

WWF-Australia's  
Position Document on  
the Queensland East Coast  
Inshore Finfish Fishery

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# 1 Summary of WWF's points regarding the ECIFF

WWF-Australia's key points regarding the Queensland East Coast Finfish Fishery (ECIFF) are justified and explained in detail in this position document on the East Coast Inshore Finfish Fishery. It responds, in particular, to the Regulatory Impact Statement (RIS) and Public Benefit Test (PBT) released by the Department of Primary Industries and Fisheries (DPI&F) on 7 December 2007 (DPI&F 2007f and g). WWF points focus on management actions that support three main positions:

a) Less impact on shark populations, especially:

For the reasons discussed in this document, including the lack of knowledge of and lack of selectivity in the ECIFF for shark, WWF's position is that the acceptable level of take for a dedicated shark fishery is nil. This should remain the case until definitive data proves the sustainability of such a fishery. This is contrary to DPI&F's Proposal 3 to introduce a shark fishery. (WWF point 3 below, Section 3.2)

b) Less impact on threatened or protected species, especially:

The proposed management plan and subsequent regional plans must be approved through the Great Barrier Reef Ministerial Council prior to finalisation to ensure this outcome is achieved. (WWF point 62 below, Section 3.12); and

c) Reduction in bycatch and sustainability of take of target and by-product species especially:

Relative to an average of measure of effort over the years prior to 2004, effort in the ECIFF should be reduced (as set out in Section 3.4.2). Much of this reduction should already have occurred. The effort needs to be reduced in such a way that there is a permanent reduction of effort to that level. (WWF point 12 below, Section 3.4.2)

WWF's views are listed in this summary section within thirteen overarching statements (given in bold capitals). Those subordinate numbered points that are in **bold** are the priority points. Where a WWF point is pertinent to a particular proposal made by DPI&F, this is mentioned within the WWF point listed below.

WWF points presented in this document all support DPI&F's obligations against the Queensland Fisheries Act, either directly or indirectly. This includes DPI&F's Queensland Fisheries Act's aim "...to promote ecologically sustainable development...". Within this Fisheries Act, the principles of ESD are said to include:

- providing fairness within and between generations;
- protecting biological diversity, ecological processes and life-support systems; and
- the precautionary principle.

Many of WWF's points listed below are not addressed or are not addressed adequately within the ECIFF RIS and PBT.

Additionally, while the WWF points are consistent with the Queensland Fisheries Act, they are also broadly consistent with DEH's recommendations under the EPBC Act Assessment (DEH 2006) with the exception of WWF's position on sharks. DPI&F's ECIFF RIS and PBT does not comprehensively address requirements under either the Fisheries Act or the EPBC assessment.

Where WWF-Australia is silent regarding any aspect of the ECIFF RIS and PBT, it does not imply agreement with the stated DPI&F proposal(s). In this way, this document should not be seen as comprehensive.

WWF point 1: *The proposed ECIFF Management Plan must be consistent with all relevant international agreements, national and state legislation and policy with special regard to the requirements of protected species, shark, ecological sustainability and the precautionary principle (see Attachment 3).*

#### **OVERALL STATEMENT: NO REMOVAL OR REDUCTION IN EXISTING LEVELS OF PROTECTION**

**WWF point 2: *Given the condition of the ecosystem (Attachment 1), new management measures should not remove or reduce any protective measures currently in place. This includes protection that is duplicated in other legislation. This includes any review of closures as recommended by DEH's EPBC Assessment Report Recommendation 17. WWF support DPI&Fs proposals 16 to 21 for increased levels of, or improvements in, closures.***

#### **OVERALL STATEMENT: NO SHARK FISHERY AND STRICT LIMITS AND CONTROLS ON INCIDENTAL TAKE OF SHARK**

**WWF point 3: *For the reasons discussed above, including the lack of knowledge of and lack of selectivity in the ECIFF for shark, WWF's position is that the acceptable level of take for a dedicated shark fishery is nil. This should remain the case until definitive data proves the sustainability of such a fishery. This is contrary to DPI&F's Proposal 3 to introduce a shark fishery. WWF's position renders the requirement for an observer program in this fishery (DPI&F's Proposal 5) irrelevant.***

**WWF point 4: *The current targeting for shark in the ECIFF, which does not include a shark fishery, should be banned. This includes prohibiting large amounts of shark take as by-product, for example, in the mackerel fishery.***

WWF point 5: *Measures must be taken so that targeted shark fishing effort that needs to be removed from the ECIFF does not activate latent, or other, effort elsewhere.*

WWF point 6: *The levels of incidental catch (by-catch and by-product) should be minimised to as low a level as possible in all fisheries including the commercial and recreational components of the ECIFF. This should be nil for any at-risk or protected sharks listed in Table 1 or Table 2. For species not listed there, the allowed incidental take should be 4 sharks or rays per commercial fisher. This is contrary to DPI&F's Proposal 4 of 10 sharks or rays and more stringent than DPI&F's Proposal 6 regarding the more vulnerable species. The "bag limit" for sharks for recreational fishers should be 1 (supporting this bag limit in DPI&F's Proposal 1).*

WWF point 7: *All by-catch and by-product must be correctly and adequately recorded and significant penalties incurred for failure to do so. Correct recording will require shark identification training for fishers.*

WWF point 8: *Compulsory training must be provided to all ECIFF commercial fishers to teach the reasons for and methods to reduce by-catch and the appropriate handling of bycatch of shark (and all protected species) to promote increased post-release survivorship.*

WWF point 9: *Management incentives and disincentives should be adequate to require compliance with mechanisms established to achieve these objectives. The incentives must include a reliable, compulsory and random observer program within the ECIFF as a whole; disincentives should include adequate penalties and application of a risk-based approach to enforcement.*

#### **OVERALL STATEMENT: REMOVAL OF LATENCY IN LARGE MESH NET FISHERY**

**WWF point 10: *At a minimum, more stringent use-history criteria must be applied to remove the part-time, non-income dependent fishers that are using approximately 247 (i.e. 497-250) commercial licenses in this fishery. WWF supports that part of DPI&F Proposal 14 that refers to removal of latent effort in the N6 fishery.***

#### **OVERALL STATEMENT: OVERALL EFFORT/TAKE IN LARGE MESH NET FISHERY REDUCED**

WWF point 11: *Existing output controls should remain unless it is proven that they make a negative contribution to the sustainability of the fishery overall. In this WWF do support DPI&F's Proposal 22 to reduce the incidental catch limit for tailor to 30kg but do not support the removal of the spotted mackerel TAC nor the increase of the incidental catch limit to 50. Rather, the level of TAC for the species controlled by output controls should be reviewed to ensure the ecological sustainability of the target stock given take in other sectors and illegal, unreported and unknown catch.*

**WWF point 12: *Relative to an average of measure of effort over the years prior to 2004, effort in the ECIFF should be reduced by, at least, a + b + c + d + e + f +g (see Section 3.4.2). Much of this reduction should already have occurred. The effort needs to be reduced in such a way that there is a permanent reduction of effort to that level.***

WWF point 13: *Effort needs to remain at the reduced level until such time that it is proven that it would be sustainable for all target, by-product and by-catch species, for protected species and the ecosystem to increase effort. For this reason, WWF does not support DPI&F Proposal 13 as it pertains to the change in definition of use of nearshore nets under N2 where effectively effort will be increased (see Table 6, p. 49 of the RIS). For this reason WWF also does not support DPI&F's proposal (Table 6, p. 51 of the RIS) to remove the 200m restriction for offshore nets in Keppel Bay nor does WWF support DPI&F's Proposal 13 to allow more nets in rivers and creeks in the N2 fishery (Table 6, p. 52 of RIS). WWF does support DPI&F's proposal (Table 6, p. 56, RIS) to not allow the use of more than one net at one time unless otherwise specified and that part of Proposal 13 removing the ability of N2 fishers to use offshore set and drift nets.*

**WWF point 14: *The overall effort level must to be set in the ECIFF Management Plan, not regionally.***

WWF point 15: *Total effort across the regions (see Section 3.5) should not exceed the effort level calculated above.*

WWF point 16: *Any proposed management changes should maintain or decrease not increase effort that can be exerted by any symbol until such time that the ecological sustainability of any increase in effort can be statistically proved.*

WWF point 17: *Unitise effort in the fishery (per net length or time) to enhance management capacity.*

WWF point 18: *WWF does not support the use of acoustic alarms as a mitigation tool to minimise interactions with marine mammals in the ECIFF.*

**WWF point 19: *Supports DEH's EPBC Assessment Report (2006) recommendation 2 & 3 to develop and implement targets for take of particular species or taxa and timely and effective management responses must be triggered when levels of take exceed agreed limits.***

WWF point 20: *Performance measures should include protected species and ecosystems and should be developed using a precautionary approach, the best available science, independent peer review of proposed measures and with significant and transparent input from the Management Advisory Committee.*

WWF point 21: *For target and by-product species, performance measures that trigger a management response should be at least: a possible (versus proven) reduction in commercial or recreational harvest or harvest rate of the lowest level of taxa possible above 10% over 3 years or any significant change to species composition. That is, if the data do not prove that the harvest rate is maintained over time, it is taken to be unsustainable. This does not apply to species with a TAC, for which the TAC itself would be the performance measure.*

WWF point 22: *Performance measures, targets, triggers and management responses should be legislated and not rest merely in policy.*

WWF point 23: *If the data that exist indicate that stocks may have reduced by more than approximately 70% of the pre-human impact levels then there should automatically be a moratorium put in place until data proving the sustainability of stock use is provided.*

WWF point 24: *Support DEH's EPBC Assessment Report (2006) recommendation 4 of the one year timeframe within which these performance measures including all reference values and management responses must be set.*

WWF point 25: *Support formal penalties for the fishery in the absence of targets that aim to ensure sustainability in a precautionary manner and penalties in the absence of adequate management responses when targets are triggered.*

WWF point 26: *Support building in the capacity (within the management plan) to review the targets as better scientific information becomes available.*

**WWF point 27: *On-water- attendance to all set nets required to be within 100m. WWF support the DPI&F proposed changes to net attendance rules to be at 100 on-the-water (see Table 6, p. 50) except for the offshore nets where DPI&F propose 400m attendance rules and the possibility of leaving the net completely for up to 6 hours if it is "inoperable" (DPI&F Proposal 15).***

**WWF point 28: *400m is the maximum length of large mesh net that should be allowed in this fishery. Where current maximum net lengths are shorter they should prevail.***

WWF point 29: *Nets cannot be joined and if more than one net is set simultaneously they should be at least 100m apart from each other and the 100m on water attendance rule must still apply for each net.*

WWF point 30: *Training programs for fishers and observers encompass information about the importance and manner of setting a taut net.*

WWF point 31: *4 hour maximum soak for large mesh set nets.*

WWF point 32: *A standard maximum mesh size be applied across the large mesh net fishery (N1 and N2) of 162.5mm. WWF supports this DPI&F proposal for N1 and seeks that it also be applied to N2 versus the proposed 215mm (see Table 7, p. 58 of the RIS).*

#### **OVERALL STATEMENT: REGIONALISATION OF FISHERIES MANAGEMENT**

WWF point 33: *Subject to the other WWF positions not being compromised, regionalise the fisheries management controls as much as possible into approximately one region south of Agnes Waters and five north of Agnes Waters.*

WWF point 34: *DPI&F should allocate sufficient resources to ensure timely and ecologically sustainable outcomes of regional planning processes. This should, at least, include support in the form of assistance with information gathering, communications within communities within regions and with head office, provision of dispute resolution services, adequate administrative support for community panels.*

#### **OVERALL STATEMENT: ENHANCE PROTECTION OFFERED BY DPAS**

**WWF point 35: *No commercial or recreational netting in DPA(A)s.***

WWF point 36: *Realign the boundary of Rodd's Bay DPA(B) to encompass all of Facing Island. (This conforms with DPI&F's Proposal 8)*

#### **OVERALL STATEMENT: ENHANCE PROTECTION OF KEY INSHORE DUGONG HABITATS OUTSIDE DPAS**

**WWF point 37: *All areas of high and medium conservation value to dugong (including the area starting north at Bobart Point, including Princess Charlotte Bay and to 10km south of Lookout Point) within the Great Barrier Reef World Heritage Area (Grech et al in press) and that 25% of Moreton Bay of highest conservation value to dugong be set aside as "no commercial or recreational netting" areas.***

**WWF point 38: *All headlands officially termed a "Cape" (by the Queensland Department of Natural Resources and Water) may not have any large mesh net fishing within a 10 km radius of the point of the headland. This includes headlands inside and outside all DPAs. If a more workable rule can be defined that will offer the same or more protection to threatened species, this alternative rule may be acceptable to WWF.***

## **OVERALL STATEMENT: ESTABLISH MECHANISMS TO MANAGE RECREATIONAL FISHING TAKE**

WWF point 39: *Support DEH's EPBC Assessment Report (2006) Recommendations 9 and 16 to ensure recreational and charter boat catch levels are sustainable. Where bag limits are introduced or reduced, WWF supports DPI&F's Proposals 1 and 10. WWF recommends a more restrictive bag limit of 2 for barramundi consistent with proposed limits for other high order predators (e.g. Kingfish, Mulloway, Black Jewfish). WWF supports DPI&F's Proposal 2 to remove the extended bag limit for charter fisher and for Fraser Island.*

WWF point 40: *WWF supports implementation size limits that are at least 2 cm higher than the size of sexual maturity. Where the diversity of rules might cause confusion, WWF supports adoption of the more conservative rules more widely. So WWF does not support the size limits in the DPI&F Proposal 1 that are set exactly at or below sexual maturity.*

