



**SUBMISSION TO THE
GREEN PAPER ON FISHERIES
MANAGEMENT REFORM IN QUEENSLAND**

14 October 2016

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INTRODUCTION: QUEENSLAND DESERVES BETTER

Industry has been waiting to develop a strategic vision with government and has been prepared to help develop a better fisheries management regime. The State Government's "Green Paper" provides a vision that adopts net free zones (NFZs) as a resource allocation tool thereby keeping a highly contentious, politically motivated fisheries management tool¹. Our current fisheries management regime is really 'political fisheries management' whereby the political agenda is more important than science based management.

Industry is prepared to negotiate and undertake fisheries reform with key fisheries stakeholders but there is no trust; no trust of government motives, no trust of department officers and no trust of environmental non-government organisations (eNGOs). Industry has been asked to provide comment on a fisheries review document that raises more questions than it answers.

The Queensland Seafood Industry Association (QSIA) has argued that fisheries management in Queensland ought to include the following obligations and outcomes:

- The reform process requires an incremental approach but not one that lasts for years.
- A commitment to protect and utilise the marine environment, habitat, bio-diversity and fish stocks in ecologically sustainable ways.
- Unfortunately, the paper does not provide enough detail for industry, let alone the community to reach the following goals:
 - Access to the communal fisheries resource comes with the responsibility that all sectors report accurate and verifiable catch data, contribute financially to management and compliance costs and enter into 'good faith' negotiations on all matters; and
 - Commercial fishing plans that support all available species to be harvested sustainably with the greatest efficiency at the lowest cost (avoiding red and green tape) presenting businesses the opportunity to prosper.
- Industry is looking for the political games played with commercial fishing businesses, families and regional economies to end – the Green Paper goes nowhere near this aspiration.
- A transparent and supported representative structure.
- That the development and expansion of one industry or sector is not at the detriment or contraction of another industry or sector, including industries and enterprises that do not

¹ More detail will be provided regarding the NFZ policy under Theme 3.

directly use or rely on fisheries resources. This means Queensland fisheries resources will be protected and guarded for 'resource dependent' and 'resource associated' stakeholders.

The Queensland commercial seafood industry is ready and willing to engage in the reform process under the following conditions – (1) all sectors will negotiate under similar conditions (i.e. data is collected from all sectors), (2) peer reviewed science is a foundational element of fisheries management, (3) there is no political interference in resource allocation decisions and (4) the NFZs are taken off the policy agenda. Not an unreasonable ask but critical to the success of better strategic fisheries management.

Regards,

A handwritten signature in black ink, appearing to read 'KH', is enclosed in a light blue rectangular box.

Keith Harris
President
Queensland Seafood Industry Association

ACKNOWLEDGEMENTS

The development of this paper was a multi-step process incorporating feedback and ideas developed from input across the harvest and post-harvest sectors. On behalf of the QSIA, I would like to thank Emeritus Professor Tor Hundloe AM for his insights and critical analysis of the proposed reform process.

I would also like to thank the following individuals and groups:

- The hundreds of Queensland seafood consumers that have signed letters to the Minister for Agriculture and Fisheries and State politicians.
- The hundreds of seafood consumers that provided their views on access to fresh local seafood via the online survey at www.saveyourlocalseafood.com.
- QSIA Board.
- QSIA Members – Elaine Lewthwaite, William Pearce, Margaret Stevenson, Darran Line, Lydia Blehm, Vicki Bush, Kelly Morgan and Andrew Mirosch.
- Nathan Rynn, QSIA Net Committee Coordinator and committee members.
- Neil Green, QSIA Line Committee Coordinator and committee members.
- Shane Stockhill, QSIA Crab Committee Coordinator and committee members.
- QSIA trawl fishery members.
- Dane Van Der Neut (Commercial Fishing Media).
- The Sydney Fish Market (SFM) for its submission on the issues raised in the Green Paper.

This submission provides industry and government with an opportunity to implement fair and equitable fisheries management outcomes to meet industry needs and ensuring ongoing access to fresh local seafood by the ultimate beneficiaries of better fisheries management, the Queensland community

Regards,



Eric Perez
Chief Executive Officer
Queensland Seafood Industry Association

RECOMMENDATIONS

The following recommendations have been developed based on the findings in this paper and have been designed to ensure that the community and industry interest are represented.

Recommendation 1: Status quo is not acceptable

The reform process must lead to a level playing field in terms of fisheries management policy and must include the following culture change:

- Removal of political fisheries management in favour of a science-based fisheries management approach; and
- Removal of the NFZs as a fisheries management policy tool.

Recommendation 2: Science-Based Fisheries Management

That science is used as the foundational mechanism to inform fisheries management.

Recommendation 3: Government must investment in the fisheries reform process

At this stage there are no government funds allocated to the reform process. The marine resource is a public good that demands a government investment in its management.

Recommendation 4: Remove the unwarranted 60% unfished population proposal

The concept of managing stocks to achieve 60% unfished population is a proposal without documented justification. There is no literature and none has been found that supports it. There is evidence that the bulk of the Queensland fisheries are being fished at a sustainable level.

Recommendation 5: Harvest Strategies

Determining harvest strategies should be determined at a later stage through extensive consultation between industry and government based upon proven science.

Recommendation 6: That industry stakeholders are involved in the development of a Fisheries Management White Paper

The Green Paper is one step in achieving reform in the fisheries management space. Industry must be involved in the development of a Fisheries Management White Paper.

Recommendation 7: Fisheries Management Decision-Making Infrastructure

Recommendation 7.1: Establish a Local Fisheries Resources Focus Group

An all-inclusive local stakeholder group established to address local resource management functions and decisions. The membership of the local group may include commercial fishers, recreational fishers, charter operators, game boat operators, Indigenous fishers, consumers, supply chain dependent businesses, BFPO, marine park regulators and local government.

Recommendation 7.2: Establish Fishery Advisory Panels

Fishery specific advisory panels would be established to oversee state-wide fishery matters, review and recommend amendments to management plans, assist in World Trade Organisation (WTO) approval process, including formulating recommendations and education about approval conditions, fishery development, and fishery research. The fishery advisory panel is not just for management plan review activities but a regular and ongoing fisheries management advisory panel that meets at least quarterly and provides input into the State Fisheries Board. Participants of the specific fishery advisory panels would include:

- Financial stakeholders – commercial fishers, consumers, supply chain, dependent businesses;
- Non-financial stakeholders – fishery managers, researchers, conservationists (Department of Environment, Great Barrier Reef Marine Park Authority (GBRMPA) and Department of State Development); and
- Expert advisors, by invitation – economists, scientists (environmental, social).

Recommendation 7.3: Establish a State Fisheries Board

Establish a State Fisheries Board. Membership of the state fisheries board would be made up of representatives from key stakeholder groups:

- Commercial fishing industry.
- State and Federal government departments.
- Independent scientific experts.

These groups cover not only industry interests but the broader public interest in the ongoing management of Queensland fisheries. Membership should exclude special interest groups who have anti-commercial fishing agendas or have a purely environmental view of fisheries

management with the absurd assumption that industry does not value or protect its marine environment.

Recommendation 8: Recreational Fishing License or Catch Monitoring System

QSIA supports the introduction of a recreational fishing license or some form of user pays recreational catch monitoring system which is a prerequisite for workable harvest strategies and overall better management of the marine resource.

FINDINGS

QSIA seeks better fisheries management arrangements for the State's fisheries and outlines a series of findings for consideration by the government.

Findings	Description	Page Reference
1	The State government needs to return to open and transparent use of research-based evidence in fisheries policy development.	23
2	Only a small proportion of recreational fishers are highly skilled and capable of high catches. It is this proportion of fishers who are dictating the fisheries management regime in Queensland. What is needed is an alternative set of recreational fishing representatives who have a long-term vision for a shared fisheries resource.	24
3	By incorporating incompatible statistics on the values of the recreational and commercial sectors, the Green Paper misrepresents the importance of the recreational sector. The recreational catch is worth only a fraction of the expenditure by recreational fishers.	26
4	The Department of Agriculture and Fisheries (DAF) was either unaware of the July 2016 research published by CSIRO or choose to ignore it. On the basis of the CSIRO study of July 2016, the fisheries in question are under-fished and there is an economic case to increase effort where it is under-utilised.	27
5	<p>There is no value adding in recreational fishing, while a commercially-caught fish will have its economic value increased substantially as it is turned into fresh fillets, incorporated in a serving of fish and chips or become part of a restaurant meal.</p> <p>The commercially-caught fish is ultimately worth considerably more than the recreationally-caught fish and, important to note, as it is transformed from raw material to a higher value product generates employment up the chain.</p> <p>There is no employment generated up the value-added chain from recreationally caught fish as there is for commercial fishing, simply because there is no value-adding for recreationally-caught fish.</p>	32
6	The flow-on from an initial activity will produce income and jobs for industries and people up or down the line. These are measured by multipliers. But be very wary of "output" multipliers as they can be very misleading as they involve double counting. Hence, they should not be used in describing a sector of the economy or an economic activity. On the other hand, employment multipliers are quite useful.	42

Findings	Description	Page Reference
7	<p>The fact that the multipliers for recreational fishing are much smaller than those for commercial fishing is the consequence of recreational fishers not being employed to fish and as a result not earning an income from fishing, and they also generate no employment and income from the processing and ultimate sale of their fish, something that commercial fishers do.</p> <p>It is only through the purchase of hooks, lines and sinkers, plus boat fuel if they fish from a boat, accommodation if on an extended trip, and the occasional cost of replacing a fishing rod and reel, that recreational fishing generates income and employment.</p>	44
8	<p>In Queensland, commercial fishing creates more full-time employment, even though, on the basis of the Green Paper, there is more than twice as much expenditure on recreational fishing. Any reduction in the amount of commercial fishing would destroy more jobs than it would create.</p>	45
9	<p>There are enough primary stakeholder groups in the State and National government and industry domain that can be drawn on to help manage Queensland fisheries to ensure economic, social and environmental values are maintained.</p>	55
10	<p>In recent times there has been a coordinated effort along the east coast of Australia to increase recreational fishing activity at the expense of commercial fishing activity particularly in the inshore net fisheries. There has been since 2000 a dramatic decrease in recreational fishing nation-wide and in Queensland. The decrease has been since 2000, from 23% of the State population aged 5 years or more, to 17% in 2010, to 15% in 2013-14.</p> <p>In terms of recreational fisher days, there were about 30% less fishers in 2010 to what there were in 2000. Adjusted for population growth the decrease has been between 40% to 50%. If a re-allocation of access is considered, the opportunity exists to increase the share of the commercial sector, all other things being equal.</p>	57
11	<p>It is expected that, notwithstanding population growth, the recreational fishing effort and the catch will remain as it is today or decrease. On the other hand, population growth and changing preferences will result in a significant increase in demand for commercially-harvested seafood.</p> <p>The economic value of the commercial catch will increase. That being the case, the State government could make a positive commitment to the State's economy and regional centres by allocating greater resources to commercial fishers.</p>	58