WWF point 41: *All species of the genus Epinephelus (groupers) over 100 cm are Protected Species in the Great Barrier Reef Marine Park under the GBRMP Zoning Plan 2003. The size limits for groupers under the ECIFF management plan should be consistent with this. Size and bag limits in the ECIFF should be consistent with those in other fisheries in the area (e.g. coral reef fin fish fishery bag limits for all cod).*

WWF point 42: *WWF supports DPI&F's proposed introduction of bag limits where none exist (especially Mangrove Jack, Grunter, Trevally and Salmon) and decreases in bag limits where current limits are considered to be too high and simplifying bag limits to enhance compliance. Where there is known confusion in species identification, bag limits should apply to groups of taxa*

WWF point 43: *Within two years, implement a compulsory, free recreational fishing licence as a means to understanding the fishery better.*

## **OVERALL STATEMENT: ENHANCE COMPLIANCE USING EDUCATION AND RISK-BASED ENFORCEMENT PROGRAM**

WWF point 44: *Develop a code of practice for release marine mammals, turtles and shark for both commercial and recreational fishers. Develop and implement an ongoing compulsory training program on the code of practice and on species identification to deliver to all licensed commercial fishers. Develop and implement a training program on the code and on species identification that can be self-delivered by recreational fishing clubs.*

WWF point 45: *Provide regular, compulsory, regionalised training to all participants in the commercial fishery on the rules and regulations of the ECIFF Management Plan. That is, make the licence conditional upon attendance of the training.*

WWF point 46: *Within 2 years review and implement new logbooks (with input from other management agencies e.g. GBRMPA, commercial fishers and day-to-day managers) to ensure they are workable and adequate for management purposes. There must be improvements, especially, in recording soak times and incidental catches.*

WWF point 47: *Within 2 years review and enhance the risk-based approach to on-the-water enforcement to optimise use of limited resources. WWF supports DEH's recommendation 6 in their EPBC assessment (2006) except for the time frame.*

WWF point 48: *Implement a program to ensure magistrates and other relevant players in the courts are adequately briefed on the significance of environmental crime in the ECIFF.*

WWF point 49: *VMS on ECIFF commercial fishing boats must be compulsory.*

WWF point 50: *In this ECIFF Management Plan, counter-productive use of the Serious Fisheries Offences provision needs to be addressed.*

WWF point 51: *Ensure adequate penalties to deter environmental crime. For example, revocation of a licence upon a second incidence of lack of reporting of an interaction with a protected species. Develop the penalties by working together with other management agencies e.g. GBRMPA, commercial fishers and day-to-day managers. At the minimum reflect the level and type of penalties found in the GBRMPA Act but supplement these penalties with licence suspension and revocation where appropriate.*

WWF point 52: *Ensure the proposed new ECIFF Management Plan rules and regulations are thoroughly reviewed for feasibility by day-to-day managers both within the DPI&F and with other management agencies e.g. the GBRMPA. In particular, the netting regulations must be simplified.*

**OVERALL STATEMENT: ENSURE ADEQUATE RESEARCH OCCURS TO REDRESS DATA PAUCITY REGARDING, ESPECIALLY, IMPACTS ON PROTECTED SPECIES AND ALL SHARK TAKE**

WWF point 53: *WWF supports DEH's EPBC Assessment Report (2006) Recommendation 18 to determine optimal mitigation strategies to (a) avoid interactions with protected species and sharks and (b) effectively disentangling and releasing trapped marine wildlife from nets to maximise survival.*

WWF point 54: *Allocate resources to support ongoing, existing and independent dugong and turtle research and to support shark research, especially on population status and trends.*

WWF point 55: *Effectively monitor target and by-product populations and trends or, at least, catch per unit effort of those species.*

WWF point 56: *Support DEH's EPBC Assessment Report (2006) Recommendation 10 to conduct stock assessments, population trend assessments and trends of CPUE of key ECIFF species, however, WWF considers that priority species should be identified from the entire suite of species impacted by the fishery, not just the target species. DPI&F conduct a risk-based assessment with the MAC to identify the priority species. These analyses should factor in that some populations extend beyond the geographic boundary of the ECIFF and also are impacted by fishing activities outside the ECIFF (as per DEH EPBC Assessment Report Recommendation 11).*

WWF point 57: *Support the details of an observer program as recommended (no. 7 and 8) by DEH's EPBC Assessment Report (2006).*

**WWF point 58: *Ensure that the observer program implemented is comprehensive and includes compulsory, frequent and apparently haphazard (i.e. not predictable) allocation of observers to boats that is a risk-based allocation and well as a sampling regime of data that enables extrapolation of the data to the fishery as a whole.***

WWF point 59: *Maintain or expand the stranding and necropsy programs including a review of existing data in light of better information on causes of death and an alternative assessment process (see next WWF point).*

WWF point 60: *Cause of death, where determinations require expert assessments of probability, should be the joint responsibility of a small group of experts (3-4 people) drawn from EPA, GBRMPA and the scientific community.*

**OVERALL STATEMENT: SET CLEAR, REASONABLE TIMEFRAMES FOR IMPLEMENTATION OF ALL ASPECTS OF THE FISHERY MANAGEMENT PLAN INCLUDING REGIONALISATION**

WWF point 61: *Implementation of this management plan, inclusive of regional plans/arrangements, will take no longer than two years. Regional management arrangements/plans are to implement the management plan regionally. For those regions where regional arrangements/plans to implement the overall management plan have not been developed within two years, generic rules, consistent with the points set out in this document, should come into effect until such time that a regional management plan can be developed.*

**OVERALL STATEMENT: REQUIRE APPROVAL OF THE FINAL MANAGEMENT PLAN AND SUBSEQUENT REGIONAL PLANS THROUGH MINISTERIAL COUNCIL**

**WWF point 62: *The proposed management plan and subsequent regional arrangements/plans must be approved through the Great Barrier Reef Ministerial Council prior to finalisation and that WWF be given observer status at the Ministerial Council meetings where these plans are to be approved.***

**OVERALL STATEMENT: GET TO A NEW EAST COAST INSHORE FINFISH FISHERY**

WWF point 63: *Where necessary to reach sustainable effort levels, a structural adjustment package should be offered to departing fishers in a manner that ensures no opportunity for their effort to be re-introduced to the fishery. The financial offers included as part of the structural adjustment package should be prepared mindful of the Productivity Commission's (2003) assessment of a value-added (~profit) component of 18.9% that applies to the GVP of fisheries (see p355 Tables G19 and G20 of Productivity Commission Report, 2003).*

**WWF point 64: *The arrangements for structural adjustment must be clear and with strict guidelines to help ensure certainty, effectiveness and avoid excessive costs to both government and fishers. These guidelines must be approved through Ministerial Council.***

WWF point 65: *While WWF does support the development of a By-catch Action Plan for this fishery (DEH EPBC Assessment Report 2006 – Recommendation 15) it considers that by-catch mitigation*

*efforts should start immediately and not wait for the development of this plan. Further, the Plan should be developed in the next 2 years, not 3 years as suggested.*

*WWF point 66: Support the DEH EPBC Assessment Report (2006) Recommendation 2 that, effective in the current year, DPI&F are to report publicly and explicitly on the status of this fishery in as much detail as possible. As performance measures for all species (target, by-product, by-catch) are developed, reports should provide assessments against these performance measures. Reporting must be annual.*

*WWF point 67: DPI&F should inform not just DEWHA of intended management amendment that may possibly effect the sustainability of any target, by-product or by-catch species but the DPI&F ECIFF Management Advisory Committee should also be informed (see DEH EPBC Assessment Report (2006) Recommendation 1)*

*WWF point 68: Fishers choosing to remain in the ECIFF receive new licenses that are legally conditional upon compliance to the new regulations for the fishery. The effort exerted by the remaining fishers must be less than that described in Section 3.4.2.*

*WWF point 69: The Management Advisory Committee meeting times and meeting papers should be set adequately frequently and in advance to allow members to contribute fully to management decision-making. There should be one month notice of meetings and papers should be distributed at least two weeks prior. Mechanisms should be in place for formal registrations of dissatisfaction by members to the Department of Premiers and Cabinet, GBRMPA and DEWAH if any member considers that the views of this statutory body are not adequately addressed in DPI&F decision-making.*

*WWF point 70: WWF is neutral regarding the suggested change to the fishery area near the tip of Cape York (DPI&F Proposal 11) subject to greater clarity on which Management Plan will manage the "gap".*

## 2 Introduction

WWF-Australia<sup>1</sup> commends the Queensland Department of Primary Industries and Fisheries (DPI&F) and Minister Mulherin for the preparation and effort that has been directed towards developing a Management Plan for the Queensland East Coast Inshore Finfish Fishery (ECIFF). WWF appreciates the opportunity to have input to the development of this fishery's management plan. This is WWF's position document on the ECIFF and supports WWF's formal submission to the Regulatory Impact Statement (RIS) and Public Benefit Test (PBT).

As context for this position document, WWF recognises that the habitat and community structure within which the ECIFF operates was already compromised before the fishery started to contribute its impacts (Attachment 1). The introduction of the monofilament gill net in the early 1960s (De Lacey 2005) coincides with the beginning of a new period of population decline in already at-risk inshore species. Inshore species whose habitat coincides with the area of the ECIFF include dugong, turtle, dolphin (including the snubfin dolphin) and rays. Despite implementation of various management measures, many of the old ecosystem threats, and new threats such as climate change, are not only ongoing but increasing in their negative effect.

Compliance with the ecologically sustainable development and precautionary principle requirements of the Queensland Fisheries Act and Environment Protection and Biodiversity Conservation Act, and DPI&F's own policy to ensure the long-term profitability of this fishery, were factors WWF took into account in preparing this position document and are pertinent to all of DPI&F's decisions regarding the future management of the ECIFF.

This document supports the WWF submission to the ECIFF RIS and PBT. Reference is made to the specific proposals as set out and numbered in the DPI&F "Have your say: summary of proposed changes" document released with the RIS and PBT on 7 December 2007. Where WWF Australia is silent regarding any aspect of the ECIFF RIS and PBT, it does not imply agreement with the stated DPI&F proposal(s). In this way, this position document should not be seen as comprehensive. This position document focuses on management actions that support:

- a) Less impact on shark populations;
- b) Less impact on threatened or protected species; and
- c) Reduction in bycatch and sustainability of take of target and by-product species.

Key points are highlighted in the summary section in **bold** are also presented in **bold** throughout this document.

### ***2.1 Legal and policy commitments***

DPI&F must take account of, or conform with, a number of state and national laws and policies. Some of these are set out here.

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<sup>1</sup> Further referred to in this document as WWF

### **2.1.1 Queensland Fisheries Act 1994 – ESD and precautionary principle requirements**

The Queensland Fisheries Act 1994 requires, amongst other things, “to provide for the ....conservation and enhancement of the community’s fisheries resources and fish habitats in a way that... seeks to promote ecologically sustainable development”. Within this Fisheries Act ecologically sustainable development (ESD) means conserving and enhancing the community’s fisheries resources and fish habitats so that the ecological processes on which life depends are maintained and that the total quality of life, both now and in the future, can be improved. In the Fisheries Act, the principles of ESD are said to include:

- providing fairness within and between generations;
- protecting biological diversity, ecological processes and life-support systems; and
- the precautionary principle.

The precautionary principle is defined in the Fisheries Act to mean that if there is a threat of serious or irreversible environmental damage, lack of scientific certainty should not be used as a reason to postpone measures to prevent environment degradation, or possible environmental degradation, because of the threat.

Conformity with the Queensland Fisheries Act requirements as discussed above will lead to the long-term profitability of this fishery. WWF positions presented in this document all support DPI&F’s obligations against the Queensland Fisheries Act (as discussed above), either directly or indirectly.

### **2.1.2 EPBC Act 1999 – ESU and precautionary principle requirements**

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) is pertinent to this fishery. Its objects include to provide for the protection of the environment, to promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources; and to promote the conservation of biodiversity. The EPBC Act defines, amongst others, the following principles as principles of ecologically sustainable development:

- if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;
- 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; and
- the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making.

### **2.1.3 Commitments under national plans**

Because the ECIFF occurs both in the Great Barrier Reef Marine Park and in the Great Barrier Reef World Heritage Area, its management must be consistent with several national plans. WWF has identified at least the following plans to be pertinent to this fishery:

- [Conservation Overview and Action Plan for Australian Threatened and Potentially Threatened Marine and Estuarine Fishes - 2002](#)

- [Recovery plan for ten species of Seabirds](#) - May 2005
- [Humpback Whale Recovery Plan 2005 - 2010](#) - May 2005
- [National Plan of Action for the Conservation and Management of Sharks](#) - May 2004
- [Recovery Plan for Grey Nurse Sharks \*Carcharias taurus\* in Australia](#) - June 2002
- [Recovery Plan for Marine Turtles in Australia](#) - July 2003
- [Protecting Whales and Dolphins](#) - 2006

## 2.1.4 Commitments under other state legislation plans or policies

There are numerous pieces of legislation, plans and policies that pertain to the ECIFF:

### [Nature Conservation Act 1992](#)

Fish resource allocation policy

[Fish habitat management operational policies \(FHMOP\)](#)

[State coastal management plan: Queensland 's coastal policy](#)

[Cardwell-Hinchinbrook regional coastal management plan](#)

[Curtis Coast regional coastal management plan](#)

[South-east Queensland regional coastal management plan](#)

[Wet Tropical Coast regional coastal management plan](#)

**WWF point 1:** *The proposed ECIFF Management Plan must be consistent with all relevant international agreements, national and state legislation and policy with special regard to the requirements of protected species, shark, ecological sustainability and the precautionary principle (see **Attachment 3**).*

## 3 WWF key positions on the ECIFF

WWFs three key positions in response to the ECIFF RIS and PBT aim to ensure:

- a) Less impact on shark populations;
- b) Less impact on threatened or protected species; and
- c) Reduction in bycatch and sustainability of take of target and by-product species.