Findings	Description	Page Reference
12	Preferences for recreation and leisure change. An ongoing decline in participation in recreational fishing is likely. Fisheries managers should take the opportunity to reallocate resources to the growing fishery sector (commercial fishing) not the declining sector (recreational fishing).	59
13	All sectors (commercial, recreational, charter, game, Indigenous and freshwater and aquaculture) to be managed on a fair, equal and transparent basis for expansion or contraction. The recreational bag limit for shared target species need to be reduced and recreational take properly policed.	61
14	Resource allocation ought to be based on access to Queensland fisheries resources (including the seafood it produces) to all stakeholders, recognising the general public who want to consume Queensland seafood as the largest stakeholder and commercial fishers as the only sector which harvests seafood for the community – including consumers who do not fish for themselves.	64
15	The fisheries management framework needs to be based on regularly collected, verifiable catch data and harvest volumes across all sectors and regular stock assessments of shared bio-mass species with catch data and harvest reports being regularly released publicly.	64
16	Any and all harvest strategies developed ought to include provision for commercial fishers' diversification with particular consideration for the economic impacts that would ensue for the many small multi endorsed fisheries.	64
17	As per the Recreational-only Fishing Areas Report by RA Tobin, 'Further investigation is required to understand why recreational fishers do not choose to use current ROFA, the cause of conflict between the recreational and commercial sectors, and whether expected catch benefits of ROFA are being realised'. The 2010 Report raised real concerns that recreational fishers are not fully utilising recreational only fishing areas. Continuing resource access conflict and calls for more recreational only areas have little basis when current provisions are not resulting in preferential use or full utilisation by recreational fishers.	65
18	With advancements in personal communication devices, mandatory catch and effort reporting ought to be implemented in the recreational, charter, game, Indigenous and freshwater sectors, to match the reporting obligations of the commercial sector. Complete catch data and stock assessments can then be used to set accurate and binding harvest levels for the highly valued and heavily targeted species.	67

Findings	Description	Page Reference
19	All developments that have a negative impact on the fisheries resources and associated marine environment, bio-diversity and sustainability obtain an independent cost benefit analysis, made public for scrutiny and comment. A trust needs to be established to be accessed and used by fisheries resource users. Full operational details of the trust fund to be developed and agreed with input from all fisheries resource users.	97
20	The fisheries act should be written to prohibit the buy-out of commercial fishing licenses by anti-commercial fishing groups who use their influence to deny Queensland and Australian consumers fresh local seafood.	68
21	That there is sufficient flexibility and adaptability in the provisions of commercial fisheries management to allow for progressive modification of regulations, after robust consultation with entitled stakeholders to improve economic outcomes (e.g. real time management, or modification of seasonal closures to align with lunar cycle).	68
22	Reporting regimes must be reviewed to embrace simplicity, functionality, timely completion and available technology.	72
23	There is an urgent need to restore open communication between government, fishers and key stakeholders along the coast.	73
24	That the new and improved version of Queensland fisheries management has robust and regular representative input through timely two-way information exchange both vertically and horizontally. That DAF start working co-operatively 'with' stakeholders and cease doing things 'to' stakeholders.	75
25	Increase enforcement to target illegal fishing and black market selling of catch by all sectors. Compliance checks and enforcement should be risk based with significant and regular breaches being most heavily administered. Compliance officers must have the powers to undertake the full range of duties required to fulfil the role.	76
26	The State government work with key stakeholders to determine reform costs. The State government should also guarantee seafood industry businesses (pre and post-harvest) are not lumbered with the costs of reform.	84

Findings	Description	Page Reference
27	That the State government remove the use of NFZs as a fisheries management tool. That the State government commit to a process of removing political considerations from its fisheries policy agenda.	88
28	Our seafood is very highly regarded by foreign and domestic visitors. Tourism is an important employment generator in the Queensland economy which has been cited by the State government as a pretext for the net free zone policy. There is a real and critical link between local caught seafood and the tourist experience which has been missed by the Green Paper.	94
29	Increase budget to DAF to achieve four outcomes: (1) fisheries regulation, (2) fisheries enforcement, (3) science-based management and (4) industry development.	98

FINDINGS GROUPED BY THEME

The findings identified in the Green Paper suggest that the fisheries management reform process will be somewhat complicated, multi-faceted and requiring a strategic and fisheries specific mix of responses to achieve positive outcomes for the community and industry. Grouping the findings in the QSIA response reveals a number of themes. The range of themes have led to a range of recommendations to move the reform process forward.

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Communication	Finding 23 Finding 24
Resource Allocation	Finding 10 Finding 11 Finding 12 Finding 13 Finding 17 Finding 27
Coastal Development	Finding 19
Representation	Finding 2 Finding 9
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Reporting and Data Collection	Finding 15 Finding 18 Finding 21
Reform Implementation	Finding 26 Finding 29
Tourism Value	Finding 28
Politics	Finding 20

ABBREVIATIONS

ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
BFPO	Boating and Fishery Patrol Officer
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAF	Department of Agriculture and Fisheries
ECIFFF	East Coast Inshore Fin Fish Fishery
eNGOs	Environmental Non-Government Organisations
EMS	Environmental Management System
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
ESD	Ecologically Sustainable Development
FAO	Food and Agriculture Organisation
FRDC	Fisheries Research and Development Corporation
GBR	Great Barrier Reef
GBRMPA	Great Barrier Reef Marine Park Authority
GDP	Gross Domestic Product
GRP	Gross Regional Product
GVP	Gross Value of Production
MAC	Managerial Advisory Committee
MEY	Maximum Economic Yield
NSIA	National Seafood Industry Alliance
NFZ	Net Free Zones
ROFA	Recreational Only Fishing Areas
SFM	Sydney Fish Market
SOCI	Species of Conservation Interest
QSIA	Queensland Seafood Industry Association Incorporated
TAC	Total Allowable Catch
WTO	World Trade Organisation
ZAC	Zone Advisory Committees

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FISHERIES MANAGEMENT OVERVIEW

The Queensland Government is undertaking a review of fisheries². To facilitate the review, the government issued a Green Paper via the Department of Agriculture and Fisheries (DAF) in July 2016. The review is most welcome. It provides an overdue opportunity for both expert and public comment on the future of a valuable resource.

A positive aspect of the review is that it is based on seeking consensus on the way forward. To achieve consensus all relevant data and analyses have to be put “on the table”; and these data and analyses have to be evidenced-based. This will mean that interested parties are discussing facts not simply opinions or long-held myths.

For a consensus to be arrived at the fundamental principles of the disciplines underpinning modern fisheries management need to be understood and applied. The key disciplines are biology, ecology and economics. In recent years there has been a marriage of these discrete disciplines to form the field of bio-economics.

In as much as the paper makes the over-riding objective to “optimise benefits to the community” and seeks to allocate access to fishery resources “on maximising the economic value Queenslanders receive from sustainable use”, it is necessary that the economic dimension of fisheries is fully understood. This is a major function of this submission.

It is acknowledged that at the highest level, fisheries management in Queensland is undertaken by very experienced and qualified economists. That must auger well for the future of the fisheries. However, it must also be recognised that the managers, the responsible Minister and her parliamentary colleagues can be subject to considerable lobbying that, unfortunately and generally unintentionally, is misguided on economic concepts and measurements.

In the interests of correcting inappropriate and flawed views, this report will deal in some detail with economic matters. The aim is to put on the table the relevant economic principles and metrics based on them, so that interested parties can work from the same conceptual base and numerical values.

² This section titled, ‘A Shared Reform Vision’, was drafted by Emeritus Professor Tor Hundloe. Professor Hundloe’s biography is contained at Attachment 1.

The Green Paper makes it clear that the harvesting of seafood has to be sustainable. That can be taken as an over-riding principle. In concert with that there are two caveats attached to seeking maximum economic benefit from harvesting the resource. The first is to ensure that there is low risk to the fished resource, to other species, particular endangered ones, and to the World Heritage status of the Great Barrier Reef (GBR).

The second caveat (mentioned above) is that the resources available to be fished are shared so to meet the objective of optimising benefits to the community. Sharing applies to three sectors, commercial fishers, recreational fishers and fishing by Indigenous folk. The last group is small in number and concentrated in the far north of the State. There is scant data on their fishing, and as conventional economic issues are not strictly involved, it is not discussed below (for a discussion of Indigenous fishing see Hundloe 2002).

Further by the way of an introduction, it is appropriate to note an important aspect of Queensland's fishery resources. McPhee in writing about Australian fisheries (in Hundloe et al 2016, p.203) states: "Australia is blessed with an exceptionally diverse marine fauna, but the productivity of the marine environment is relatively low..." In the same book (at p.120) he notes that "Queensland has a huge diversity of seafood". While it would be preferable to have a higher level of biomass, the diversity is a valuable consumer attribute in the economic sense that the greater the choice the better off the consumer.

The consumption of seafood is growing at about 1% per annum, and hence we could expect that by 2026 (in 10 years), average consumption will approach 17 kilograms per year. While that itself will lead to some increase in demand, the expected population growth will see Queensland with near 6 million people, up from the present 4.6 million. Combining the predicted increase in average demand and population growth, by 2026 we could expect an overall increase from the present 69 million kilograms consumed by Queenslanders to near 100 million kilograms. This is a significant increase.

Australians do not rely on locally-caught seafood but import much. Our low marine biomass is the determining factor. However, the traditional fish and chip shops, the wet fish markets, the supermarkets and seafood restaurants are faced with consumer demand for local product. There are various estimates of the premium attached to local seafood, but they are not necessarily reliable as "local" can mean anything to the nearest bay or inlet to anywhere in Australia. Regardless of

that, increased demand coming face-to-face with limited local supply will either mean spending more foreign exchange on imported seafood or giving priority to the commercial sector.

The next sections deal with one of the perennial difficulties faced by fisheries managers, sharing access to the resource. The issue is made difficult to resolve by the fact that assertions about the economic importance of the competing sectors are based on numbers that cannot be compared. Just as apples and oranges are entirely different fruits so are the completely different types of numbers resorted to by the competing fisheries interests.

Rather than simply pointing to how an “apples to apples” comparison can be made, the following discussion digs deep into the basic economic principles and illustrates their application. This is considered the best way to clarify the issues which have frustrated fisheries managers for decades.

CHAPTER 1. MANAGING TARGET STOCKS

1.1. THE NOTION OF MAXIMISING ECONOMIC BENEFITS

To maximise economic value on a sustainable basis is a very laudable goal³. It rules out over-fishing (“mining” the resource) and, as a consequence for economic analyses, rules out anything but the lowest discount rate. This warrants a brief explanation.

In economic evaluations it is common practice to discount both costs and benefits that occur in future years. In cost-benefit analyses undertaken for governments it is normal practice for Treasury departments to impose a positive discount rate. We should note that discount rates have a significant impact on the level of effort and harvest that is deemed the dynamic Maximum Economic Yield (MEY) for a fishery.

Applying a zero discount rate will have MEY at a lower level of effort and, hence, a lower harvest than that of Maximum Sustainable Yield (MSY). How much lower is a function of the shape of the yield curve and the cost of fishing. The role and importance of MEY is discussed in some detail in a later section.

Finding 1

The State government needs to return to open and transparent use of research-based evidence in fisheries policy development.

1.2. A NOTE ON FISHING SUCCESS RATES

There is no case made in the Green Paper that the recreational harvest is impacted by the commercial fishery. The only comment is that the recreational catch is “low”. For most recreational fishers’ catches have been and will continue to be low. Only a small proportion are highly skilled fishers and capable of high catches. There is an extensive literature on this subject.

³ This section titled, ‘Managing Target Stocks’, was drafted by Emeritus Professor Tor Hundloe.

To illustrate that the few get most of the fish while the vast majority get only a few or none, we can make reference to a report compiled by a Departmental officer 30 years ago (Moore, 1986, "Recreational Fishing in Hervey and Great Sandy Strait, Department of Primary Industries). Moore's research, given that it was undertaken in Hervey Bay and Great Sandy Strait, makes it especially relevant today. There is a campaign by some in the recreational fishing lobby to exclude commercial fishing from some of the most productive grounds in this area. The campaigners make no reference to Moore's historical data.

Moore notes that the average catch per fisher/per trip, if the fishers were targeting summer whiting, was 3.5 fish, and 80% of fishers caught no fish. The average catch of winter whiting per trip was 9.2 fish and 70% of fishers caught no fish (Moore 1986, p.14). Moore states that these success rates are not unusual as there is world-wide evidence of similar success rates (Moore 1986, p.15). He comments that the lack of success by the vast majority leads to a view that catch rates generally are declining while the very successful fishers believe catch rates were increasing.

Recent evidence suggests nothing has changed in terms of catch success and perceptions of the cause of lack of success. What is important to note is that there is a core of experienced and generally successful recreational fishers and (in statistical terms) a long tail of "amateur" recreational fishers. Fisheries managers have the difficulty of dealing with the perceptions of the unsuccessful fishers.

Whether or not the lack of success by the many is leading to a decline in participation is an open question. Data is presented below on the decreasing effort, nation-wide, by recreational fishers. This opens up an opportunity to re-examine the relative (de facto) sharing of the resource.

Finding 2

Only a small proportion of recreational fishers are highly skilled and capable of high catches. It is this proportion of fishers who are dictating the fisheries management regime in Queensland. What is needed is an alternative set of recreational fishing representatives who have a long-term vision for a shared fisheries resource.

1.3. THE RELATIVE HARVESTS AND THE VALUE LANDED

The paper indicates that the relative shares at this point in time are: 20,000 tonnes of commercially-caught seafood annually; 8,500 tonnes of recreationally-caught seafood per annum; and 8,100 tonnes of seafood produced by aquaculture per year.

At beach/wharf prices (the basis for gross value of production (GVP) the commercial sector produced income in the order of \$190 million (Green Paper 2016, p.5). While the year is not stated, it would be 2013-14. Another report by the same government department has more recent data and indicates that the 2014-15 GVP was \$170 million (Queensland Ag Trends, 2015-16, p.49).

The Queensland Government (DAF 2016, p.51) puts the decrease in commercial catch down to the loss of fishing grounds due to increased NFZs. This certainly could be the reason. However, it is worth noting that there is nothing unusual with this degree of change in GVP between years, as fluctuations of this magnitude are common. For example, scallops and to a lesser extent prawns are known for their variability in catches.

However, the decrease in the commercial catch would raise a question if there was a corresponding increase in the recreational catch. This would have to be specific to recently declared net-free zones. If this was so, there has been a deliberate re-allocation from the commercial sector to the recreational sector. However, the recreational effort and catch is decreasing across the state and without data from specific locations this matter must remain unresolved.

The landed price of the commercial catch averages out at approximately \$9 kilogram, but the average masks some very high prices, such as for top quality reef fish, rock lobsters and some prawns, as well as low prices for mullet.

The 8,500 tonnes landed by the recreational sector can be valued on the same basis as the commercial harvest. This is done by DAF and Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES). In the case of DAF (2016 p.49) the value is \$94 million. If the recreational catch was 85,000 tonnes this indicates a beach value of \$11/kilogram; otherwise the catch has increased to approximately 10.3 million tonnes. Has there been a very recent increase in recreational catch at the expense of the commercial catch? If so, is this the result of

the NFZ policy? The increased catch would have to be location specific and substantial to compensate for the general reduction in fishing effort by the recreational sector, a matter which is discussed in some detail in a following section.

ABARES (“Australian fisheries and aquaculture statistics”, 2014, p.44) report the Queensland recreational catch value at the beach price was \$73 million, based on 2011 data. The more recent data, stating a price of \$94 million, is the appropriate reference point.

Finding 3

By incorporating incompatible statistics on the values of the recreational and commercial sectors, the Green Paper misrepresents the importance of the recreational sector. The recreational catch is worth only a fraction of the expenditure by recreational fishers.

1.4. THE SUSTAINABILITY ISSUE

To meet the economic goals of the Queensland Government we need, in the first instance, to be satisfied that the present level of harvest is sustainable. The analyses of the commercial fisheries that are publicly available indicate that the Queensland fisheries are being fished at a sustainable level. Three exceptions are noted, but these fisheries are being managed so to return them to sustainability.

Notwithstanding the reassuring assessments that the harvests are at present sustainable, the paper suggests that there are community “concerns” about sustainability; however, the reader is given no further information.

There is a very recent study published by CSIRO (Pascoe et al 2016) which suggests that the fisheries are sustainable and, in fact, under-fished. We read this in an assessment titled “Beyond GVP: The value of inshore commercial fisheries to fisher and consumers in regional communities on Queensland’s east coast “. Inshore fisheries are defined as the net fishery, a line fishery (excluding its offshore component) and the crab (pot) fishery.

On this basis this study does not cover the majority of the trawl fisheries and some other important fisheries. Pascoe et.al write: “From the capacity utilisation analysis, there is some potential for fishery GVP to increase given current stock conditions... although most areas are operating at fairly high levels of capacity utilisation. From the analysis GVP could increase by up to 10% with

the existing fleet and stock conditions if all areas were operating at full capacity. This translates roughly into an additional \$4.5m in direct GVP and as much as \$14.3m to the regional economies...” (p.74).

This assessment does not support any concerns that the fishery is over-fished, to the contrary, it states it is under-fished. CSIRO is suggesting an increase in commercial fishing effort.

Finding 4

DAF was either unaware of the July 2016 research published by CSIRO or choose to ignore it. On the basis of the CSIRO study of July 2016, the fisheries in question are under-fished and there is an economic case to increase effort where it is under-utilised.

1.5. BEACH PRICE, PURCHASE PRICE AND THE COSTS OF FISHING

Estimating the value of the recreational catch at the beach price might not be appropriate. What needs to be taken into account is how realistic is it that a recreational fisher could purchase fish at that price. The beach price would be too low if it is not available to recreational fishers. They might have to purchase fish at a wholesale or retail level. We shall come to estimates below, but first it needs to be recognized that recreational fishers whose sole goal is a feed of fish have the choice of going fishing or buying the fish they prefer.

Purchasing fish means the certainty of a feed and of the preferred species, not a gamble as fishing is except for the most competent, and even these folk cannot guarantee a snapper when this is the desired fish for dinner.

The otherwise recreational fisher would be buying whole fish (not gutted or scaled) if the fish was to be comparable to a fish landed and sold by a commercial fisher at the beach price. It is not an easy matter to find a commercial fisher who is going to sell a couple of flathead or whatever as the fish are being landed. This was not the case a generation or two ago, particularly if you lived by the beach. When a haul of mullet was landed, local folk rushed to the beach to buy fish. No more except in rare circumstances.

Today, we need to ask how much more a purchaser would need to pay over and above the beach price to obtain fish that he/she could have sought to catch. The amount depends on where whole fish are landed in relation to where the purchaser lives. Residents living near wharfs or beaches where commercial fishers land fish are likely to buy fish at close to the beach price.

On the other hand, if the fish are transported a considerable distance, that will add to their cost. In this case the fish, although whole, will be gutted and scaled and hence more costly. At an extreme, the purchaser would need to purchase a whole gutted and scaled fish in a wet fish shop. At a maximum price, and this would be only for select high-value species, the cost could be double the beach price. The increase in price from fish sold at the SFM to fish mongers selling to the public is “at least twice the price” according to (Deloitte 2016, p.33).

Even if we were to value the recreational catch in Queensland at a mix of wholesale and retail prices, because this is what the fishers would have to pay if they purchased fish rather than sought to catch them, its total value would still be much lower than that of the commercial harvest. We present an estimate below.

We must note that if we are to value the recreational catch as processed fish (even if minimally processed), we must do the same for commercially – caught fish, if we are to compare “mullet to mullet” rather than “mullet to coral trout”. If the recreational catch is to be measured at the retail level for whole fish so should the commercially-caught fish. However, as will be explained in some detail below, these types of comparisons are not useful and, importantly, not appropriate if the allocation or re-allocation of fish between sectors is the reason to make the comparisons.

If the issue is to shift shares, the monetary value required from both recreational and commercial fishers is that for “the marginal “fish, that is, the additional fish caught as one sector foregoes the right to catch that fish. This is discussed in more detail below.

1.6. INAPPROPRIATE AND DANGEROUS BIG NUMBERS

The common practice for some time has been to take the landed price of a commercially-caught fish as its value, and for a fishery multiply that by the number of fish landed. This is how the sum of \$190 million (or \$170 if the more recent year is used) has been calculated as the “value” of the Queensland commercial fishery.

For the recreational fishery the approach to derive a monetary value has been to add up all the expenses involved in fishing trip. One can immediately see the conceptual problem that results. In Queensland at present we have a recreational catch that is valued by both ABARES and DAF at between \$73 million and \$94 million (about \$80 million) per year, yet the recreational fishers spend \$400 million per annum to get in the order of \$80 million in food.

How much would these recreational fishers have to spend to purchase \$80 million worth of fish at retail prices? Even if they had to pay top retail prices, and purchase the actual species they prefer, the amount they would spend would be in the order of \$160 million per year, far less than half of the \$400 million they are reported to have spent.

The numbers speak for themselves. The use of the big numbers, \$400 million per annum, is completely misleading, and if used as a guide to re-allocating access to a fishery, a certainty to result in an economic loss to society. It would be a serious misallocation of resources which no economist would support.

There is no suggestion in the paper that this dollar sum (\$400 million) will influence any re-allocation. Fisheries managers understand that using this number is not an “apples to apples” comparison to the reported GVP of between \$170 million and \$190 million. However, there is the danger that the big number could be used by those ignorant of its veracity. The big number versus small makes for a media story and feeds into public ignorance of the true situation.

To bring the above analysis to a conclusion, for recreational fishers to spend such a large amount of money, \$400 million, for \$80 million worth of fish is clearly irrational behaviour. This matter is subject to more detailed analysis in the future section. Comparing the GVP of commercial fishers to the total expenditure of recreational fishers is akin to comparing a mullet to a coral trout and must not be used to influence any re-allocation.

There is an explanation for this economically irrational behaviour. Many of the people we call recreational “fishers” are paying for things other than fish. They are more than simply fishers. This matter we will come to. Here, it will help if we take a step back and deal with the activity of fishing from first principles.

1.7. FORMAL ECONOMIC DEFINITIONS AND EXAMPLES OF VALUE

As already noted, a great deal of confusion surrounds the attempts to compare in economic terms commercial and recreational fishing. Above, we have introduced the issue. Here we shall deal with it in more formal economic terms.