This latter position obviously contributes to the first two positions but encompasses a slightly broader objective as well.

Each of the thirteen overarching statements outlined below contributes to achieving the three key WWF positions (above) and each of these statements is also discussed in detail in separate sections in the remainder of this document.

1. No removal or reduction in existing levels of protection
2. No shark fishery and strict limits and controls on incidental take of shark
3. Removal of latency in large mesh net fishery
4. Overall effort/take in large mesh net fishery reduced
5. Regionalisation of fisheries management

6. Enhance protection offered by DPAs
7. Enhance protection of key inshore dugong habitats outside DPAs
8. Establish mechanisms to manage recreational fishing take
9. Enhance compliance using education and risk-based enforcement program
10. Ensure adequate research occurs to redress data paucity regarding, especially, impacts on protected species and all shark take
11. Set clear, reasonable timeframes for implementation of all aspects of the fishery management plan including regionalisation
12. Require approval of the final management plan and subsequent regional plans through Ministerial Council
13. Get to a new East Coast Inshore Finfish Fishery

### ***3.1 No removal or reduction in existing levels of protection***

The DPI&F have taken measures to enhance protection of fisheries resources, by-catch and habitat. These include approximately 210 closures such as restrictions on what kinds of nets can be used when and where, seasonal closures, permanent fisheries closures, Dugong Protection Areas, size and/or bag limits on certain species (DPI&F 2007d).

***WWF point 2: Given the condition of the ecosystem (Attachment 1), new management measures should not remove or reduce any protective measures currently in place. This includes protection that is duplicated in other legislation. This includes any review of closures as recommended by DEH's EPBC Assessment Report Recommendation 17. WWF support DPI&Fs proposals 16 to 21 for increased levels of, or improvements in, closures.***

### ***3.2 No shark fishery and strict limits and controls on incidental take of shark***

All the available data show that shark populations along the eastern Queensland coastline are at very low levels (Section 3.2.3, Attachment 2). Globally, there is a growing concern regarding the status of shark populations. The first fishery independent estimate of the scale of shark catches worldwide show the shark finning trade to be three to four times higher than formal fishery-dependent estimates (Clarke et al 2006).

Within the ECIF, shark comprises about 19.6% of the total tonnage and about 27.7% of the GVP (both data are the 2000-2005 average, CHRIS website: [chrisweb.dpi.qld.gov.au/CHRIS](http://chrisweb.dpi.qld.gov.au/CHRIS)). Latest data, for 2005, show these figures to be 17.1% and 24.4% respectively. In terms of efforts (days fished), shark comprises 29.1% of the days fished in the ECIF from 2000-05 (CHRIS website: [chrisweb.dpi.qld.gov.au/CHRIS](http://chrisweb.dpi.qld.gov.au/CHRIS)) or 26.8% of days fished in 2005.

Fisheries managers advocate that for most fished species, anywhere from 20-40% of the virgin biomass should be retained in any fish stock to ensure sustainability. Fisheries managers also generally consider successive declines in catch at similar effort levels as an indicator of a fishery in trouble. This is for species with much higher fecundity and earlier ages of reproduction than sharks. The limited data available indicate that sharks are on a path to economic, if not ecological, extinction unless shark fishing stops. For example, let us consider tonnage of shark caught per number of days fished in the commercial netting fishery as an indicator of CPUE. Then, although CPUE for shark increased from 1988/89 to 2001 (0.085 or 0.066 tonnes/day in 1988 and 1989 to 0.132 tonnes per day in 2001), CPUE has been in decline every year since then (to 0.113 in 2005)([chrisweb.dpi.gov.au/CHRIS](http://chrisweb.dpi.gov.au/CHRIS)). This is not a trend exhibited by the net fishery as a whole.

WWF will develop the arguments here that support the final detailed positions regarding shark fishing in the ECIF (Section 3.2.9).

### 3.2.1 Shark ecology – why sharks matter

Removal of sharks directly affects their abundance, size structure and changes population dynamics. Most sharks are predators at or near the top of the food chain. If some shark are prey, they are prey to other sharks. Therefore, the indirect effects of shark removal involves changes in trophic interactions by removal of key predator (or prey) species, removal of competitors, species replacement and enhancement of food supply through discards (Stevens *et al.* 2000).

For example, reduction of top predators, such as sharks, can lead to increases in the numbers of the prey normally targeted by the those predators and this starts a cascade of changes that cause increases and declines in subsequent trophic levels; this has been termed a trophic cascade effect (Ward and Myers 2005, Myers *et al.* 2007).

Take the example of Hawaii’s coral reefs below (from Jackson et al 2001). While the effects of overfishing, including of shark, was most pronounced in the Caribbean, they were also evident on the Great Barrier Reef.

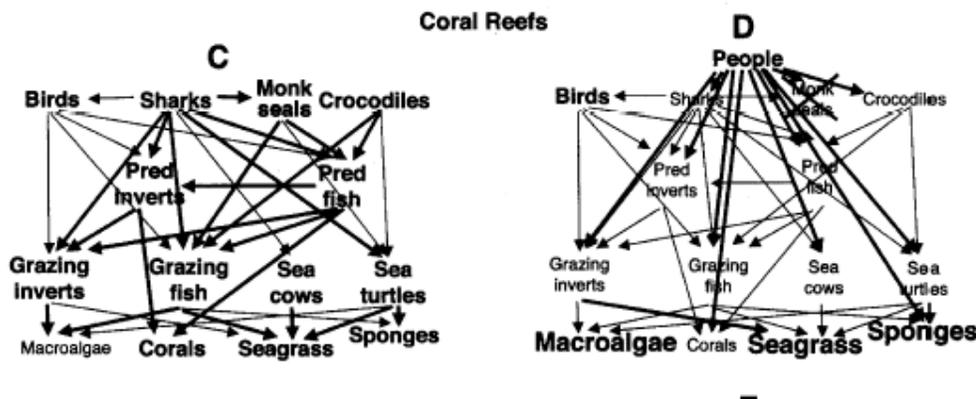


Figure 1: Simplified food webs for coral reefs showing changes in the important top down interaction due to overfishing: before (left) and after fishing (right). Bold font represents abundant and normal font represents rare, crossed-out represents extinct. Thick arrows represent strong interactions: thin arrows represent weak interactions. Source: Jackson *et al.* (2001)

The impact of loss of sharks in a particular ecosystem cannot be predicted until it is too late. But we know from collapses elsewhere, that the results are usually significant and negative. For example, in the coastal northwest Atlantic Ocean, through the trophic cascade effect, shark depletion is known to have caused the collapse of a century-old scallop fishery (Myers *et al.* 2007). The loss of the scallops, in turn, is expected to have led to the destruction of seagrass beds and thus loss of nursery habitats exacerbating stresses on already highly degraded coastal benthic ecosystems (Myers *et al.* 2007).

### **3.2.2 Shark biology – why sharks are vulnerable**

The biology of sharks make them particularly vulnerable to human exploitation, much in the same way dugong, turtle, whales and dolphin are vulnerable to human exploitation.

Sharks are large, long-lived species that typically have low fecundity, late maturation and long generation times. Ages of maturation range from 6 years to 18 years. Approximately 70% of living sharks and rays bear live young. Gestation periods are typically from 6-22 months with small clutch sizes (Jackson 2001).

For these reasons, amongst others, these animals have naturally low abundance relative to other fish and recover only very slowly from depletion. For these reasons, sharks are vulnerable to human exploitation in the same way as whales, turtles and dolphins are vulnerable. For these reasons, these latter taxa are not commercially harvested in Queensland.

The life history for the individual shark species taken in the ECIFF is not well known but is likely to be consistent with the generic life history characteristics outlined above.

### **3.2.3 Shark population status**

There is extremely little species specific data on the status of shark populations in the Great Barrier Reef ecosystem, and what there is, shows that the animals are in collapse (Robbins *et al.* 2006).

As mentioned in the Attachment 2, there was a 75% decline in shark caught in the shark control program 1962-1988. This is a good indicator of populations in decline well before significant commercial take of sharks started. The populations of sharks were already at low levels before both the increases in by-catch of shark accompanying the increasing efforts in the fishery over the last 20 years and the initiation of what is effectively a shark fishery over that time. The shark fishery in Australia overall has increased such that Australia has recently been identified, by TRAFFIC, as being one of the world's top 20 shark catching nations.

In the Great Barrier Reef ecosystem, including the inshore areas used by the ECIFF, rare quantitative data are available for shark that aren't targeted (but are bycatch): the whitetip and grey reef sharks. Robbins *et al.* (2006) show that these species are in severe, ongoing decline of 7 and 17% per year despite not being targeted for fishing. It bodes ill for shark species that are targeted.

At least part of the issue is that the spatial extent of many of the shark populations that occur in the GBR is unknown; some are certainly known to extend, at least, beyond the area of the ECIFF. That means that many of these populations are not only being impacted by other fisheries within the GBR (e.g. the reef line fishery, the trawl fishery) but are also being impacted by legal as well as illegal,

unreported and unknown fishing activity outside the area of the ECIF. Some of the other legal impacts on ECIF sharks have been looked at by Salini *et al* 2007. Their work does not enhance the level of confidence in the sustainability of the use of these shark stocks.

From a population status point of view, where and how the shark is killed is immaterial; a shark's death will still contribute to a decline in the population. And management must take a precautionary approach in how to address this reality.

### 3.2.4 Conservation status of sharks

At a national and state level, the government has legal obligations to conserve species that have been given threatened status. Of the approximately 133 species of sharks and rays that occur in the Great Barrier Reef World Heritage Area (which includes the area of the ECIF), forty are listed as threatened. The following table summarises formal "listings" of sharks and rays at the international, national and state levels. In addition, an Australian Government commissioned overview and action plan for Australian threatened and potentially threatened marine and estuarine fishes found 28 shark and ray species occurring in the Great Barrier Reef World Heritage Area as being of conservation concern, with a number of them being 'data-deficient' (Pogonoski et al 2001).

**Table 1. Formal listings of sharks and rays that occur in the Great Barrier Reef World Heritage Area**

Common Name	Scientific Name	IUCN	Bonn	CITES	Australia	Qld	Pogonoski
Banded eagle ray	<i>Aetomylaeus nichofii</i>	V					
Banded wobbegong	<i>Orectolobus ornatus</i>	DD					DD
Black shark	<i>Dalatias licha</i>	DD					DD
Black whaler	<i>Carcharhinus obscurus</i>						LR (nt)
Blacktip shark	<i>Carcharhinus tilstoni</i>	DD					
Blacktip topeshark	<i>Hypogaleus hyugaensis</i>	LR (lc)					LR (lc)
Bluespotted ribbontail ray	<i>Taeniura lymma</i>	LR (lc)					LR (lc)
<b>Bizant River shark</b>	<b><i>Glyphis sp. A</i></b>	<b>CR</b>			<b>CE</b>		
Bull shark	<i>Carcharhinus leucas</i>	LR (lc)					LR (lc)
Colclough's shark	<i>Brachaelurus colcloughi</i>	V					V
Common blacktip shark	<i>Carcharhinus limbatus</i>	DD					DD
Crocodile shark	<i>Pseudocarcharias kamoharai</i>	LR (lc)					LR (lc)
Dwarf sawfish	<i>Pristis clavata</i>	CR					
Eastern angel shark	<i>Squatina sp. A</i>	V					
Endeavour dogfish	<i>Centrophorus moluccensis</i>	EN*					
Estuary stingray	<i>Dasyatis fluviorum</i>	V					LR (nt)

Common Name	Scientific Name	IUCN	Bonn	CITES	Australia	Qld	Pogonoski
<b>Freshwater sawfish</b>	<i>Pristis microdon</i>	<b>CR</b>			<b>V</b>		
Freshwater whiplay	<i>Himantura cf. chaophraya</i>	V					
<b>Great hammerhead</b>	<i>Sphyrna mokarran</i>	<b>LR (lc)</b>					<b>LR (lc)</b>
<b>Great white shark</b>	<i>Carcharodon carcharias</i>	<b>V</b>	<b>I, II</b>		<b>V</b>		<b>V</b>
Green sawfish	<i>Pristis zijsron</i>	CR					
Greeneye spurdog	<i>Squalus mitsukurii</i>	EN*					
<b>Grey nurse shark</b>	<i>Carcharias taurus</i>	<b>CE*</b>			<b>CE</b>	<b>CE</b>	<b>E</b>
Grey reef shark	<i>Carcharhinus amblyrhynchos</i>	LR (lc)					LR (lc)
Gulper shark	<i>Centrophorus granulosus</i>	V					DD
Manta ray	<i>Manta birostris</i>	LR (lc)					LR (lc)
Narrow sawfish	<i>Anoxypristis cuspidata</i>	CR					
Oceanic whitetip shark	<i>Carcharhinus longimanus</i>	V					
Porcupine ray	<i>Urogymnus asperrimus</i>	V					LR (nt)
Purple eagle ray	<i>Myliobatis hamlyni</i>	EN					
Sandbar shark	<i>Carcharhinus plumbeus</i>	LR (nt)					LR (nt)
<b>Scalloped hammerhead</b>	<i>Sphyrna lewini</i>	<b>LR (lc)</b>					<b>LR (lc)</b>
Shortfin mako	<i>Isurus oxyrinchus</i>	LR (lc)					LR (lc)
<b>Silky shark</b>	<i>Carcharhinus falciformis</i>	<b>LR (lc)</b>					<b>LR (lc)</b>
<b>Spinner shark</b>	<i>Carcharhinus brevipinnas</i>	<b>LR (lc)</b>					<b>LR (lc)</b>
<b>Spotted eagle ray</b>	<i>Aetobatus narinari</i>	<b>LR (lc)</b>					<b>LR (lc)</b>
<b>Tiger shark</b>	<i>Galeocerdo cuvier</i>	<b>LR (lc)</b>					<b>LR (lc)</b>
<b>Whale shark</b>	<i>Rhincodon typus</i>	<b>V</b>	<b>II</b>	<b>II</b>	<b>V</b>		<b>DD</b>
<b>Whitespot giant guitarfish</b>	<i>Rhynchobatus djiddensis</i>	<b>LR (lc)</b>					<b>LR (lc)</b>
<b>Whitetip reef shark</b>	<i>Triaenodon obesus</i>	<b>LR (lc)</b>					<b>LR (lc)</b>

- IUCN 2006 Red List Assessments are for global populations, except where a separate IUCN assessment exists for Australia (denoted by\*)
- Bonn=Bonn Convention. Appendix I lists migratory species that are endangered; Appendix II lists migratory species that have an unfavourable conservation status and that require international agreements for their conservation and management, as well as those that have a conservation status that would benefit significantly from international co-operation and agreement.

- CITES = Convention on the international trade in endangered species. Appendix I includes those threatened with extinction that are or may be affected by trade. Trade in specimens of these species is subject to particularly strict regulation in order not to endanger further their survival and can only be authorised in exceptional circumstances. Appendix II includes include: (a) species which, although not necessarily now threatened with extinction, may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilisation incompatible with their survival; and (b) other species which must be subject to regulation in order that trade in specimens of certain species referred to in sub-paragraph (a) of this paragraph may be brought under effective control.
- CE = Critically endangered; DD - Data deficient; E=Endangered; LR (lc) = Lower risk, least concern; LR (nt) = Lower risk, near threatened; V=Vulnerable

(Table source: GBRMPA position statement on sharks, [www.gbrmpa.gov.au](http://www.gbrmpa.gov.au))

At least thirteen of these species (in bold in the table) have distributions that overlap with the area used by the ECIFF; thus potentially or actually these threatened sharks are being negatively impact by the fishery even though they are not targeted. Other species possibly interacting with this fishery and in Table 1 include the dwarf sawfish, green sawfish and grey reef shark (see proposed commercial take limit of take of 1 for these species in DPI&F's RIS and PBT, 2007). See next section for recorded deaths of these species in this fishery.

### 3.2.5 Shark species at risk

Two species of sharks are being targeted by the ECIFF:- the Australian blacktip shark (*Carcharhinus tilstoni*) and the Spot-tail shark (*C. sorrah*). But these account for only 40% of total catch (Rose et al 2003). At least 20 species have been recorded in shark catch by observers in merely four observer trips in the ECIFF. These data do not include bycatch. It can only be presumed that more field trips would lead to more species being identified and, in fact, Salini *et al* (2007) recorded an additional 4 species in their work. Note that logbooks allow the recording of only ten groups of sharks and rays (Salini *et al* 2007).

DPI&F researchers (Gribble et al 2005) found that, of the 20 species of shark that were taken in the ECIFF, seventeen were displayed either lower than average productivity or higher than average susceptibility to fishing mortality or both. That is, arguably 17/20 species of shark taken in the ECIFF are at some risk of overexploitation. Of these, 14 species are definitively at risk of overexploitation both in terms of their productivity characteristics and susceptibility to fishing pressure. Assessments taken since then (Salini *et al* 2007 and advise in 2007 from Scientific Advisory Group of the Inshore Finfish Management Advisory Committee) showed similar results but for an even wider range of species.

Given that these species are at risk, what are the best estimates of their actual take? The estimates below (Table 2) assume the percentages recorded by the observer program can be used to estimate percentages of take overall. These estimates have used the proposed take of 700 tonnes as well as the 2003 year of take which was about 1200 tonne.

**Table 2. Estimates of take of at-risk and/or protected species of shark in the ECIF.**

Species (all non-target)	At risk <sup>2</sup> /protected <sup>3</sup>	Kg taken/yr/700 tonnes
Scalloped hammerhead	Yes/Yes	126 000(2003 = 216 000)
Grey reef shark	Yes/Yes	46 000 (2003 = 79 000)
Great Hammerhead	Yes/Yes	20 300 (2003 = 34 800)
White-spotted giant guitarfish	Yes/Yes	2 800 (2003 = 4 800)
Whitecheek shark	Yes/No	52 000 (2003 = 90 000)
Milk shark	Yes/No	47 600 (2003 = 81 600)
Pigeye shark	Yes/No	33 600(2003 = 57 600)
Spinner shark	Yes/Yes	22 000 (2003 = 37 200)
Whitetip reef shark	Yes/Yes	2 800 (2003 = 4800)
Whitespotted eagle ray	~Yes/Yes	2 800 (2003 = 4800)

These figures are for illustrative purposes only as it is understood by WWF that a dedicated shark fishery would, proportionately, have less by-product in the form of non-target sharks. But how much less? It is unknown. And given that so many of the species are clearly at risk and protected, how much take is acceptable?

### **3.2.6 Target species, by-product and by-catch**

The dedicated shark fishery accounts for some 60-70% of take of sharks and is conducted by about 25 operators.

Demand for and price of shark fins is very high and shark are relatively easy to catch in many kinds of fishing apparatus. No apparatus is capable, however, of selecting for only a few targeted species of shark. The species that are caught are not adequately recorded and neither is the quantity of each separate species; in fact, requiring this would be almost impossible due to issues of species identification. Compliance to requirements for recording shark catch, for taking shark trunks with the fins, to fishing only with a license is inadequate. The compliance problem regarding taking shark trunks with the fins is especially difficult as, legally, the finning of sharks can happen at sea as long as the trunk is retained.

<sup>2</sup> ~Yes means at risk according to either its productivity or susceptibility to fishing mortality

<sup>3</sup> Listed in Table above

None of the records of commercial catch, of course, include by-catch of shark unless they are protected species. And they may be released alive, or not. The level of bycatch is unknown and survival rates of sharks released as bycatch is also unknown.

Recreational take of sharks is also high, with R-fish data indicating take of about 200 000kg of shark.

### **3.2.7 Interactions with other protected species**

This will be discussed further in Sections 3.6 and 3.7 with regard to the ECIFF as a whole. The particular issues with the shark fishery pertain to the more off-shore nature of the activity such that the possibility of interacting with migrating humpback whales (as populations increase) and dugong travelling along the coast is significant.

### **3.2.8 National and international obligations and experience**

As mentioned in Section 2.1.2, DPI&F have obligations under their own Act, the EPBC Act as well as under National policies with regard to the take of shark and with regard to the impact of this fishery on protected species. A complete list is provided at Attachment 3 (see also Section 2.1). Allowing take of sharks, given the risks to not just sharks but rays and other species, would be contrary to the intent of most of the pieces of legislation and policy that pertain to the activity.

There are very few data on shark fisheries with a proven and ongoing track record of success. In Western Australia, commercial shark fishing has been occurring for 40 years and now three of the four main sharks targeted have been identified as being overfished (Dusky, Sandbar and Whiskery) and the need for more effective management has been identified (<http://www.fish.wa.gov.au/docs/cf/Sharks/index.php?0206> downloaded 14/2/08). Fears of the sustainability of the fishery led to the banning of shark fishing in Western Australia north of Steep Point where the breeding stock were thought to be. Other Australian states are also considering getting out of some of their shark fisheries (e.g. the Gummy Shark fishery in Victoria and South Australia).

Internationally, there is a growing realisation that sharks are in trouble and this has started a global trend to ban shark finning:

- the world's first international prohibition on shark finning was adopted in November 2004 by the 63 member countries of the International Commission for the Conservation of Atlantic Tunas;
- the EU has banned shark finning;
- fishing regulations effectively ban shark fishing for fins in Tuvalu (Iese pers. comm.); and
- a ban on shark finning in the Eastern Pacific Ocean was approved by the 15 member Inter-American Tropical Tuna Commission (IATTC) co-sponsored by the United States, the European Union, Japan and Nicaragua and supported by Costa Rica, Panama, Ecuador and Mexico.

In the ECIFF, technically, shark finning is banned because the trunk must be retained and match with the fins. In practice, the financial incentive to take very large numbers of shark solely for their fins is extremely high (even if retaining trunks to conform to legislation) and, in instances of non-compliance, enforcement efforts are inadequate.

### 3.2.9 WWF position on sharks

Broadly, WWF is not in agreement with the DEH EPBC Assessment Report (2006) Recommendations 12 and 13 regarding shark take, in particular with regard to the proposal to establish a shark fishery nor is WWF in agreement with DPI&F's Proposals 3, 4 nor that part of 14 which is setting up a new symbol for the shark fishery.

In October 2007, over 50 scientists from the ARC Centre considered available science and delivered consensus statements that included the following: ".....Coral reef megafauna (e.g. dugongs, turtles and sharks) continue to decline rapidly, and are ecologically extinct on most of the world's reefs. In Australia, current management practices are failing to maintain populations of megafauna that are already severely depleted. Commercial harvesting and marketing of these species should be banned to allow the recovery of depleted stocks. ..." (Downloaded 26/11/07 from [www.coralcoe.org.au/news\\_stories/communique.html](http://www.coralcoe.org.au/news_stories/communique.html)). WWF concurs.

**WWF point 3:** *For the reasons discussed above, including the lack of knowledge of and lack of selectivity in the ECIFF for shark, WWF's position is that the acceptable level of take for a dedicated shark fishery is nil. This should remain the case until definitive data proves the sustainability of such a fishery. This is contrary to DPI&F's Proposal 3 to introduce a shark fishery. WWF's position renders the requirement for an observer program in this fishery (DPI&F's Proposal 5) irrelevant.*

**WWF point 4:** *The current targeting for shark in the ECIFF, which does not include a shark fishery, should be banned. This includes prohibiting large amounts of shark take as by-product, for example, in the mackerel fishery.*

**WWF point 5:** *Measures must be taken so that targeted shark fishing effort that needs to be removed from the ECIFF does not activate latent, or other, effort elsewhere.*

**WWF point 6:** *The levels of incidental catch (by-catch and by-product) should be minimised to as low a level as possible in all fisheries including the commercial and recreational components of the ECIFF. This should be nil for any at-risk or protected sharks listed in Table 1 or Table 2. For species not listed there, the allowed incidental take should be 4 sharks or rays per commercial fisher. This is contrary to DPI&F's Proposal 4 of 10 sharks or rays and more stringent than DPI&F's Proposal 6 regarding the more vulnerable species. The "bag limit" for sharks for recreational fishers should be 1 (supporting this bag limit in DPI&F's Proposal 1).*

**WWF point 7:** *All by-catch and by-product must be correctly and adequately recorded and significant penalties incurred for failure to do so. Correct recording will require shark identification training for fishers.*

**WWF point 8:** *Compulsory training must be provided to all ECIFF commercial fishers to teach the reasons for and methods to reduce by-catch and the appropriate handling of bycatch of shark (and all protected species) to promote increased post-release survivorship.*

**WWF point 9:** *Management incentives and disincentives should be adequate to require compliance with mechanisms established to achieve these objectives. The incentives must include a reliable, compulsory and random observer program within the ECIFF as a whole; disincentives should include adequate penalties and application of a risk-based approach to enforcement.*

### ***3.3 Removal of latency in large mesh net fishery***

In the early 2000s, there were about 819 licenses in this commercial part of the ECIFF. DPI&Fs effort to reduce latency in the fishery in 2004-5 reduced this number to 497 (DPI 2007b). While this is to be commended, significant latency remains in the fishery. DEH's EPBC Assessment of the ECIFF recognises this as a problem.

Best estimates are that, at most, approximately 250 licenses are used by people relying on the fishery for a significant proportion of their income. The rest of the licenses are used only intermittently and account for, say, 25% of total effort of fishery. These people have other sources of income and are contributing relatively little, economically, to any flow-on impacts, for example, with local fishing-dependent businesses.

These "part-time" fishers also impact upon the profitability of the full-time commercial fishers.

Management efforts to control effort or take per license will be severely compromised if fishers can simply purchase other, less used licenses, and add that symbol to their fishing symbol portfolio.

***WWF point 10: At a minimum, more stringent use-history criteria must be applied to remove the part-time, non-income dependent fishers that are using approximately 247 (i.e. 497-250) commercial licenses in this fishery. WWF supports that part of DPI&F Proposal 14 that refers to removal of latent effort in the N6 fishery.***

This recommendation is more prescriptive and specific than the recommendation (5) put forward by DEH in the EPBC Assessment report.

### ***3.4 Overall effort in large mesh net fishery reduced***

The overall effort in the ECIFF impacts significantly on the sustainability of target species, of by-product and of by-catch including protected species and shark. For example, EPA's Marine Wildlife Stranding and Mortality database annual reports document interactions between nets (both commercial and the shark control program nets) and protected species including whales, turtles, dugong, dolphins and including the Australian Snub-fin Dolphin (<http://www.epa.qld.gov.au/publications?id=2292>; accessed 18/2/08). The impact of the effort, especially on protected species, can be exacerbated or reduced depending on the net length (both individual net length and total length of net in Queensland waters), net tautness, depth of the net, height above bottom, mesh size and mechanisms in place to do with net attendance and to do with ghost nets.