The majority of publicly available attempts in comparing commercial and recreational fisheries are “apples to oranges” (or in a fishery context “mullet to coral trout”) comparisons and hence not at all helpful and, if used as guides to the relative economic significance of the two sectors, misleading and likely to result in economic losses to the nation or part thereof. We restate this because in the past, in States other than Queensland, lobbyists have been able to distort allocation decisions to favour those using flawed economics. Sufficient economic data was not on the table. This is not going to be repeated here. It helps if we present an understanding of how economic values are derived. Apologies to the economists who are reading this.

Because commercial fishing and the processes by which consumers get to eat seafood comprises market transactions, we can outline how values are determined in a market economy, and how the overall measure of a nation’s (or part thereof) economy is derived. We realise that these basic facts are well and truly understood by the Queensland fisheries managers, but are not necessarily understood by lay people who might read the paper.

Making sense of value-adding is an appropriate starting place. While it has become the convention to value fisheries’ output at the beach/wharf price to obtain the GVP (just as it is conventional to measure agricultural output at its value at “the farm gate”), this measure does not reflect the value- adding which transforms whole fish or other unprocessed seafood into products purchased by consumers.

Economists, and for that matter most of us, measure the economic output of the nation (or part thereof) in terms of Gross Domestic Product (GDP) or Gross Regional Product (GRP). Roughly speaking this is the monetary measure of what has been produced in a country or region over a year. The term “roughly” is important because we need to be clear on “what has been produced”.

What has been produced is the sum of value added in the steps that lead to the purchase of the final product by a consumer. Value added at each stage is the value of a producer’s output minus the intermediate inputs used in the process. Using an example will make this clear. Economists

have a propensity to use wheat and bread to illustrate the idea. I won't disappoint. A bread-maker (a bakery) earns \$1 million per year by selling bread to customers, but if it has paid \$750,000 to purchase intermediate goods (inputs such as electricity, water and importantly flour), the bakery has only added \$250,000 to the value of these inputs.

If we did not subtract the cost of the inputs such as the flour, we would be double counting. The baker bought the flour from the miller and if we added the output of the miller (flour) to the output of the baker (bread), the flour the baker purchased would be counted twice. Go back a step. The miller bought wheat from a farmer and if we counted the value of the wheat sold to the miller, we would have treble counting.

In economic terms, the catching/harvesting of seafood is equivalent to farmers growing wheat. The seafood on the beach or wharf is an input (an intermediate good) that will not be sold as a final (that is a consumer) good until it has been processed. Both fish and flour can enter the final good category at various stages of processing.

Without wanting to confuse matters, wheat is also called "raw material" in the production of bread. A fish landed at the wharf is raw material to be converted, otherwise processed, into a final product. Beef or chickens are examples of other meats that are raw materials. A beef hamburger and a fish burger are similar consumer products. Understanding terminology can be important if confusion is to be minimised.

A final product is what consumers purchase, not something bought by other businesses that transform inputs into something consumers will purchase. Once we get to the stage of a consumer buying a product or service we have what economists call "final demand". The adjective "final" is very important because there is demand for "intermediate" goods and services. This is called "derived demand", as it is derived from the final demand by consumers.

As with wheat so it is with fish, the final consumer can seek different products, and some of these will be at different levels of processing. Here I'm not thinking of bread or noodles, both of which require similar amounts of processing of wheat, but rather flour or bread. A person who is a home-bread maker will purchase flour. As far as the market economy, and the measure of GDP go, flour is the final product in this case; that is the work in bread-making in the home does not register as an economic activity, no value-added or increase in employment results. This is no different to a

consumer who purchases fresh fish to cook at home. In both of these cases the consumer will pay considerable less per kilogram than he/she would if they purchased a loaf of bread or a serving of fish and chips.

A recreational fisher is going to fry his/her fish in a pan at the camp site or take it home to incorporate in a meal. The formal economy does not recognise the preparation of a meal on the beach or the home. That is, there is no formal value adding and no employment created. This is the very significant differences between commercial and recreational fisheries.

Finding 5

There is no value adding in recreational fishing, while a commercially-caught fish will have its economic value increased substantially as it is turned into fresh fillets, incorporated in a serving of fish and chips or become part of a restaurant meal.

The commercially-caught fish is ultimately worth considerably more than the recreationally-caught fish and, important to note, as it is transformed from raw material to a higher value product generates employment up the chain.

There is no employment generated up the value-added chain from recreationally caught fish as there is for commercial fishing, simply because there is no value-adding for recreationally-caught fish.

1.7.1. EXAMPLES OF VALUE ADDING

Another thing that the above illustrates is that both wheat and commercially-caught fish can enter into the consumer market at different levels of processing, and the level of processing determines the cost to the consumer. Both wheat and fish can result in radically different final consumer products.

In terms of fish, if it is sold as wet fish (after being scaled and gutted, maybe filleted) it brings a certain price in the market. If it is cooked in a fish and chip shop, it has a higher price. For example, the price to the consumer of wild-caught barramundi fillets is likely to be in the order of \$40 to \$45 per kilo, purchased as crumbed/battered/grilled fish it would cost \$50 or a little more per kilo. For whiting the cost as fillets would be about \$45 to \$50 per kilo as fillets or \$55 to \$62 as cooked fish.

For some wheat and some seafood there is an additional step, their use in a restaurant meal. We could if we wished, although its utility would be questionable, attempt to value noodles as part of a restaurant meal, or prawns as part of curry purchased in a restaurant. This is a questionable, in fact pointless, exercise unless we were studying restaurant meals, due to the fact that the consumer is purchasing much more than a fillet of fish or simply noodles in a restaurant. Nevertheless, the raw material (the fish or wheat) is key to the meal in its value-added form.

To derive an economic value of wheat or fish, we need to know how much of the total harvest enters final demand at different stages of processing. Only the value-added will be included in the final price/value. For our purposes, what percentage of the Queensland harvest is sold at a processor's price into the overseas market? What percentage is sold to the wet fish retail market? What percentage goes to the fish and chip trade and what percentage goes to the restaurant trade? The same fish will have different economic value as it moves up the chain. However, in each transformation the fish is a different consumer product. It is more than simply fish! In this regard it is different to a fish caught by a recreational fisher, as the latter does not undergo any form of economic transformation. This is subject to elaboration below.

One final matter to note on this subject is that exports of seafood (and other goods) are valued at the nation's border, more precisely when they are loaded onto a ship or aircraft. For example, exported green prawns are cooked and converted into meals in Hong Kong and therefore are subject to value adding there, not in Australia. This is not of any great significance other than Australia earns foreign exchange through exporting, and this allows us to purchase the vast range of clothing, electronic goods, white goods, motor vehicles, toys that we import. Queensland exports a significant quantity of seafood, with prawns, rock lobster and live fish the major income earners.

The equivalent of exports of seafood for the recreational fishing sector is inbound tourism where the primary, or at least part of the reason to travel to Australia is to undertake recreational fishing. Income from foreign tourists to Australia are like exports; they pay money to experience Australia.

There was a niche market for this type of tourism when game fishing was fashionable out of Cairns. The American actor, Lee Marvin, who visited regularly in the past added the "celebrity" culture that made game fishing what economists call a "positional good", something one does to show one's status and wealth.

There is no recent evidence to suggest that recreational fishing plays an important role in attracting foreign tourists. On the other hand, much is made of Australian seafood by the tourism industry in its promotion of the country. Foreign tourists partaking of seafood-based meals is the major means by which commercially-caught seafood which is not exported earns foreign currency.

1.7.2. GROSS DOMESTIC INCOME EQUALS GROSS DOMESTIC PRODUCT

We can note in passing that there are in addition to the three different final products of which fish is the major element (fresh/wet fish, cooked fish in a fish and chip shop and fish as component of a seafood meal) frozen fish, smoked fish, canned fish and increasingly various other forms of processed seafood that appeal to consumers.

There is an alternative method to adding up value added stage by stage to derive GDP. It is to sum all incomes associated with producing the final product. As everyone involved in producing something is paid for his/her contribution, whether it be in profits, wages, rents, interest payments, these will add up to the value added at each step.

As an example, take the case of a fishing company with a few boats, having paid for fuel, repairs and maintenance and ice, the company will divide up its value-added from a season of fishing between profit for its shareholders, wages for skippers and crew, interest payments on a bank loan and so on. The sum of these incomes is called gross domestic income. For all intents and purposes this amount will equal GDP.

Commercial fishing is a part of that economy. So also is that relatively small component of recreational fishing undertaken by fishers hiring charter vessels for the express of fishing, otherwise recreational fishing is not directly part of the market economy. While noting this, it is also important to remember that various inputs into recreational fishing, a rod and reel, hooks, swivels and sinkers, bait, boat fuel if using a boat and various other pieces of equipment are purchased in the market economy. Likewise, there are numerous inputs into the commercial fisheries.

Our challenge is to make sense of recreational fishing in a formal economic context if the Queensland Government is to determine the relative access to our fisheries on economic grounds. This is what its policy states it aims to do. We could be faced with a situation that the

Government, including ministers, other parliamentarians and senior public servants, have been presented with flawed assessments as to the relative economic value of commercial and recreational fishing; in particular the argument that a huge range of costs attributed to recreational fishers trumps the actual value of commercially-caught fish. A 2004 journal article by McPhee and Hundloe points to the misallocation of resources that results when inappropriate measures are relied upon⁴.

The Green Paper and the consultative process set out by the Department, in particular the goal of achieving consensus, provides the opportunity to correct the misuse of expenditure data.

1.7.3. CATCHING A FEED IS NOT THAT IMPORTANT

Having discussed commercial fishing, it is now time to deal with recreational fishing in some detail. We need to commence by defining recreational fishing. That is not as easy as one might assume. As noted above, except for paid-for recreational charter-boat fishing, recreational fishing is not a market-based activity. Goods and services that are sold in the market economy are purchased by recreational fishers but the act of fishing is not something requiring payment (putting aside that in some jurisdictions a license to fish has to be purchased from government). And importantly the fish caught do not enter the market as products for sale. In fact, it is illegal to sell these fish. This means that there is no value-adding in the economic sense. We have discussed this.

Not all types of recreational fishing are alike. Not all types of recreational fishing require much expenditure on inputs. Very different types of experiences and, it must be noted, costs are involved. Take the amateur mud crab fisher as an example of a person who spends little time and usually not much money in pursuit of crabs. The majority of these folk live near to fishing grounds and have their own boats. Crab pots are taken to the target area, usually not far away and only a small amount of fuel is used. The next day the pots are retrieved and reset. Any (legal) crabs caught are taken home. Crab bait is usually fish or meat waste from the home, or if purchased an inexpensive item. If the crabber is fortunate and catches only one crab, he/she has more than covered the expensive of the trip. Catch more, and this is a significant gain, which can be measured in economic terms if the fisher was to purchase crabs rather than catch them.

⁴ McPhee, D and Hundloe, T 2004, 'The role of expenditure studies in the (mis)allocation of access to fisheries resources in Australia', *Australasian Journal of Environmental Management*, v.114, p.34).