According to the federal Department of Environment and Heritage's EPBC Assessment of the ECIFF (DEH 2006), the commercial large mesh net component of the ECIFF targets approximately 25 species or taxa; there are nine species that are by-product and more than 100 species that are by-catch (of which 40-60 are the major by-catch). Information on some target species has generated concern as to their sustainability, for example, the spotted mackerel and the grey mackerel. The by-catch includes species over which there are very grave concerns such as sharks, rays and other protected species such as dugong, inshore dolphin, turtle and whales.

Although Halliday et al (2001) states that the bycatch species are only some 15% of the total catch, this represents some 1 200 000 kilograms of fish every year. At best, one can say that the fishery is not perfectly species specific in its take.

As discussed in Attachment 2, the length of net to which animals are exposed annually is significant (about 40 000km of large mesh net per year along the Queensland coast).

Elsewhere, gillnet fishing has been banned due to similar concerns:

- New Zealand has banned set nets from inshore waters of the North Island's upper west coast to protect inshore dolphins;

- South Australia has banned use of monofilament nets due to interactions with marine mammals as has Florida; and

- Since 1990, chiefs of several major fishing rights areas in Fiji no longer issue any commercial gillnet permits.

The UN General Assembly adopted a resolution which bans drift net fishing (unanchored gill netting) in international waters effective December, 1992. This was due to concerns regarding interactions with species such as dolphin and turtle. The prohibition on the use of drift nets was extended to EU waters of the Baltic Sea from 1 January 2008.

Clearly, the most effective way to remove or reduce the impacts of the fishery on shark and other protected species is to reduce effort in the large mesh net fishery.

From a sustainability point of view, effort in the ECIFF must be set in a broader context. Populations of animals that are impacted by this fishery are also impacted outside of this fishery: other fisheries interact with some of the same populations and illegal, unreported and unknown fishing activity interacts or takes from the same stocks – this include foreign fishing vessels targeting shark for fins. A well known black market exists in the net fishery e.g. south of Sarina, in Bowling Green Bay and around Bowen. Fisheries management decisions about effort or take must, therefore, must be developed with an awareness of the total impacts upon targeted, by-product and by-catch stocks – not just impacts from licensed ECIFF fishers.

A fishery can be controlled through input or output controls.

### **3.4.1 Output control**

In the southern part of the fishery output controls have been applied to some target species: tailor and spotted mackerel. Controls on output should also help control effort unless there is incentive for high-grading. That is, the discard of existing catch in preference to a higher value catch that becomes available.

Output controls on target species or even on target and by-product species are of conservation concern in relatively non-specific fishery. Forcing controls to limit the take of particular target species would encourage high-grading. It may also increase the level of discarded by-catch and the fishing effort would increase to satisfy the species that are allowed to be taken.

Output controls are also as arbitrary as input controls in the absence of stock assessments for all the relevant species including by-product.

**WWF point 11:** *Existing output controls should remain unless it is proven that they make a negative contribution to the sustainability of the fishery overall. In this WWF do support DPI&F's Proposal 22 to reduce the incidental catch limit for tailor to 30kg but do not support the removal of the spotted mackerel TAC nor the increase of the incidental catch limit to 50. Rather, the level of TAC for the species controlled by output controls should be reviewed to ensure the ecological sustainability of the target stock given take in other sectors and illegal, unreported and unknown catch.*

### **3.4.2 Input control**

Effort needs to be reduced in the ECIFF. Below a systematic method is recommended for determining what level of effort in the fishery would be acceptable.

- a) The amount of effort ascribed to the licenses that were removed in 2004-5 should not have crept back into the fishery. To estimate the impact on effort that the removal of 40% of the licences should had and should continue to have average tonnage for the fishery for the years 2001-2003 was calculated (5974.27 tonnes). In the absence of better data, our analysis presumes that that 2005 data is somewhat indicative of the relative impact of the reduction in licences (the 2006 data on effort were not available at the time of writing). Catch in 2005 was 4932.4 tonnes – that is a 17.5% decrease from the 2001-2003 levels of take. This proportion of the effort need to remain removed from the fishery. The 2006 data should be used to check whether this is the case or not.
- b) The best estimates we could access indicate that the Great Barrier Reef Marine Park Structural Adjustment Package removed approximately 11% of effort from this fishery (as measured in GVP – which is, admittedly, not a good measure). The fishers have, most likely, bought back into the industry given the latency but managers should factor in the amount of effort that should have been removed by this structural adjustment in their assessments of what the effort levels should be reduced to. The 2006 data should be used to check whether this is the case or not. If better data on the actual effort removed is available, this could be used instead.
- c) 25% of existing effort can be said to be sourced from part-time, “recreational” fishers with a commercial license. This effort needs to be removed from the fishery (Section 3.3).
- d) From the latest data on days fished (Section 3.2), the targeted shark fishers use 26.8% of the total days fished in 2005 (or averages 29.1% of days fished from 2000-05) in the ECIFF ([chrisweb.dpi.qld.gov.au/CHRIS](http://chrisweb.dpi.qld.gov.au/CHRIS)); this component of the fishery needs to be closed and the commensurate effort removed from the fishery.
- e) The effort that is proposed to be removed from DPAs and important dugong conservation areas (Sections 3.6 and 3.7) should be removed from the fishery as a whole (and not displaced).
- f) Any additional effort introduced into this fishery against any licence after the 8/4/2002 investment warning must be removed. This should be conducted on a per-licence basis so as not to penalise those fishers that heeded the investment warning and to ensure this individual effort creep, which may be disguised in the overall industry, is removed.

Many advocate that a proportion of effort in any fishery be explicitly allocation towards the ecosystem. This is similar to the desire in water resource allocation that a proportion of the available water be allocated to the ecosystem. Such an approach is especially applicable in a fishery impacted by other fisheries and illegal, unreported and unknown (IUU) fishing activity. This allocation would be over and above the minimum stock required to be maintained for fisheries purposes alone. Allison et al. (2003) also advocated application of an “insurance factor” to any protective measures that are proposed, in the event of severe disturbance. Their work focussed on areas that might be considered for reserve design but the principles apply equally to fisheries management measures. Their examples of two disturbance types (oil spills and cyclones) in the south of the U.S.A., determined insurance factors varying from 1.1 to >4.0 depending, in part, on the assumed recovery time.

- g) Given the possibility of disturbances in this ecosystem (cyclones, climate change, oil spills and IUU fishing impacts), WWF considers that at least 10% of the effort in this fishery should be removed and re-allocated to ensuring the future of the ecosystem including target, by-product and by-catch species impacted by its activities.

**WWF point 12:** *Relative to an average of measure of effort over the years prior to 2004, effort in the ECIFF should be reduced by, at least,  $a + b + c + d + e + f + g$ . Much of this reduction should already have occurred. The effort needs to be reduced in such a way that there is a permanent reduction of effort to that level.*

**WWF point 13:** *Effort needs to remain at the reduced level until such time that it is proven that it would be sustainable for all target, by-product and by-catch species, for protected species and the ecosystem to increase effort. For this reason, WWF does not support DPI&F Proposal 13 as it pertains to the change in definition of use of nearshore nets under N2 where effectively effort will be increased (see Table 6, p. 49 of the RIS). For this reason WWF also does not support DPI&F’s proposal (Table 6, p. 51 of the RIS) to remove the 200m restriction for offshore nets in Keppel Bay nor does WWF support DPI&F’s Proposal 13 to allow more nets in rivers and creeks in the N2 fishery (Table 6, p. 52 of RIS). WWF does support DPI&F’s proposal (Table 6, p. 56, RIS) to not allow the use of more than one net at one time unless otherwise specified and that part of Proposal 13 removing the ability of N2 fishers to use offshore set and drift nets.*

**WWF point 14:** *The overall effort level must to be set in the ECIFF Management Plan, not regionally.*

**WWF point 15:** *Total effort across the regions (see Section 3.5) should not exceed the effort level calculated above.*

**WWF point 16:** *Any proposed management changes should maintain or decrease not increase effort that can be exerted by any symbol until such time that the ecological sustainability of any increase in effort can be statistically proved.*

Managing effort in this fishery, as suggested above, is difficult because there are no units of effort by which managers can uniformly increase or decrease effort.

**WWF point 17:** *Unitise effort in the fishery (per net length or time) to enhance management capacity.*

Efforts to conduct research into or implement the use of acoustic alarms in this fishery are, at best, distracting and, at worst, enable fishers and managers to avoid issues of more substance or convince themselves that these matters have been addressed.

**WWF point 18:** *WWF does not support the use of acoustic alarms as a mitigation tool to minimise interactions with marine mammals in the ECIFF.*

The impacts of effort on target species, by-product and by-catch are not effectively being monitored. WWF is aware that DPI&F are working on a Performance Measurement System.

**WWF point 19:** *Supports DEH's EPBC Assessment Report (2006) recommendation 2 & 3 to develop and implement targets for take of particular species or taxa and timely and effective management responses must be triggered when levels of take exceed agreed limits.*

**WWF point 20:** *Performance measures should include protected species and ecosystems and should be developed using a precautionary approach, the best available science, independent peer review of proposed measures and with significant and transparent input from the Management Advisory Committee.*

**WWF point 21:** *For target and by-product species, performance measures that trigger a management response should be at least: a possible (versus proven) reduction in commercial or recreational harvest or harvest rate of the lowest level of taxa possible above 10% over 3 years or any significant change to species composition. That is, if the data do not prove that the harvest rate is maintained over time, it is taken to be unsustainable. This does not apply to species with a TAC, for which the TAC itself would be the performance measure.*

The DPI&F RIS and PBT Appendix B mentions that a new Performance Measurement Framework “removes the need to include review events in fishery management plans” thus removing the legislative requirement to comply with operational objectives, performance indicators, triggers and required management responses. WWF does not agree with this approach.

**WWF point 22:** *Performance measures, targets, triggers and management responses should be legislated and not rest merely in policy.*

**WWF point 23:** *If the data that exist indicate that stocks may have reduced by more than approximately 70% of the pre-human impact levels then there should automatically be a moratorium put in place until data proving the sustainability of stock use is provided.*

**WWF point 24:** *Support DEH's EPBC Assessment Report (2006) recommendation 4 of the one year timeframe within which these performance measures including all reference values and management responses must be set.*

**WWF point 25:** *Support formal penalties for the fishery in the absence of targets that aim to ensure sustainability in a precautionary manner and penalties in the absence of adequate management responses when targets are triggered.*

**WWF point 26:** *Support building in the capacity (within the management plan) to review the targets as better scientific information becomes available.*

### **3.4.3 Net attendance rules**

Survival of protected species and sharks that are caught in large mesh nets can be significantly improved if trapped animals are attended to in a timely manner. Or entanglement may be avoided if the net is well attended. This can only occur if the responsible fisher is quickly able to register that such an animal is trapped in his net. On the water, and in inshore, low visibility environments, it is not possible to determine this from any large distance. Even 200 meters away is often too far to see

if a dugong, for example, is trapped in the net. In 1999, the GBR Ministerial Council recommended immediate introduction of 100m on-the-water attendance rules for all offshore nets. This has still not been implemented.

**WWF point 27:** *On-water- attendance to all set nets required to be within 100m. WWF support the DPI&F proposed changes to net attendance rules to be at 100 on-the-water (see Table 6, p. 50) except for the offshore nets where DPI&F propose 400m attendance rules and the possibility of leaving the net completely for up to 6 hours if it is “inoperable” (DPI&F Proposal 15).*

### **3.4.4 Net dimensions and set**

More net in the water means more interactions with protected species including sharks. Again, following the logic of proximity above, if one is within 100m of a 800m long net then one can legally be 900m away from a trapped animal. A fisher will probably not be able to see this interaction. Additionally, taut nets are less likely to entrap protected species including dugong. Shorter nets are easier to keep taut than longer nets.

**WWF point 28:** *400m is the maximum length of large mesh net that should be allowed in this fishery. Where current maximum net lengths are shorter they should prevail.*

**WWF point 29:** *Nets cannot be joined and if more than one net is set simultaneously they should be at least 100m apart from each other and the 100m on water attendance rule must still apply for each net.*

**WWF point 30:** *Training programs for fishers and observers encompass information about the importance and manner of setting a taut net.*

Fishers often know what times of day they are more likely to encounter dugong or other large (protected) by-catch. By setting nets for shorter periods of time that avoid the most likely times of interactions with protected species the fishers will be more able to avoid killing protected species. Ideally this would be no more than 2 hours. Fishers, however, like to fish over an entire tidal period, up to 6 hours or longer.

**WWF point 31:** *4 hour maximum soak for large mesh set nets.*

Very small mesh captures is less discriminate and catches more juvenile fish than larger mesh nets but does not tend to enmesh larger species including many protected species. Very large mesh means both that potential target species are not caught and large by-catch can more easily become entangled by trapping some body part. At the moment this fishery encompasses mesh size from 50mm to 245mm.

**WWF point 32:** *A standard maximum mesh size be applied across the large mesh net fishery (N1 and N2) of 162.5mm. WWF supports this DPI&F proposal for N1 and seeks that it also be applied to N2 versus the proposed 215mm (see Table 7, p. 58 of the RIS).*

## **3.5 Regionalisation of fisheries management**

Local stewardship is fundamentally important to the future of Queensland’s marine resources including the resources impacted by this fishery. Implementing some regional management control over the resources of the ECIF will help engender local stewardship, in part, by preventing

outsiders, with no vested interest in the future of an area, to take resources from that area. For example, there are very strongly held concerns about local grey mackerel stock off Port Douglas and indications are that, while local fishers have not had discernable negative impact, recent exploitation of the stock by non-local commercial fishers have caused significant, negative impacts on the stock ([http://www.ffc.org.au/Grey\\_Mackerel.html](http://www.ffc.org.au/Grey_Mackerel.html)).

Regional management controls will also better be able to recognise biogeographical differences in stocks and their abundance and distribution and allow application of locally appropriate management controls which are most likely to work. Locals might also be able to better come to regional agreements on allocation of resources between sectors e.g. commercial and recreational.

For this to be successful DPI&F must have the willingness and ability to adequately support the consultation and negotiations that would be required to come to regional management arrangements and also to enforce them, once approved.

One obvious border in the regionalisation would be distinguishing the southern fishery (south of Agnes Waters) from the northern fishery. The northern fishery, at least, should then be further divided based upon socio-demographics as well as biogeography into at least 5 separate regions.

Total effort in all the regions combined should be the same or less than the effort described in the WWF position described in Section 3.4.2.

**WWF point 33:** *Subject to the other WWF positions not being compromised, regionalise the fisheries management controls as much as possible into approximately one region south of Agnes Waters and five north of Agnes Waters.*

**WWF point 34:** *DPI&F should allocate sufficient resources to ensure timely and ecologically sustainable outcomes of regional planning processes. This should, at least, include support in the form of assistance with information gathering, communications within communities within regions and with head office, provision of dispute resolution services, adequate administrative support for community panels.*

### ***3.6 Enhance protection offered by DPAs***

In the 1990s it was considered that southern dugong populations were in trouble. In response, DPI&F established 16 Dugong Protection Areas (DPAs) based upon assessments of the different levels of risks that different nets posed to dugong and information about areas of importance to the southern population of dugong. The risk features identified also influence the level of interaction with other protected species such as turtles and cetaceans so the DPAs offer protection to these species as well as dugong (DPI&F 2007c).

There are 8 Dugong Protection Area (A)s and eight Dugong Protection Area (B)s. Ex-gratia payments and Great Barrier Reef Ministerial Council decisions aimed to significantly reduce netting and the impact of netting in these areas. The DPA(A)s contribute to reducing the decline of dugong populations but the regulations that apply within them are complicated so as to compromise compliance to them and thus the effectiveness of them. DPA(B)s has seen such increased levels of netting as well as complicated and/or ambiguous rules such that they have been deemed ineffective (DPI&F 2007c).

And nets kill dugong (Marsh 2000). Fifteen of 30 dugong necropsied in 1996 showed evidence of being caught in a net (Marsh 2000). The Queensland Environment Protection Agency are extremely conservative in their attribution as to the cause of a dugong death. Even so, 2005 data showed that 30% of attributable dugong deaths were due to nets (Greenland and Limpus 2005). Consider that, if a dugong is found to be healthy, with a gut clear of foreign matter (e.g. plastic bags) and unmarked, it is hard to conceive of any cause of death except drowning by net: these deaths are unattributed by EPA. If this logic is correct then 80% of deaths could be attributable to nets. By any assessment, nets cause a significant proportion of dugong deaths.

Given that the population of dugong along the urban Queensland coast is now at approximately 3% of the numbers estimated for the early 1960s (Marsh et al 2001) and the vulnerable and highly protected status of the animal, better protection is required for dugong in the DPAs.

Grech et al (in press) also identify gill and mesh nets as an important source of mortality of dugong and state that closures to these nets significantly reduced the risk of dugong mortality in commercial gill and mesh nets by reducing the area in which commercial netting activities are permitted in dugong habitats.

Inshore areas used by dugong are also, often, used by other inshore protected species that interact with nets such as sharks, turtle and cetaceans. Commercial logbook records of interactions with protected species and sharks in the ECIFF confirm both that such animals occur in the same area as the ECIFF and also are caught in its nets (Zeller and Snape 2005). Enhancing protection offered to dugong then has the added benefit of contributing positively to diminishing negative impacts upon these animals also.

**WWF point 35: *No commercial or recreational netting in DPA(A)s.***

The stranding reports recorded eight dugongs possibly interacting with nets in the area of Rodd's Bay in 2005 (these are the latest data available). The strandings database recorded six turtles, two dugong and several queenfish found washed ashore in that area in 2003. The DPA in that area is inadequate to protect dugong and other protected species.

**WWF point 36: *Realign the boundary of Rodd's Bay DPA(B) to encompass all of Facing Island. (This conforms with DPI&F's Proposal 8)***

### ***3.7 Enhance protection of key inshore habitats outside DPAs***

There are no DPAs north of Hinchinbrook Island or south of Hervey Bay. There are, however, significant and declining dugong, turtle and cetacean populations that use areas north of Hinchinbrook Island and south of Hervey Bay. These are areas also used by the ECIFF and their nets interact with all these species. About 9.3% of the Great Barrier Reef World Heritage Area is of notable conservation value to dugong either as low, medium or high conservation value. 90.7% of the GBRWHA has less than low conservation value for dugong. (Grech et al in press)

In particular, Grech et al have noted an area off Cape York to be particularly important for dugong (Figure 2). Outside of the Great Barrier Reef Marine Park, Moreton Bay is also known to be important for dugong.

As discussed above (Section 3.6), these inshore dugong habitats are also habitat for other protected species.

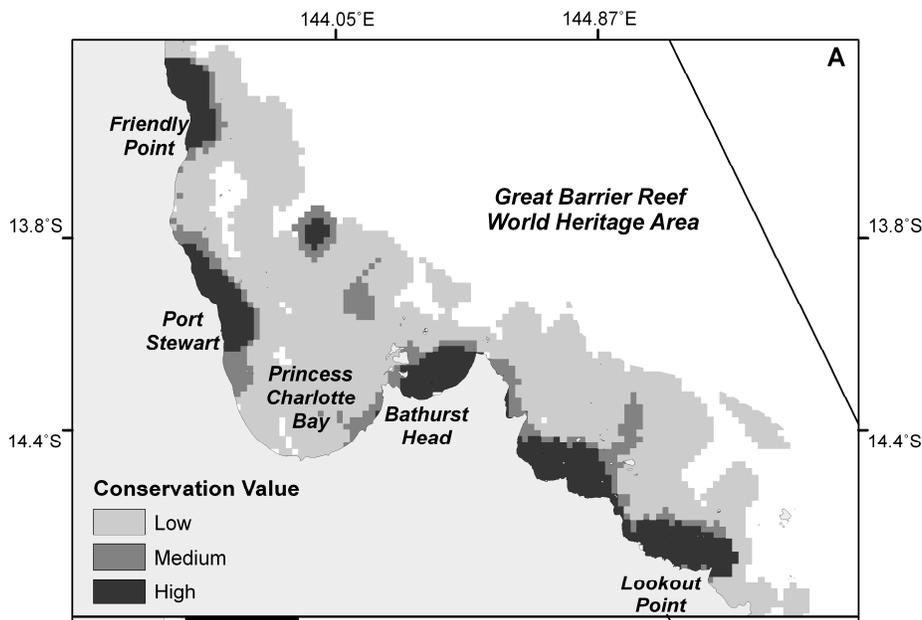


Figure 2. Area off Cape York identified as important for dugong (Grech et al in press).

**WWF point 37:** *All areas of high and medium conservation value to dugong (including the area starting north at Bobart Point, including Princess Charlotte Bay and to 10km south of Lookout Point) within the Great Barrier Reef World Heritage Area (Grech et al in press) and that 25% of Moreton Bay of highest conservation value to dugong be set aside as “no commercial or recreational netting” areas.*

Dugong and, increasingly, other species such as inshore dolphin and humpback whales, are known to migrate around headlands. In 1997, the Great Barrier Reef Ministerial Council was advised that headlands were important movement corridors for dugong. Restrictions on the use and length of nets that could be used adjacent to headlands have been ineffective. Within DPA(A)s, WWF has already stated that there should be no netting. But dugong migrate around headlands outside DPA (A)s as well. Given issues with compliance and advice from on-the-water compliance officers regarding distances required to ensuring compliance, “headlands” need to be clearly defined and “adjacent” should be clearly defined.

**WWF point 38:** *All headlands officially termed a “Cape” (by the Queensland Department of Natural Resources and Water) may not have any large mesh net fishing within a 10 km radius of the point of the headland. This includes headlands inside and outside all DPAs. If a more workable rule can be defined that will offer the same or more protection to threatened species, this alternative rule may be acceptable to WWF.*

This is more conservative than DPI&F’s Proposal 7 in terms of the distance proposed and DPI&Fs Proposal 7 is also only for headlands inside DPAs.

### ***3.8 Establish mechanisms to manage recreational fishing take and bycatch***

There are over 750 000 people that participate in the recreational component of the ECIFF. In 2002, 10 700 000 fish were taken by the recreational fishers (DEH 2006). One estimate, assuming each fish weighed just 500g, would have the recreational take equal more than half the overall commercial take in the ECIFF. DPI&F have estimated that for some species, for example bream, whiting and tailor, recreational catch is between two and four times the commercial harvest (DEH 2006).

The population of Queensland is increasing faster than any other state or territory of Australia. This increase encompasses especially “sea changers” who like to fish and, in the north, miners who look to fishing as an important part of their lifestyle. The pressures on the ecosystem from recreational fishing will continue to increase.

If fishing popularity increases at the same rate as the population (say, 2.3% per year), in 10 years there will easily be around one million people fishing recreationally off the east coast of Queensland.

While the DPI&F R-fish program offers valuable information about recreational fishing, there is no mechanism in place to manage recreational fishing beyond the bag and size limits. While laudable and important, bag and size limits are, ultimately, a necessary but not sufficient mechanism for managing recreational fishing in Queensland into the future, if fishers wish their children to be able to catch fish as well.

Aside from impacts on target species, recreational fishers are well known to interact with protected species and sharks. This only enhances the importance of having means by which to (a) involve them in the management of their resources and (b) have mechanisms in place by which to effectively manage their impacts.

**WWF point 39:** *Support DEH’s EPBC Assessment Report (2006) Recommendations 9 and 16 to ensure recreational and charter boat catch levels are sustainable. Where bag limits are introduced or reduced, WWF supports DPI&F’s Proposals 1 and 10. WWF recommends a more restrictive bag limit of 2 for barramundi consistent with proposed limits for other high order predators (e.g. Kingfish, Mulloway, Black Jewfish). WWF supports DPI&F’s Proposal 2 to remove the extended bag limit for charter fisher and for Fraser Island.*

The science on size at maturity of different fish species is imperfect and, in any case, there is individual variation and even regional variation in size at sexual maturity. Additionally, fishers often guesstimate length of fish and, if in doubt, tend to err on the side of keeping the fish (“it’s legal”) versus releasing it (“it might not be legal so I’ll let it go”). Often size limits are set at exactly the scientists’ best guess of size at maturity, potentially allowing no time for reproduction to actually occur. So, setting of a size limit to be at the size of sexual maturity is not an appropriate or precautionary approach to management.

**WWF point 40:** *WWF supports implementation size limits that are at least 2 cm higher than the size of sexual maturity. Where the diversity of rules might cause confusion, WWF supports adoption of the more conservative rules more widely. So WWF does not support the size limits in the DPI&F Proposal 1 that are set exactly at or below sexual maturity.*

**WWF point 41:** *All species of the genus Epinephelus (groupers) over 100 cm are Protected Species in the Great Barrier Reef Marine Park under the GBRMP Zoning Plan 2003. The size limits for groupers under the ECIFF management plan should be consistent with this. Size and bag limits in the ECIFF should be consistent with those in other fisheries in the area (e.g. coral reef fin fish fishery bag limits for all cod).*

**WWF point 42:** *WWF supports DPI&F's proposed introduction of bag limits where none exist (especially Mangrove Jack, Grunter, Trevally and Salmon) and decreases in bag limits where current limits are considered to be too high and simplifying bag limits to enhance compliance. Where there is known confusion in species identification, bag limits should apply to groups of taxa*

**WWF point 43:** *Within two years, implement a compulsory, free recreational fishing licence as a means to understanding the fishery better.*

### ***3.9 Enhance compliance using education and risk-based enforcement program***

Compliance comprises three essential components:

1. Education and awareness, ideally beginning well before any new management measures are implemented but ongoing afterwards also. This includes education regarding the issues as well as the solutions. This includes education of people who may use or value the resource in the future (e.g. school students) in addition to the current resources users.
2. Appropriate incentives to do the right thing. This should include some kind of reward for desired behaviours. It should also include a risk-based enforcement program that prioritises high probability, high environmentally damaging environmental crime to optimise the use of limited resources. The enforcement program should include adequate penalties to deter environmental criminals.
3. Enforceable rules.

DEH's EPBC Assessment of this fishery (2006) specifically identifies the lack of capacity to monitor the effectiveness of management arrangements as a problem and also critiques the lack of a risk-based compliance program.

WWF recognises that a comprehensive program along all three of the above-mentioned dimensions of compliance is beyond the resources of the DPI&F. The points WWF makes on this issue, then, represent a compromise.