A beach or river fisher living very close to his/her favourite fishing area is likely to have no, or at least insignificant, travel costs. If the fisher uses worms or eugaries (pipis) as bait these can be self-caught. This type of fishing can take up as much leisure time as the fisher wishes but comes at little cost. This type of fishing involves a relatively inexpensive outing and a good haul will be worth much more than the occasional lost hook and sinker.

Then there are the folk who specifically target banana prawns when they “boil”. Observations have been made over many years of this style of fishing in Southern Moreton Bay. In the order of 30 “tinnies”, some with two people on board, most with one, will congregate in a small area, with each boat having no more than sufficient space around it to allow the casting of a net. The fishers will work the area for six hours per day and for as many days that there are prawns to harvest. In this type of fishing “work” is the appropriate word. There is no relaxing for lunch, no “chatting” as one would do if fishing with lines in the water.

One can assume that each fisher will take the legal catch per day over the period the prawns are available. Little in the way of boat fuel is required as the prawns are not far from the mainland. Fuel to tow the boat is the major expense and that varies according to the distance travelled on land. As a consequence, this form of recreational fishing is very “profitable”, and more akin to casual commercial fishing. With 30 nets in the water in a small area one could compare this to a commercial operation.

Next there is the keen fisher who works as a miner in central Queensland and has a number of days of leisure each fortnight. He could tow a boat some hundreds of kilometres to a launching ramp at, say, Mackay and then travel quite some distance, particularly if targeting reef fish. This is both time-consuming and relatively expensive recreational fishing but catches tend to be good. Another means of access to good fishing grounds is to hire a charter boat, usually with a group of friends. In this case being on the water for a week is relatively expensive, though usually compensated by a good catch. Anecdotal evidence suggests that many of these fishers cover their expenses in that the value of their catches pays for the charter fee.

Likewise, a trip from south-eastern Queensland to the barramundi and mud crab grounds in the Gulf of Carpentaria can involve weeks away from home, and cost a considerable amount in vehicle and boat fuel, and requires much camping gear and cold storage. These fishers are likely to fish daily for weeks on end, and hence have a significant influence on the average days fished.

As that stands at four (4) days per annum there must be many recreational fishers who fish only once per year. On this point, it should be noted that it is reported in the 2013-14 recreational fishing survey in Queensland that avid fishers, folk fishing 20 or more days per year, catch 80% of the recreational catch.

The various types of fishing trips apparently average out at a cost of \$625 per year for the 640,000 recreational fishers identified by the Queensland Government. That is, if total expenditure per year is \$400 million divided by the number of fishers. If we work on the basis of the total recreational catch being in the order of \$80 million per year (valued at commercial fish prices on the beach), the average catch for the recreational fisher is \$125 worth of fish per year. If that value is doubled to reflect an amount a recreational fisher could find him/herself paying in a retail outlet, that is still only \$250 worth of fish for an outlay of \$625. This does not make economic sense. A matter we put on the agenda for discussion earlier.

To illustrate the puzzle, the outlay of \$625 per year can be converted to seafood meals bought in the various retail markets. At a high quality fish and chip shop, \$625 would buy a couple a serving of fish and chips each fortnight, or a restaurant seafood main course once a month. The fish would be barramundi, snapper, whiting or similarly priced fish. A family of four (eating adult-sized meals) would be able to purchase a fish and chip meal once a month.

Another alternative to seeking to catch your own omega-3 is to purchase packaged, Australian-farmed smoked salmon. Add your choice of vegetables and a household of four could enjoy one of these meals every fortnight within the \$625 limit. Many (most) recreational fishers are unlikely to catch fish anywhere near this value.

However, some, particularly family groups, who like camping holidays could be satisfied with relatively small catches per day. A recreational fisher and family who, for example, undertake a family camping holiday on Fraser Island and catch 20 whiting per day (that is five fillets for a family of four) and put them in the pan the day they are caught would rightly think that he/she is adding considerable value to the fish. It would be a delightful meal as there could be no argument that the fish would not be excellent eating. However, in terms of registering in formal economic statistics the pan-fried, straight- from- the- sea fish do not rate.

Likewise what one cooks at home on the BBQ, or camping on the beach does not generate any income or paid employment. Our campers provide an explanation, in part at least, for the large amount spent by recreational fishers, an amount that does not make any economic sense if what the fisher seeks is fish to eat. The fact is that the person seeks more than fish, and part of his/her expense can be attributed to the other sources of satisfaction that are being sought and enjoyed. A family camping holiday brings many different types of satisfaction.

We have used the family on a camping trip as one example of multi-purpose recreational outings. There are many more examples providing evidence that shows the recreational fisher is more than a fisher. This we have already noted. Let us continue to call them fishers even though we will see that he/she is something else.

There are numerous studies, going back a considerable time, that show that catching fish is only one of many reasons for a recreational fisher to go “fishing”. In most of these studies, catching fish comes some way down the list of sought-after pleasures. This suggests that the very high cost of a fishing trip reported above, should be apportioned according to the importance or rank of the sought-after recreational /leisure attribute.

Where various sources of enjoyment are involved in taking the trip, the cost of the actual fishing part would be no more than a fraction of the total cost. If this was the approach taken to measure the economic contribution of recreational fishing the use of expenditure data would make some sense. However, it would not be used in making re-allocation decisions. Economists have an appropriate methodology for that, and this will be discussed in some detail in due course.

Before referring to two specific studies, a general overview of the reasons to go on a fishing trip helps set the scene. The following (Table 1) is a generic list compiled from various studies.

Table 1. Reasons to go fishing

- Stress relief/relax/fun
- Social bonding/quality time with family and friends
- Keep fit
- Enjoy outdoor environment/fresh air/sunshine/scenery
- To catch and eat fish/healthy food
- Solitude

A recent Queensland study by Sutton (Sutton 2014) found the following reasons for participating in a fishing trip (see Table 2).

Table 2. Reasons to go fishing: Queensland

<ul style="list-style-type: none"> • Relaxation • To be outdoors/natural surroundings • Catch fish • Socialising
--

Finally, here are the results from a New Zealand survey of 612 recreational fishers (see Table 3). The reasons are ranked according to importance. Respondents were allowed to select more than one reason.

Table 3. Reasons to go fishing: New Zealand

1. Enjoyment/pleasure/fun	46%
2. Relaxation/leisure	33%
3. Recreation/recreational activity	22%
4. Food supply/fish to eat	18%
5. Environment/outdoors/fresh air	17%
6. To get away/escape/time out	11%
7. Sport/exercise	10%

Source: Walshe K (2002), 'Attitudes and perceptions of New Zealand marine recreational fishers toward the management of their fishery'.

What can be made of the information in the above tables, other than a fishing trip is for the average person a multi-purpose outing? It follows that the total expenditure that is conventionally attributed to a "fishing" trip should be divided into parts that are associated with the various pleasures sought. In the New Zealand example, less than one-fifth of the total trip costs should be assigned to fishing. There are some people for whom catching fish ranks first, and a smaller number of cases where it is the only reason. These can be relatively expensive trips, such as weeks spent in the barramundi-mud crab areas of northern Australia. Obviously, these types of trips raise the average expenditure and catch per trip considerably. In the cases where fishing does not rank first, we need to ask would the trip be made if fishing was not part of it? The answer is not to be found in the data.

Sutton (2014) asked his respondents what activities they would substitute for their fishing trips and the majority suggested the following: camping, hiking (bush walking) and surfing/water-skiing. These are outdoor activities that provide similar forms of satisfaction to those identified for fishing. It is possible, but there is no data to verify it, that some of those who no longer are recreational fishers have taken up these pursuits as substitutes, and purchasing fish when a fish meal is desired.

Above it was argued that we could value the recreational fish catch at twice the beach price which would mean approximately \$80 million multiplied by two, or \$160 million per year. This might be generous, but better to be on the generous side. Therefore, let us assume that the average catch per year is worth \$160. With 640,000 recreational fishers this equates to just over \$100 million per year in expenditure to catch fish, and the rest of the \$400 million spent is to gain the other types of satisfaction while on the water or the beach. Others have made similar points.

A recent study by Farr et al⁵ reported that the value of the recreational catch was between \$7 and \$23 and state: "These values were significantly less than an average price of the trip \$63. So clearly the fishing trip is not only about 'fish'". Here again, are expert researchers pointing out that it is wrong to claim that all expenditure on a so-called fishing trip is for the benefit obtained from catching fish.

And here is yet another authoritative organisation making the same point. An ABARES study (Georgeson et al 2015, p.18) states that: "recreational fisheries typically produce a recreational service where the value a fisher derives ...is a composite of a range of values, including the enjoyment of the outdoors...".

Expenditure on so-called fishing trips is not justified by the value of the average catch. Rather than assert that folk who spend many times the value of the fish they catch are irrational in an economic sense, we can recognise that they are spending much of that money to obtain pleasure/satisfaction over and above catching fish.

⁵ Farr M., Stoeckl N., and Sutton S. 2013, 'Taking a closer look at boating, fishing and fish in the GBR: implications for policies', 4th Queensland Coastal Conference, Townsville, October 2013.

If we take the \$400 million annual expenditure as the sum spent by Queensland's recreational fishers and apportion it according to the reasons to go "fishing", the amount that could realistically be assigned to actually catching fish could be in the order of one-third to one-fourth.

1.8. THE FUNDAMENTAL MATTER OF JOBS

The preceding discussion has focused on accounting for the value, including the value-added component, of the fisheries. We now turn to the matter of jobs in, and/or created by, the commercial and recreational sectors.

Some theoretical background will help. In addition to the actual employment in the sector under consideration (or example, skippers and crew on a commercial fishing boat) there are "flow-ons" from that initial employment to other industries/sectors (for example, employees in the boat repair and maintenance industry).

At its simplest, I earn an income from producing something. I need to purchase inputs, such as petrol/diesel so to do my work. If I'm a carpenter I have to purchase tools and timber. Incomes and jobs are created. When I get paid I spend much of my income at the shops. Those who own the shops and those who work in them benefit from my spending. All very simple and easy to comprehend. These inputs to my house-construction business are what economists call "backward linkages". When the house is built, someone has to advertise and sell it and more jobs are created. These are called "forward linkages".

Some flow-on impacts, such as purchase of fuel or repairs and maintenance, take place in the local community. With regard to commercial fishing, these take place in either the home port or the port from which the fisher is operating. However, some other inputs, say the need to purchase a new gear-shift, might have to be "imported" from Melbourne, or maybe even overseas. All these impacts can be traced and apportioned to impacts in the local/regional economy, the state economy, the national economy or the global economy. For fishing most flow-on impacts are local or regional.

The flow-on impacts are expressed in three different categories: additional output of products or services, called "output multipliers"; additional income, called "income multipliers"; additional employment, called "employment multipliers". For each type of multiplier there are several components. Consider employment multipliers, we start with the "initial impact" which is the

people directly employed in fishing, owner/operators and crew. Next there is the “first round” impact, followed by the “industrial support” impact, the “production induced” and finally “consumption induced” impact.

We must note that measures of additional “output” entail what economists call double-counting and, hence, are not that meaningful; however, additional income and employment are meaningful.

Finding 6

The flow-on from an initial activity will produce income and jobs for industries and people up or down the line. These are measured by multipliers. But be very wary of “output” multipliers as they can be very misleading as they involve double counting. Hence, they should not be used in describing a sector of the economy or an economic activity. On the other hand, employment multipliers are quite useful.