**WWF point 44:** *Develop a code of practice for release marine mammals, turtles and shark for both commercial and recreational fishers. Develop and implement an ongoing compulsory training program on the code of practice and on species identification to deliver to all licensed commercial fishers. Develop and implement a training program on the code and on species identification that can be self-delivered by recreational fishing clubs.*

**WWF point 45:** *Provide regular, compulsory, regionalised training to all participants in the commercial fishery on the rules and regulations of the ECIFF Management Plan. That is, make the licence conditional upon attendance of the training.*

**WWF point 46:** *Within 2 years review and implement new logbooks (with input from other management agencies e.g. GBRMPA, commercial fishers and day-to-day managers) to ensure they are workable and adequate for management purposes. There must be improvements, especially, in recording soak times and incidental catches.*

**WWF point 47:** *Within 2 years review and enhance the risk-based approach to on-the-water enforcement to optimise use of limited resources. WWF supports DEH's recommendation 6 in their EPBC assessment (2006) except for the time frame.*

**WWF point 48:** *Implement a program to ensure magistrates and other relevant players in the courts are adequately briefed on the significance of environmental crime in the ECIFP.*

**WWF point 49:** *VMS on ECIFP commercial fishing boats must be compulsory.*

The "Serious Fisheries Offences" provisions in other DPI&F fishery management plans are sometimes being used to persuade magistrates to defer (or lower) penalties to environmental crime which should then be dealt with under the Serious Fishing Offences provision. The Serious Fisheries Offences provisions have, however, never been applied.

**WWF point 50:** *In this ECIFP Management Plan, counter-productive use of the Serious Fisheries Offences provision needs to be addressed.*

**WWF point 51:** *Ensure adequate penalties to deter environmental crime. For example, revocation of a licence upon a second incidence of lack of reporting of an interaction with a protected species. Develop the penalties by working together with other management agencies e.g. GBRMPA, commercial fishers and day-to-day managers. At the minimum reflect the level and type of penalties found in the GBRMPA Act but supplement these penalties with licence suspension and revocation where appropriate.*

**WWF point 52:** *Ensure the proposed new ECIFP Management Plan rules and regulations are thoroughly reviewed for feasibility by day-to-day managers both within the DPI&F and with other management agencies e.g. the GBRMPA. In particular, the netting regulations must be simplified.*

### ***3.10 Ensure adequate research occurs to redress data paucity regarding, especially, impacts on protected species and all shark take***

Throughout this document, and most other documents regarding the ECIFP, it is clear that there is a lack of data on many significant aspects of the fishery. This limits the ability of fisheries managers to manage well. Due to this paucity of data, throughout this document WWF have attempted to put forward positions that reflect application of the precautionary principle.

As more comprehensive information becomes available proving the sustainability of fishing practices to be exercised under the new ECIFP Management Plan or proving the sustainability of changes to those fishing practices then, perhaps, some of the more precautionary management regulations could be revised to allow higher levels of effort or take.

For these reasons, targeted research is required.

**WWF point 53:** *WWF supports DEH's EPBC Assessment Report (2006) Recommendation 18 to determine optimal mitigation strategies to (a) avoid interactions with protected species and sharks and (b) effectively disentangling and releasing trapped marine wildlife from nets to maximise survival.*

**WWF point 54:** *Allocate resources to support ongoing, existing and independent dugong and turtle research and to support shark research, especially on population status and trends.*

**WWF point 55:** *Effectively monitor target and by-product populations and trends or, at least, catch per unit effort of those species.*

**WWF point 56:** *Support DEH's EPBC Assessment Report (2006) Recommendation 10 to conduct stock assessments, population trend assessments and trends of CPUE of key ECIFF species, however, WWF considers that priority species should be identified from the entire suite of species impacted by the fishery, not just the target species. DPI&F conduct a risk-based assessment with the MAC to identify the priority species. These analyses should factor in that some populations extend beyond the geographic boundary of the ECIFF and also are impacted by fishing activities outside the ECIFF (as per DEH EPBC Assessment Report Recommendation 11).*

Research elsewhere has found significant disparity between records of incidental catch of protected species and other by-catch provided by commercial fishers with and without an observer present. DEH also consider the lack of verified data on species caught in this fishery to be a problem and support a robust observer program (DEH EPBC Assessment Report (2006) Recommendations 7 and 8).

**WWF point 57:** *Support the details of an observer program as recommended (no. 7 and 8) by DEH's EPBC Assessment Report (2006).*

**WWF point 58:** *Ensure that the observer program implemented is comprehensive and includes compulsory, frequent and apparently haphazard (i.e. not predictable) allocation of observers to boats that is a risk-based allocation and well as a sampling regime of data that enables extrapolation of the data to the fishery as a whole.*

The strandings database and necropsy program are essential tools in understanding interactions between marine wildlife and human activities and causes of mortality. These programs are at risk of being down-sized or ceased altogether. The implications of new findings regarding how better to determine the cause of dugong deaths should be explored to better understand the role of nets in dugong mortality.

**WWF point 59:** *Maintain or expand the stranding and necropsy programs including a review of existing data in light of better information on causes of death and an alternative assessment process (see next WWF point).*

The responsibility of determining the cause of death of animals in the necropsy program is significant and has led to litigation in the past. No one person should bear that responsibility.

**WWF point 60:** *Cause of death, where determinations require expert assessments of probability, should be the joint responsibility of a small group of experts (3-4 people) drawn from EPA, GBRMPA and the scientific community.*

### ***3.11 Set clear, reasonable timeframes for implementation of all aspects of the fishery management plan including regionalisation***

New management plans, if implemented too quickly, lead to low levels of knowledge and understanding regarding the plan amongst those affected. Additionally, where there will be structural adjustments to the fishery, fishers will need time to plan forward for their future.

This management plan is complicated by the fact that regional management is advocated. Regional planning will require a completely new and time consuming management effort at the local level.

However, if the implementation of management plans take too long, this leads to business uncertainty and ongoing negative conservation impacts.

**WWF point 61:** *Implementation of this management plan, inclusive of regional plans/arrangements, will take no longer than two years. Regional management arrangements/plans are to implement the management plan regionally. For those regions where regional arrangements/plans to implement the overall management plan have not been developed within two years, generic rules, consistent with the points set out in this document, should come into effect until such time that a regional management plan (or regional arrangements) can be developed.*

### ***3.12 Require approval of the final management plan and subsequent regional plans through Ministerial Council***

The ECIFF is of state-wide and national consequence particularly with regard to its interactions with protected species including sharks, dugong, turtle and various cetaceans. As such, its management plan should have federal and state-level endorsement.

**WWF point 62:** *The proposed management plan and subsequent regional arrangements/plans must be approved through the Great Barrier Reef Ministerial Council prior to finalisation and that WWF be given observer status at the Ministerial Council meetings where these plans are to be approved.*

### ***3.13 A new ECIFF***

Given that many of the proposed changes are significant in both nature and quantum, many fishers may not wish to remain in the ECIFF but others might find this “new” fishery attractive. Additionally, to ensure the future profitability and sustainability of this fishery along all dimensions, not just in terms of target species, the overall effort in the ECIFF must be reduced.

Removing effort through structural adjustment and the buying out of licences must be planned for and equitable payouts calculated. As one example to consider, DPI&F estimates that 25 fishers take 60-70% of the shark in terms of tonnage and, hence, in terms of GVP. 65% of the shark GVP was about \$3 279 800 in 2005 ([chrisweb.dpi.qld.gov.au/CHRIS](http://chrisweb.dpi.qld.gov.au/CHRIS)). At a value-added of 18.9% (see p355 Tables G19 and G20 of Productivity Commission 2003), that makes approximately \$619 900 in value-added in total. Assuming each of the 25 fishers shared equally in this, a crude estimate of profit, they netted about \$25 000 each in 2005. While this calculation would need considerable refinement, it is clear that the quantum of resources required to adjust this fishery equitably to ensure future profitability and sustainability need not be impossibly high.

**WWF point 63:** *Where necessary to reach sustainable effort levels, a structural adjustment package should be offered to departing fishers in a manner that ensures no opportunity for their effort to be re-introduced to the fishery. The financial offers included as part of the structural adjustment package should be prepared mindful of the Productivity Commission's (2003) assessment of a value-added (~profit) component of 18.9% that applies to the GVP of fisheries (see p355 Tables G19 and G20 of Productivity Commission Report, 2003).*

**WWF point 64:** *The arrangements for structural adjustment must be clear and with strict guidelines to help ensure certainty, effectiveness and avoid excessive costs to both government and fishers. These guidelines must be approved through Ministerial Council.*

**WWF point 65:** *While WWF does support the development of a By-catch Action Plan for this fishery (DEH EPBC Assessment Report 2006 – Recommendation 15) it considers that by-catch mitigation efforts should start immediately and not wait for the development of this plan. Further, the Plan should be developed in the next 2 years, not 3 years as suggested.*

**WWF point 66:** *Support the DEH EPBC Assessment Report (2006) Recommendation 2 that, effective in the current year, DPI&F are to report publicly and explicitly on the status of this fishery in as much detail as possible. As performance measures for all species (target, by-product, by-catch) are developed, reports should provide assessments against these performance measures. Reporting must be annual.*

**WWF point 67:** *DPI&F should inform not just DEWHA of intended management amendment that may possibly effect the sustainability of any target, by-product or by-catch species but the DPI&F ECIFF Management Advisory Committee should also be informed (see DEH EPBC Assessment Report (2006) Recommendation 1)*

**WWF point 68:** *Fishers choosing to remain in the ECIFF receive new licenses that are legally conditional upon compliance to the new regulations for the fishery. The effort exerted by the remaining fishers must be less than that described in Section 3.4.2.*

**WWF point 69:** *The Management Advisory Committee meeting times and meeting papers should be set adequately frequently and in advance to allow members to contribute fully to management decision-making. There should be one month notice of meetings and papers should be distributed at least two weeks prior. Mechanisms should be in place for formal registrations of dissatisfaction by members to the Department of Premiers and Cabinet, GBRMPA and DEWAH if any member considers that the views of this statutory body are not adequately addressed in DPI&F decision-making.*

**WWF point 70:** *WWF is neutral regarding the suggested change to the fishery area near the tip of Cape York (DPI&F Proposal 11) subject to greater clarity on which Management Plan will manage the "gap".*

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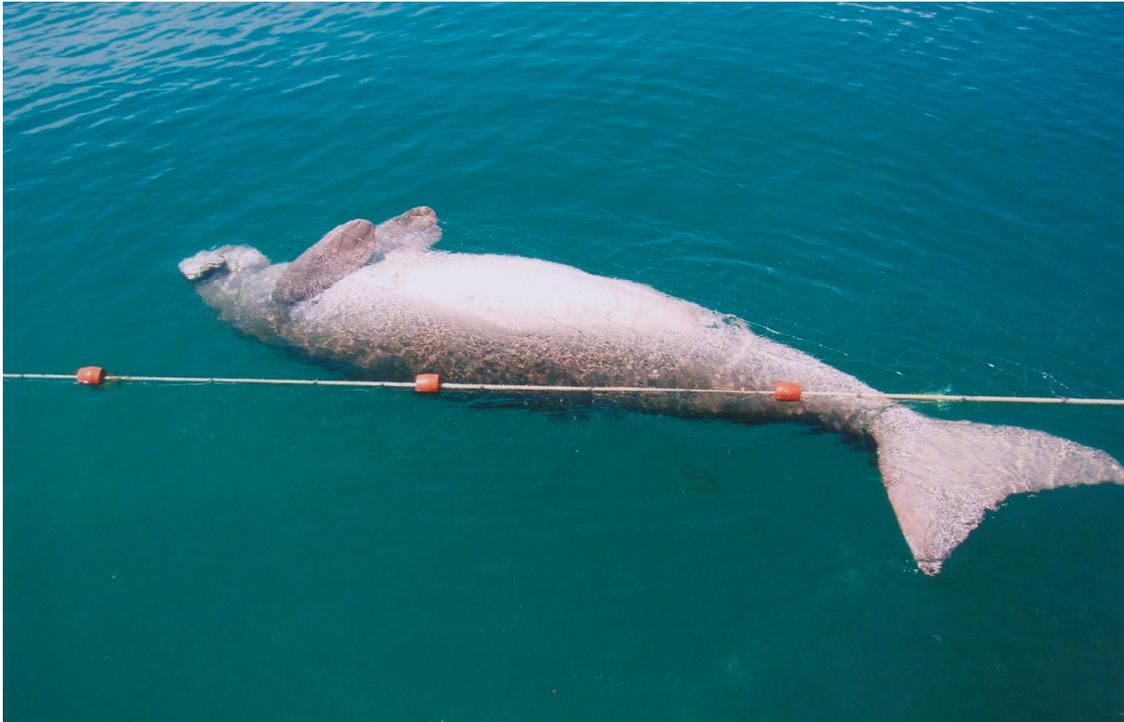
### **Attachment 1. The baseline has shifted – the ecosystem is compromised**

The area within which the ECIFF is conducted is a significantly depauperate marine and coastal environment. For a whole plethora of reasons, it is overall, arguably, 30% degraded compared to the system when pristine (Pandolfi *et al* 2003). And climate change introduces another, new threat that will impact the ecosystem in unknown and probably significant ways.

Shark catch and catch per unit effort have declined since 2003 in the ECIFF (see Section 3). This is a classic indicator of a fishery in trouble. The current situation is building upon a long history of diminishing shark populations as evidenced by the ~75% decline in sharks caught in DPI&F shark nets 1962-1988 (Paterson 1990). Quantitative data from Robbins *et al* (2006) indicate two of the most abundant sharks that occur on reefs and are bycatch in this fishery (whitetip and grey reef sharks) are declining at 7 and 17% per annum. And these sharks are not targeted by any fishery. They are bycatch in the ECIFF.

Barramundi catch in the ECIFF declined 1981 to 1994 to be only 45% of 1981 catch levels by 1994 (Zeller and Snape 2005) triggering the implementation of barramundi seasonal closures. The stocks remain a source of concern.

Dugong populations along the urban Queensland coast are at approximately 3% of the levels they were in about 1962 (Marsh *et al* 2001). This is well after the 1850s-60s stock collapse of dugong in the 1850s to 1860s subsequent to dugong stations being opened in the southern parts of the area of the current ECIFF. The ECIFF is well known to interact with and cause the death of dugong (see Figure 3). Definitely 30%, and arguably 80%, of recorded dugong deaths are caused by nets (Greenland and Limpus 2005 and Section 3.6)



**Figure 3. Dugong trapped in net**

An indication of the relative decline in rays, dolphin and turtle inhabiting inshore waters of the ECIF is supplied by looking at the declines in catch of these animals in the DPI&F shark control program (Paterson 1990). In 1988, 7% the number of rays were caught in the shark control program compared to 1962. In 1988, 16% the number of dolphins caught in 1969 was recorded in the shark control program. Six of the seven species of marine turtles occur in the waters of the ECIF; the conservation status of all species is “endangered”. Numbers recorded in the last 30-40 years show turtles in the GBRWHA (including in the areas of the ECIF) are in decline either as measured by nesting or direct population estimates (GBRMPA 2007). For example, since the 1970s the Loggerhead Turtle population has declined by 90% (Chaloupka and Limpus 2001). Meanwhile turtle soup factories were significantly impacting green turtle stocks from about 1904-1929 by harvesting up to 900 turtles per year. All these species are now bycatch in the ECIF; the numbers caught, released, survival post-release are all unknown.

In the 1950s-60s records show significant decline in seagrass beds. This habitat co-incides with the ECIF and is another part of the ecosystem that is in trouble.

Over half a million salt and freshwater crocodiles were shot in the 1950s to 1960s and are now starting some recovery. Since the 1974 ban on crocodile hunting, numbers are thought to be increasing although nesting habitat is limited.

Whaling brought Humpback Whale numbers down to a low of about 100 in 1963 when whaling was banned (DEH fact sheet); the pre-whaling population is thought to be at least 27 000 (Noad *et al* 2004).

Research into marine ecosystems started long after enormous changes such as these had occurred and therefore no baseline data exists for comparison (Knowlton & Jackson 2008; Friedlander & DeMartini 2002).

Estuarine crocodiles and Humpback Whales now have protected status. As both crocodile and whale numbers increase there is increasing likelihood, and already evidence, of interactions between these protected species and the ECIFR. Aside from causing conflicts with inshore finfish fishery participants, this will hinder the recovery of these species.

Water quality has declined in that sediment loading has at least tripled (if not been multiplied by 14), phosphorus has almost tripled and nitrogen has doubled (Haynes *et al* 2005). Additionally, habitat destruction in the inshore and coastal area of the ECIFR are significant and ongoing.

The entire fishery is also operating in a coastal environment known to be vulnerable to the future impacts of climate change. The consequences of any impacts are unknown but require resource managers to build resilience and apply the precautionary principle rather than manage to the extreme of MSY estimates.

#### **Some environmental protection measures**

DPI&F and others have implemented management measures that have contributed to reducing the rate of decline of inshore species and habitats.

Certainly, Dugong Protection Areas have contributed to reducing the rate of decline of dugong populations. However, the DPA (B)s are well known to be ineffectual, in that the rules have been unenforceable, and the DPA (A)s also have highly complex rules that are extremely difficult to enforce.

The 2003 Great Barrier Reef Marine Park (GBRMP) Zoning Plan and the 2003 Great Barrier Reef Coastal Zoning Plan have also contributed reducing the rate of decline of dugong and other inshore species. It should be noted, however, that much of the ECIFR occurs outside the GBRMP. In any case, only the very minimum level of no-take protection recommended by scientists was offered to inshore habitats (and, hence, species) within the GBRMP Zoning Plan 2003 (i.e. only 20% no-take areas were established). And in the Great Barrier Reef Coastal Plan 2003, where most of the ECIFR does occur, the levels of protection did not mirror those in the GBRMP Zoning Plan 2003. The levels of protection within the Coastal Plan were less than that in the GBRMP Zoning Plan; that is, less than the minimum recommended by the scientists (i.e. less than 20% no-take areas in the intertidal parts of the Queensland coast).

As mentioned above, whaling and crocodile hunting bans are showing a positive impact on those species populations.

There have been changes to the fishery regulations to reduce bag limits and improve size limits of several recreationally fished species.

### **Summary**

These significant management efforts have, on average, slowed the negative trend in most species. But the trend continues, however, to be negative. Given this negative trend will be compounded by the increasingly obvious effects of climate change, fisheries managers should be motivated to support precautionary management actions to ensure the future profitability and sustainability of the ECIFF.

## **Attachment 2. Background to the East Coast Inshore Finfish Fishery (ECIFF)**

The ECIFF is a multispecies and multigear fishery including both recreational and commercial fishers. In the first 20-30 years of this fishery, licenses were issued relatively freely leading to a large number of participants and latent effort. On a four year average (2002-05), 8 130 000 kilograms of approximately 16-20 target species and 40 by-product species are taken by the commercial component of the fishery (DEH 2006). In 2002, as an example, an additional 10 700 000 fish were taken by the recreational fishers (DEH 2006). This does not include the 60-odd species that are recorded as major bycatch – including the protected species mentioned above (DEH 2006).

### **Fishing impact**

Consider just the commercial large mesh net component of this fishery – the one that interacts most with the protected species and sharks mentioned above. At any one time it is possible that about 500km of large mesh nets are set along the coast of Queensland (DPI&F 2007a). If fishers were to fish every day using a significant component of what their licenses allow them then this would add up to 182 135km of net being in the waters off Queensland over the period of a year.

Fishers don't, however, use their endorsements fully. So only a small percentage of this fishing occurs. Say, 150 days per year. Considering that there is latent effort in this fishery, perhaps only half use their licence for 150 days of the year. So then, the east Queensland coastal waters would only be exposed to about 40 000km of large mesh nets every year.

This is a lot of net in the water catching over 100 different kinds of animals of which about 25 are the target (DEH 2006).

These theoretical estimates do not include other fishing gear used in the ECIFF: seine nets, ring nets, set pocket nets, tunnel nets, drift nets, small mesh nets, the entire possible variety of large mesh nets that could be set, offshore nets and nor does it include any recreational fishing effort.

### **Fishing value**

One estimate of the value-added (profit) associated with the commercial component of this fishery is approximately 18.9% (Productivity Commission 2003) of A\$28 000 000 GVP (Zeller and Snape 2005); that is, \$5.292 million per year. The recreational part of this fishery has a GVP of approximately \$240 million (Productivity Commission 2003). For context, the GVP of the recreational fishery is about nine times that of commercial netting and the tourism industry along the GBR catchment is worth more than 150 times that of commercial netting (\$4 200 million)(Productivity Commission 2003). Sharks, dolphins, turtles and whales are of significant value in the tourism industry and, in this way, the ECIFF is in conflict with, and a threat to, a component of the value of the tourism industry. Some very preliminary estimates of the per-visitor regional expenditure that is attributable to marine turtles is \$ 1360 and to sharks is \$ 1375 (Birtles *et al* 2007). Given there are some 2 million visitors to the Great Barrier Reef Marine Park each year, one can easily argue that, economically, turtles and sharks are orders of magnitude more important alive in the tourism industry than dead in the ECIFF.

In economic terms, relatively speaking, the ECIFF of low value.

## **Fishing culture**

Commercial fishing, getting fresh local fish for the barbie, wetting a line, are part of Queensland culture. Everyone either goes for a fish now and then or knows someone that does. DPI&F's public participation documentation ([www.dpi.gov.qld.au](http://www.dpi.gov.qld.au)) states that over 750 000 Queenslanders fish recreationally. The culture also encompasses commercial fishing although only some 500 authorised fisher are considered active (DEH 2006). This fishing culture exists despite the fact that well over 60% of fish locally available for purchase is imported because our commercial fishers, overall, get a better price for some of their product overseas. \$5million of this fishery is exported – that is just under one quarter of the commercial part of the ECIFF. The fish and fishing culture is imprinted in Queenslanders although, at most, 3.5% of the labour force in Local Government Areas along the East Queensland coast participate in the commercial fishery.

Thus, quite aside from any economic value, commercial and recreational fishing contributes to Queenslanders sense of self and sense of place and is important and so this fishery should be managed in such a way to ensure it continues to do so.

The cultural value of the marine resources used in this fishery is even greater for traditional owners whose country encompasses the east coast of Queensland where the ECIFF occurs. Managers' obligations to achieve sustainability include an obligation to not only work with these indigenous people but to help them maintain those parts of their culture that rely on the ongoing well-being of the animal populations impacted by the ECIFF.

## **Ecologically sustainable use**

The formally stated policy objectives for the ECIFF Management Plan being developed are to ensure ecologically sustainable development, maximum benefits for the community with minimal impact on this fishery, other fisheries or the environment, a fair allocation of fisheries resources between all users and a profitable commercial fishery. This is commensurate with the Queensland Fisheries Act and other pieces of legislation and policy that are relevant to this fishery including several international commitments (see also Attachment 3).

## **A logical conclusion**

Joining the legal requirement for ecological sustainability with the legal requirement to apply the precautionary principle and joining those with the long history of ecological, stock, habitat and species degradation in the environment of the ECIFF, the onus of proof of the sustainability of the fishing falls squarely with those managing and conducting the impacting activities.

That is, no fishery activities should be allowed in the ECIFF until such time as the sustainability of those activities can be proven along every dimension of impact upon biodiversity including target, by-product and by-catch species. The sustainability of the fishing activities would, simultaneously, ensure the long-term future profitability of the fishery.

The WWF concedes, as DEH appears to have conceded, that such a measure (i.e. cessation of the ECIFF until it is proven to be ecologically sustainable) is unlikely to be taken by DPI&F partly because it would have short-term negative social and economic impacts for some of the 250-odd people and

their families who rely on this fishery. Additionally, a blanket ban would also likely engender a social backlash that would have negative environmental consequences.

So, despite the clear legal mandate to ensure ecological sustainability in this fishery, WWF concedes that it cannot be achieved in the short term. However, WWF considers that it is also unfair to prepare a management plan that doesn't ensure the future sustainability and profitability in terms of fishers trying to make a living and investing their capital in the fishery. The management plan needs to be both the signal of and the substance to ensuring the future and ongoing profitability of this fishery.

The positions put in this document, then, are a compromise. They propose a lesser level of unsustainable use of the animals caught in this fishery as by-catch and by-product to allow the continued take of target species whose stock levels and trends are largely unknown but presumed not to be in decline.

### **Attachment 3. International, national and state legislation, policy and obligations that pertains to management of the ECIFF**

#### **International**

Australia is a signatory to and a participant in several international conservation conventions. By being a signatory or a participant, the Australian Government has committed to implement and follow the principles of the agreements.

- Convention for the Protection of the World Cultural and Natural Heritage (World Heritage Convention)
- Convention on Biological Diversity
- Convention on the Conservation of Migratory Species of Wild Animals (the Bonn Convention)
- Convention on the International Trade of Endangered Species of Wild Flora and Fauna (CITES)
- Convention on Wetlands of International Importance especially as Waterfowl Habitat (the RAMSAR Convention)
- The World Conservation Union (IUCN)

#### **National**

The overarching Australian environmental legislation, the *Environment Protection and Biodiversity Conservation Act 1999*, protects the environment, particularly matters of National Environmental Significance. It streamlines national environmental assessment and approvals process, protects Australian biodiversity and integrates management of important natural and cultural places.

In addition, the DPI&F should also have regard to Australia's:

- National Strategy for Ecologically Sustainable Development
- National Strategy for the Conservation of Australia's Biological Diversity
- National Oceans Policy
- National Strategy for the Conservation of Australian Species and Communities Threatened with Extinction
- Recovery plan for marine turtles 2003
- Humpback whale recovery plan 2005-2010
- Sustainable harvest of marine turtles and dugongs 2005 – A national partnership approach

#### **Queensland**

Fishing activities in the Marine Park are managed by the QDPI&F through fisheries plans and regulations. These set out the rules for commercial fisheries and recreational anglers such as the type of fishing gear that may be used, the number of commercial fishing boats allowed in a fishery and size and bag limits. But other legislation also applies.

- *Fisheries Act 1994*
- *Nature Conservation Act 1992*
- *Marine Parks Act 2004*

#### **Within the Great Barrier Reef Marine Park**

In addition to the above-mentioned obligations, under the *Great Barrier Reef Marine Park Act 1975* the Great Barrier Reef Marine Park Authority has jurisdiction because:

- It is required under s.32 (7) to have regard, among other things, to the '*conservation of the Great Barrier Reef*' as an ecological whole
- Its legislation has the ability to list Protected Species, the take of which from the Marine Park requires the GBRMPA's permission under *Great Barrier Reef Marine Park Regulations 1983*, Regulation 29

There is also 5-year objective under the *25 Year Strategic Plan for the Great Barrier Reef World Heritage Area: 1994-2019*<sup>1</sup> is '*to pay special attention to conserving rare and endangered species*'

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Source: GBRMPA position statement on sharks, [www.gbrmpa.gov.au](http://www.gbrmpa.gov.au)