Very little analysis has been undertaken in measuring the flow-on benefits of fishing. This certainly is the case in Australia, and worldwide the situation is not much better. There was an attempt to measure the flow-on benefits of the Northern Prawn Fishery in its very early days (Hundloe 1985). The most comprehensive analysis of flow-on benefits was that undertaken for the Great Barrier Reef fisheries by Hundloe and reported in his book, “Fisheries of the Great Barrier Reef” (1985). Since then, there have been studies of this kind done by Econsearch for some South Australian fisheries. Then in 2016, Pascoe et.al included an assessment of the output multipliers associated with the Queensland inshore commercial fisheries. These authors used a completely different methodology to the conventional one and there are conceptual and practical difficulties in reconciling the different results. Furthermore, the fact that they are output multipliers means that they are not of relevance for present purposes.

It should help by outlining the conventional practice. The measurement of flow-on impacts is done by using standard input-output analysis, a technique by which multipliers (or technical coefficients) are derived from a transaction table of the whole economy. A more elaborate approach is to use computable general equilibrium modelling. The relatively small-scale nature of Australian fisheries and their significant impact on a local scale tend not to justify the cost of sophisticated modelling. Even the static input-output modelling is data hungry and hence costly; however, it can be deemed the appropriate method for use in fisheries, particularly where the types of inputs and outputs change little in quantity, quality and relative prices over considerable time scales.

Few modern industries are this stable. For example, recreational fishing requires fishing gear, bait and a boat if fishing off-shore. While there have been significant improvements in rods and reels (a matter some “old-timers” dispute), not much else has changed over a long period of time. Much the same applies to most types of commercial fishing. A crab fisher requires pots and a boat and this has been the case for eons. Modern prawn trawlers are much the same as they were 30 years ago. The most significant change has been in the installation of electronic technologies and by-catch exclusion/release devices. What the lack of significant change suggests is that quite old multipliers are likely to be reasonably accurate today.

A transaction table shows, sector by sector, the inputs needed by each sector to produce whatever it does, as well as showing to what other sectors, including the consumer at the end point, its products or services go. This was the method used by Hundloe for the Great Barrier Reef fisheries.

Before presenting some numbers, it is very important to note that there is a significant difference between commercial fishing and recreational fishing in regards employment and income multipliers. For recreational fishing there is no “initial impact” precisely because recreational fishers are not paid to go fishing. And there are no “forward-linkages” to processing/retailing industries. This means that this sector’s employment and income impact will on a per unit basis be considerably less than that for the commercial fisheries. This fact is too readily overlooked.

Employment flow-ons/multipliers for recreational fishing will be, by the very nature of its recreational status, considerably smaller than the flow-ons for commercial fishing. There is no initial employment involved in recreational fishing while the employment of skippers and crew is fundamental to commercial fishing, even if the skipper is an owner-operator and takes his/her income as profits not wages.

Furthermore, as there is no value-adding in recreational fishing (the fish cannot be sold and processed into a serving of fish and chips), this is another reason why there is much more local and state-wide employment generated for each dollar spent (or each fish caught) by commercial fishers than recreational fishers.

To illustrate the employment multiplier (flow-on) impact in commercial fishing we can consider the ratios produced by Hundloe. The ratio of flow-on jobs created by commercial fishing compared to recreational fishing is for the same level of expenditure: eight (8) commercial-fishing flow-on jobs to between three (3) and four (4) for recreational fishing. In an illustration below we use the ratio 8 to 3.5.

Another way at conceptualising the difference is to state that a recreational fishery in a particular location would have to generate expenditure (on bait, hooks, lines, sinkers, ice, fuel, boat maintenance if using a vessel and so on) twice or more times the expenditure of the commercial fleet if the employment impacts were to be equal.

Finding 7

The fact that the multipliers for recreational fishing are much smaller than those for commercial fishing is the consequence of recreational fishers not being employed to fish and as a result not earning an income from fishing, and they also generate no employment and income from the processing and ultimate sale of their fish, something that commercial fishers do.

It is only through the purchase of hooks, lines and sinkers, plus boat fuel if they fish from a boat, accommodation if on an extended trip, and the occasional cost of replacing a fishing rod and reel, that recreational fishing generates income and employment.

The multiplier impacts shown above are conservative in as much as they disregard the flow-on impact of “forward linkages” in the commercial sector, that is in the processing, wholesaling, retailing and food industries. No reliable data is available to allow for the calculation of the additional extra jobs involved.

The multiplier analysis reported above is consistent with multipliers calculated by Econsearch for the blue swimmer crab and the marine scale fish fisheries in South Australia. The South Australian flow-ons are somewhat higher than the Queensland ones. We should note in passing that Econsearch is the only organisation in Australia that year-in, year-out is undertaking economic assessments of the same fisheries. This is a very valuable service. The Econsearch employment flow-on for the blue swimmer crab fishery shows that for every one (1) fisher there is a flow-on of about 1.8 jobs. For the marine-scale fishery, the flow on is about 1.1 jobs for each fisher.

Applying the ratio (8 to 3.5) with regard to the expenditure reported for both commercial and recreational fishing in the Green Paper (\$190 million and \$400 million, respectively), the total ratio of jobs is in the order of 15 to 14. In other words, if we accept that the magnitude of the recreational expenditure is for fishing only and the beach price for commercially caught fish equals the expenditure by this sector (including profits), the result is that more jobs are created by commercial fishing than by recreational fishing. If we were to discount the \$400 million to account for the fact that is not all spent on catching fish, the commercial sector would be an even greater generator of employment than the recreational sector. In fact, a much larger contribution to employment. The above data and examples should put to rest the onerous assertion that the recreational fishery is more valuable to the economy and jobs than commercial fishing.

Finding 8

In Queensland, commercial fishing creates more full-time employment, even though, on the basis of the Green Paper, there is more than twice as much expenditure on recreational fishing. Any reduction in the amount of commercial fishing would destroy more jobs than it would create.

1.9. HARVEST STRATEGIES, SETTING CAPS AND MSY OR MEY

We can start with the most obvious point. If a fishery is to be managed to provide harvests year - in, year-out, reasonable biological, environmental and economic understanding of the fishery is required. As sustainable catches can occur at various biomass levels, the principle of taking the maximum sustainable yield is a starting point. There would seem no logical reason to harvest anything less than the maximum. From this we get MSY. However, MSY should be considered a band not a thin line. When we super-impose the effort-cum-cost curve in our diagram, it is advisable to view it as a broad band.

It is comforting to draw a single-line yield-cum-revenue curve. However, it is realistic to expect fluctuations in catches due to a range of events, many outside of a fisher's control. It is equally important not to think of the effort-cum-cost line as a single line without a kink in it. Expect change, such as an oil price shock.

There other issues with the cost function. As most fisheries commence as open access and, as a consequence, effort builds up until the fleet is operating at a break-even level of effort. This tends to be more effort than needed to take MSY and, hence, a lower level of catch is taken and considerable inputs (such as boat fuel) are wasted. While the fishery overall might be at the break-

even point, some fishers are likely to be working for below a normal income and the rate of return on their investment is negative. A classic example is that when the Northern Prawn Fishery was open access in the 1970s and early 1980s, over a six year period only one-third of the 264 boats were earning a profit. An unstructured fishery can operate at what appears to be a non-profitable level for a long time. This is due to the fact that the fishers are treating their boats as sunk capital (they have no other use) and the fishers themselves might not have other employment opportunities. Low opportunity costs all round.

There is not an economist who would not support the concept of MEY. It means obtaining the highest “profit” from the fishery. It is the convention to draw MEY at a lower level of effort and smaller harvest than MSY. However, this is only one possible position for MEY. Considered over the long run, in a dynamic setting, where MEY sits in relation to MSY is a function of the discount rate plus more.

Dynamic MEY is determined by the price of fish, the costs of fishing and the rate of discount. Eminent fisheries economists have warned against wasting effort in seeking dynamic MEY. For example, Jim Crutchfield quoted in Cunningham (1981)⁶, argued that “the level of information required almost certainly will be unavailable at any conceivable cost in the future”.

In setting a target for a fishery that is accessed by different categories of fishers (such as in Queensland) an overall cap must be set. If we have the situation where one sector is not capped it is not possible to meet the overall cap except by reducing access to the capped sector if the uncapped sector expands. That would not be wise management.

1.10. UNFISHED POPULATION

The concept of managing stocks to achieve 60% unfished population is a proposal without documented justification. The Green Paper offers no literature and none has been found that supports it. There is evidence that the bulk of the Queensland fisheries are being fished at a sustainable level. A very recent study by Pascoe et.al (July 2016) states that there is capacity under-utilisation and, in fact, commercial fishing could be expanded.

⁶ For those who are interested the reference to Cunningham’s article is: Cunningham, S (1981) “The Evolution of the Objectives of Fisheries Management During the 1970s”, ‘Ocean Management’, 6, pp.251-78. It is the story of how MSY gave way to MEY.

So the question that is raised is who really proposed the 60% unfished population? In the absence of contrary evidence, the community could be led to believe the target is appropriate. The submission to the Green Paper by the SFM argues that the 60% target is inappropriate and well beyond best practice and well within international sustainability expectations.

Insert 1. Fishing in Queensland is already a low risk to marine ecosystems

The Green Paper therefore begins with a conclusion that against a generally accepted criterion Queensland does not have a major problem with managing fish stocks, the fundamental objective of its fisheries management.

In reality the 30-40% of the unfished population that the Green Paper accepts as a general criterion is actually higher than the more common world standard of 20-40% for precautionary management, or 20-30% for Maximum Sustainable Yield (MSY). As explained below it is higher than the standard (20-40%) that has been proven to be effective by the Commonwealth Government of Australia.

20-40% has been clearly demonstrated in Commonwealth waters to be sufficiently conservative to allow a full recovery to be made, relatively very quickly, if 'overfishing' against this criterion is determined to have occurred and appropriate action taken.

This could be relatively easily done while remaining well within international sustainability expectations and guidelines which have already proven to be more than adequately conservative for fisheries operated under Australian conditions.

Source: SFM Green Paper Submission, p.1.

CHAPTER 2. MANAGING IMPACTS ON THE ECOSYSTEM INCLUDING NON-TARGET SPECIES

Assessing the risks to the ecosystem and non-target species needs to be undertaken where it does not take place now⁷. However, it needs to be recognised that in recent years there have been very considerable advances in excluding non-target species. These have resulted from the invention and development of modified gear, such as turtle exclusion devices, or changes in regulations as to netting practices, such as those introduced to protect dugongs.

It also needs to be recognised that there is much more recreational boat traffic than commercial fishing boat traffic, and turtles in particular are of a much higher risk from recreational boats. There is anecdotal evidence of a relatively high rate of turtle strikes in the waters of southern Moreton Bay due to the amount of passenger ferry and small boat traffic.

Insert 2. Industry Testimonial 1

Science and LOCAL knowledge is the only way to manage any primary industry and we need to listen to the most experienced, most knowledgeable people to manage our fishery better, not by groups who think every fisherman leave a trail of destruction because that's how the rest of the world works.

Source: William Pearce, Attachment 4, p.1.

As seafood that is to be exported has to be assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and detailed assessment procedures are in place, there should be no concern that fish that are potentially for export are not appropriately assessed on sustainably grounds. If the assessment procedures need upgrading, the procedure used when the initial assessment framework was developed should be applied. In this case, Fisheries Research and Development Corporation (FRDC) put together a team of experts and funded the work.

⁷ This section titled, 'Managing Impacts on the Ecosystem including non-target Species', was drafted by Emeritus Professor Tor Hundloe.

CHAPTER 3. RESOURCE SHARING ARRANGEMENTS BETWEEN SECTORS

3.1. THE ALLOCATION DECISION

There is no more contentious decision-making than in re-allocating access to a fishery⁸. This is the case because the re-allocation tends to be made on the bases of the “strength” of the demands made by the interested parties. Spurious numbers (in terms of the economic importance of a particular type of fishing) get bandied about. The media delights in the controversy and conflict ensues. It would seem to be in the interests of politicians, who are forced to be the arbitrators in these decisions, to have in place an objective measure, and stick by it.

The point of commencement for a re-allocation has to be the status quo, which is usually nothing more than the de facto sharing arrangement in place as of the time of re-allocation. It is not feasible to consider returning to a blank sheet. We know not what the species abundance, the total biomass or the environmental relationships were prior to Europeans arriving in Australia, and we also don't know how these factors played out over the very long period in which different groups of Indigenous Australians arrived and took up harvesting seafood.

Commencing with the status quo, the question an economist would ask is: if one/a few snapper were taken from the recreational fishers and assigned to the commercial fishers would we (Australian society/economy, or the Queensland society/economy) be better or worse of in economic terms? If the value of that snapper/few snapper to the commercial fisher was greater than its/their value to the recreational sector, this would be an economic improvement. Of course, the re-allocation could the other way.

This basis of re-allocation is called making decisions at the margin. It is recommended throughout the economics literature. Most recently the Productivity Commission has empathised the importance of this procedure. On page 11 in its “Overview & Draft Recommendations; Marine Fisheries and Aquaculture” (August 2016) we find: “Calculation of the marginal values of access for commercial and recreational sectors can be complex, but provides a basis and a benchmark for objective and soundly-based decision making”.

⁸ The sections titled, ‘Resource Sharing arrangement between sectors’ and ‘The Allocation Decision’, were drafted by Emeritus Professor Tor Hundloe.

Other expert bodies have made similar comments; for example, CSIRO in its submission to the Productivity Commission (May 2016). Then there is the ABARES study by Georgeson et.al (p. 18) in which it is stated: “The net benefit of each sector in a particular area should be considered and evaluated to ensure that resources are allocated to their optimal use”. Net benefit is basically the value-added and pertains to extra catches, that is marginal catches in a fishery.

The degree of complexity in estimating marginal values can be overstated. Assessment of relative values of different species of fish have been estimated for Victorian Government fisheries authorities twice in recent years⁹. The costly part of these exercises is conducting surveys of recreational fishers. It is preferable to interview them on the beach or boat ramp after, or during, a fishing trip and this is not inexpensive. All other methods, such as mail or telephone surveys, can result in non-response losses and misunderstandings which can only be dealt with on a face to face basis.

We do not have marginal values for the key species in the fisheries discussed in this report and given the cost involved in obtaining these, any re-allocation of access is best done on the basis of comparing income and employment generated by the competing sectors, including flow-on impacts. While this contradicts the earlier advice, which was to use marginal values, it is the second-best approach. Note, as stated above, output multipliers must not be used due to double counting.

One can undertake marginal shifts on the basis of the effects on income and employment. While this is not quite as focused and detailed as dealing with a moving a few of this or that species to one sector or the other, the same general principle is involved. Using the employment multipliers reported above, a manager would commence by re-allocating fish to the commercial sector because it generates more jobs for a comparable catch of fish and continued until there could be no gain in jobs shifting access one way or the other. That is, the reallocation would stop when both sectors are generating the same number of jobs.

⁹ Hundloe T 1997, Report to the Fisheries Co-Management Council on the allocation of fish between the commercial and recreational fishers, University of Queensland. Hundloe, T, Blamey R, McPhee, D, Hand T and Bartlett N 2006, Victorian Bay and Inlet Fisheries Resource Allocation-Valuation Study, Marsden Jacob Associates, Camberwell, Victoria.

This topic should not be left without commenting on a proposal made by the Productivity Commission which is if transferable quotas, under a TAC cap, were held by both commercial and recreational fishers, trades between sectors (based on relative values) would “solve” the re-allocation issue. This is one of those economic solutions which has little practical use. The Productivity Commission argues that representative organisations could act for recreational fishers in these trades. What this overlooks is that the vast majority of recreational fishers are not members of a club. To attempt to deal with all recreational fishers would be vastly expensive and the mainly club members who have, in general, a completely different agenda to the “mum-dad-kids” centered fishers. The transactions cost would outweigh any benefits from reallocation. Only if all Australians were given a quota at birth and something like a “stock market” for individual quota existed might the Productivity Commission’s concept make sense. But then think of the task of determining what a quota was: how many fish of each species? Simplicity has a lot going for it.

Even though it will not be practical to use marginal values based on specific species, let alone do it on individual fish or small number of fish (as argued above), it is worth spelling out the principle involved of relying on marginal analysis. This follows. If the reader wishes to skip these paragraphs and go to Harvest Strategies below that is understood.

Economists argue that if a re-allocation of access to fisheries is to take place, the starting point is the present (de facto) allocation between sectors. Once the existing catches are known, the issue becomes how to get the sectors to make explicit their respective willingness-to-pay for one extra snapper, their willingness to pay for an additional, extra snapper (the second), their willingness to pay for the third snapper and so.

While one sector remains willing to pay more for the extra fish (the marginal fish) than the other sector the former sector should be allocated the fish. When through subsequent re-allocations, the willingness to pay by both/all sectors settles on the same dollar amount, the reallocation stops. There is no doubt that this is a costly exercise although obtaining the necessary information to tell one-half of the story is relatively easy. The value of extra fish to a commercial fisher is evident in the beach price, and (assuming no effect on selling price) quite large amounts of fish would be valued at a consistent price. The value of an extra, or a few extra fish to a recreational fisher can be ascertained from face-to-face interviewing. For recreational fishers, this could be via a choice-modelling exercise or a much simpler contingent valuation study; or some hybrid approach.

An approach which has merit is to ask license holders (in fisheries where these are compulsory for both sectors) how much more, if anything, they would pay if the extra money was used to compensate the sector which is giving up access rights (for example, retiring some licenses and forfeiting gear or boat and gear). The fishers would have to believe that the extra money would be collected and used as suggested. Something like this was used some years ago in Victoria. The fact that there are very few examples of estimating marginal values and in using them in re-allocation indicates the high cost and degree of complexity involved.

3.2. RESOURCE ALLOCATION PROCESS

The Green Paper notes, “there is currently no clear process for considering allocation of access to fisheries resources between sectors”. Table 4 outlines the government’s resource sharing arrangements and QSIA response.

Table 4. Resource Sharing Arrangements

Work with stakeholders to develop a fisheries resource-sharing policy based on maximising the economic and social value that Queenslanders receive from the sustainable use of their fisheries resources. It will consider as a minimum:	
Green Paper	QSIA Response
<ul style="list-style-type: none"> A transparent and repeatable process where reasons for decisions are clear. 	<ul style="list-style-type: none"> The current situation is politically based resource sharing. Future process should almost completely remove political influence.
<ul style="list-style-type: none"> Opportunities for stakeholder input. 	<ul style="list-style-type: none"> Difference between primary and secondary and other stakeholders.
<ul style="list-style-type: none"> Guidance on when and how to explicitly allocate fisheries resource access shares to sectors (recreational, commercial, Indigenous and non-extractive users). 	<ul style="list-style-type: none"> Current approaches need considerable work and are not balanced.
<ul style="list-style-type: none"> The cost of the process takes into account the value (economic or social) of the fishery or resource. 	<ul style="list-style-type: none"> Government has no balanced approach on resource sharing. There is no triple bottom line approach – (1) economic, (2) social and (3) environmental.
<ul style="list-style-type: none"> Provision of a method to adequately quantify the benefits to the community of alternative resource-sharing arrangements. 	<ul style="list-style-type: none"> Resource sharing has and continues to be about political agendas and not industry development or what is in the best interest of the community. The continued existence of NFZs is a clear

	example of continued political resource allocation process.
<ul style="list-style-type: none"> Regional considerations will be taken into account but solutions must be cost-effective and capable of being implemented. 	<ul style="list-style-type: none"> Cairns, Mackay and Rockhampton commercial fishing industries have been negatively impacted by NFZs policy – no regional considerations were used before its application.

Source: The first column is derived from the Green Paper, p.15.

3.3. STAKEHOLDERS: PRIMARY AND SECONDARY

The fisheries reform process will draw commentary and recommendations from a range of industry and non-industry stakeholders. The review process provides QSIA with an opportunity to share its views regarding the roles of various stakeholders.

PRIMARY STAKEHOLDERS

QSIA does not recognise the anti-commercial fishing industry positions taken by eNGOs like WWF. There is no trust in the long-term motives of WWF which seeks the removal of commercial fishing from Australian waters and it seems the organization will do and say anything to malign the commercial seafood industry.

Insert 3. World Wildlife Fund buys up fishing licenses to protect hammerhead sharks

<p>The World Wildlife Fund's buy-up of commercial fishing licenses should not be viewed as trying to shut the industry down, says its Australian director.</p> <p>The WWF has spent \$100,000 on one commercial Queensland fishing license and is starting another campaign to buy a second.</p> <p>Its aim is to protect the future of hammerhead sharks on the Great Barrier Reef, where the species is believed to be in serious decline.</p> <p>WWF Australia conservation director Gilly Llewellyn says studies indicate the hammerhead population has declined between 63 per cent and 80 per cent in 50 years on the reef.</p> <p>"We are not against sustainable fishing, and we support the 60,000 jobs that depend on a healthy reef. A healthy reef needs sharks, dugong, turtles and dolphins," Ms Lewellyn said.</p>

Source: Attachment 2.

WWF also launched video footage depicting the need to save sharks in areas that commercial fishers cannot operate. QSIA made the following observation regarding the WWF’s commercial net purchases¹⁰:

- The shark take from the East Coast Inshore Fin Fish Fishery (ECIFFF) is controlled by a TAC of 600 tonnes. Buying an unused license will not impact shark harvests.
- There is no current research suggesting that shark fishing needs to further controlled.
- Nets set by ECIFFF fishers to target shark are nowhere near coral reefs and generally in shallow coastal waters less than 10 m deep so the video of reef sharks is misleading.
- Not one of the video grabs or images shown in your video realistically depict the habitats or locations where ECIFFF shark fishing occurs.
- Gill nets used responsibly are very selective in what they harvest and catch.
- Research demonstrates very low interaction rates with threatened species.
- Proactive fishers and fisheries managers are continually striving to improve fishing practices, and reduce unwanted catch.

WWF like all eNGOs are a special interest group that does not represent all Queenslanders views on fisheries management let alone all Australians. Tables 5 and 6 provides an overview of the groups QSIA consider primary fisheries stakeholders.

Table 5. Government Fisheries Stakeholders

Government Agencies	Representing
<p>State Government</p> <ul style="list-style-type: none"> • Department of Agriculture and Fisheries • Department of Environment and Heritage Protection • Department of National Parks and the Great Barrier Reef 	Queensland Public Interest
<p>Federal Government</p> <ul style="list-style-type: none"> • Department of the Environment and Energy • Great Barrier Reef Marine Park Authority • Australian Fisheries Management Authority • Australian Maritime Safety Authority 	National and Qld Public Interest

¹⁰ QSIA Media Release, 17 July 2016, ‘Shame on you WWF’, see Attachment 3.

Table 6. Industry Group Fisheries Stakeholders

Industry Groups	Representing
<ul style="list-style-type: none"> • QSIA¹¹ • Queensland Seafood Marketers Association (QSMA) • Gulf of Carpentaria Commercial Fishermen Association (GoCCFA) • Moreton Bay Seafood Industry Association (MBSIA) • Fishermans Portal • East Coast Crabfishers Industry Network 	<p>Queensland Commercial Fishing Groups – Harvest and Post-Harvest organisations</p>

When DAF had the capacity to manage and fund advisory committees eNGOs like WWF seemed to be taking the role of the State government agencies with regard to environmental and fisheries sustainability issues. QSIA argues there are enough government agencies to ensure environmental issues are protected in the public interest.

SECONDARY STAKEHOLDERS

Special interest groups, as does the general public, have many opportunities to provide input to the development of fisheries through government initiated processes like the current Green Paper review. WWF and similar groups have every right to make their views known but they are not primary stakeholders but a well-funded, anti-commercial fishing special interests.

Finding 9

There are enough primary stakeholder groups in the State and National government and industry domain that can be drawn on to help manage Queensland fisheries to ensure economic, social and environmental values are maintained.

¹¹ These industry groups were identified on the [Queensland Government Business Portal](#). The groups have been identified for discussion purposes only. QSIA does not seek to attribute its views on QSMA, GoCCFA, MBSIA, Fishermans Portal or East Coast Crabfishers Industry Network. It is evident that there are many industry groups capable of engaging as primary stakeholders.

CHAPTER 4. ACCESS TO THE RESOURCE

4.1. THE DECREASE IN RECREATIONAL FISHING

A very important fact reported in a 2015 ABARES publication “Australian fisheries and aquaculture statistics 2014” highlights a dramatic decrease in recreational fishing nation-wide and in Queensland¹². This fact is also reported by Taylor et al 2010¹³.

In 2000, the total number of days fished per year by residents of the state were 3,600,000 (ABARES, 2014, p.43). In 2010, this had dropped to 2,600,000 days fished, a drop to 70% of the 2000 total (p.43). The same ABARES publication reports a decrease in recreational fishing across the nation and in each State and the Northern Territory. It also reports the participation rate is the lower in Queensland than anywhere else.

It is obvious that a change of real significance is underway. Taylor et al (2010) report that fishing club membership in Queensland has declined in concert with the overall decline in recreational fishing; they also report that the Queensland recreational catch in 2010 was about half of the 2000 catch.

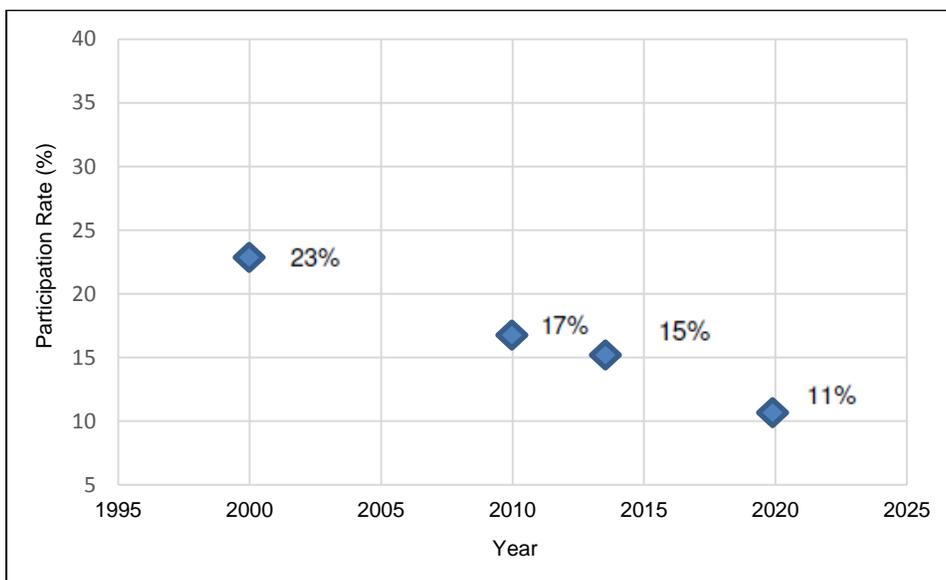
Let us put this into context. The human population growth in Queensland in the 10-year period went from 3.6 million to 4.5 million. If the days fished by recreational fishers had remained a constant percentage of the population, there should have been 4,500,000 days fished in 2010, not 2,600,000. The situation is depicted in Figure 1.

It would appear that we are witnessing a trend, a significant ongoing decline in recreational fishing. If in this case, there is the opportunity to make up for the decrease in the recreational catch by increasing the commercial catch under an overall cap in the harvest. Notwithstanding the ability of a small, privileged set of recreational fishers to catch large numbers, the magnitude of the decrease should lead to a greater share in catch for commercial fishers.

¹² This section titled, ‘Access to the Resource’, was drafted by Emeritus Professor Tor Hundloe.

¹³ Taylor, S, Webley, J and McInnes, K 2010 and 2013-14 recreational fishing surveys. See “2010 Statewide Recreational Fishing Survey,” for the Department of Agriculture, Fisheries and Forestry (the previous name for DAF and the same authors for the 2013-14 report.

Figure 1. The significant, on-going decline in recreational fishing



Source: ABARES 2014, DAF (2015) Statewide Recreational Fishing Survey 2013-2014 and Hundloe T 2016.

Finding 10

In recent times there has been a coordinated effort along the east coast of Australia to increase recreational fishing activity at the expense of commercial fishing activity particularly in the inshore net fisheries. There has been since 2000 a dramatic decrease in recreational fishing nation-wide and in Queensland. The decrease has been since 2000, from 23% of the State population aged 5 years or more, to 17% in 2010, to 15% in 2013-14.

In terms of recreational fisher days, there were about 30% less fishers in 2010 to what there were in 2000. Adjusted for population growth the decrease has been between 40% to 50%. If a re-allocation of access is considered, the opportunity exists to increase the share of the commercial sector, all other things being equal.

4.2. LOOKING AHEAD

If we look ahead 10 years (to 2026), the Queensland population is forecast to be in the order of 6 million. If the recreational fishing percentage of the population remained at 15%, where it sits today, the number of recreational fishers would grow to approximately 1 million. On the other hand, if the decline in recreational fishing over the next 10-year period mirrored what has been observed over the past 15 years, we could expect the participation rate to be in the order of 11% of the state's population. This would amount to 660 000 recreational fishers, close to the present number.

What these numbers are illustrating is the strength of population growth compensating for a significant decline in the participation rate in recreational fishing. There certainly would be no cause to consider an increase in access for recreational fishers. However, as noted in the Introduction, population growth plus the increasing preference for seafood will see a very significant demand for commercially-harvested fish. While some of this increased demand can be met by local aquaculture and some by imports, the real challenge will be to attempt to meet demand for the high-priced local product. This seafood will become more valuable and fishers' incomes will rise.

Continuing our review of prospects for the future, we could expect that the average number of days fished by recreational fishers would decline (based on the existing downward trend) , which in rough terms would drop from 4 days per year to 3 days per year. On this basis, the total recreational catch would be less than the catch today.

Finding 11

It is expected that, notwithstanding population growth, the recreational fishing effort and the catch will remain as it is today or decrease. On the other hand, population growth and changing preferences will result in a significant increase in demand for commercially-harvested seafood.

The economic value of the commercial catch will increase. That being the case, the State government could make a positive commitment to the State's economy and regional centres by allocating greater resources to commercial fishers.

4.3. WHAT IS BEHIND DECREASED RECREATIONAL FISHING?

Given the nation-wide reduction in recreational fishing, there has to be some significant underlying reason. The obvious reason is simply a change in "fashion" or preferences, as economists would say. It is not unusual for recreational fashions to change.

One of many examples is bike riding. This was very popular until the number of motor cars on the road made this a dangerous activity. Bike riding decreased substantially. Now with dedicated bike-ways it has grown as an activity. An example of a leisure activity which is much decreased on a per capita basis is body surfing, with board-riding replacing it.

The so-called “Big Bash” is gaining in popularity while Test cricket languishes. In fact, changing fashions in recreational activities and sports provide long lists of examples. One only has to consider the new sports that are allowed into the Olympic Games due to their growing appeal to audiences as much as to participants. About the only certainties are that AFL teams such as Collingwood and Carlton will be around in a 100 years.

The fact that the younger age group (not children but the next cohort) has experienced the greatest decline in participation in recreational fisheries (Taylor et al 2010) provides a clue. Young children are still being introduced to fishing as a family affair; it is when they age that recreation/leisure preferences change. There are increased leisure choices and substitutes for fishing.

Finding 12

Preferences for recreation and leisure change. An ongoing decline in participation in recreational fishing is likely. Fisheries managers should take the opportunity to reallocate resources to the growing fishery sector (commercial fishing) not the declining sector (recreational fishing).

CHAPTER 5. DECISION-MAKING FRAMEWORK

The Green Paper suggests that the Minister makes the decision about sharing access to the resource¹⁴. Maybe the Minister will want to retain this function, but if so I strongly recommend that the Minister be advised by an expert panel and the recommendations of that panel be made public.

The Minister can accept the existing de facto sharing situation and re-allocate shares according to the relative economic, including employment, strength of the competing sectors. This is what the recreational sector has been arguing for, on the false premise that their sector produces more economic benefits. If the Minister focused on the benefits of reallocation as the primary objective, she would make a reallocation decision in favour of commercial fishing.

The Minister could, remove the government from the lobbying of special interest groups by allowing expert based managers address fisheries issues. If management can be based on agreed rules and empirical evidence, it can be delegated to expert managers. The best example of this approach is the delegation of monetary policy, the setting of interest rates, to (an independent) Reserve Bank. The government sets the overall charter (such as keep inflation under 3%) which is like a target strategy for fisheries (maximise profit/income/employment), and that's its total involvement.

¹⁴ This section titled, 'Decision-making Framework', was drafted by Emeritus Professor Tor Hundloe.

CHAPTER 6. HARVEST STRATEGIES

A harvest strategy establishes how much can be harvested, who can harvest what and that catches are maintained within shares¹⁵. Key questions raised before the implementation of a harvest strategy:

- Target stock sizes, are the rights of all sectors in shared fisheries clear and explicit?
- What process should be used for resolving resource allocation?

6.1. EQUITY, BALANCE, EQUAL RESPONSIBILITY AND ACCOUNTABILITY IN HARVEST CONTROL

The use and reliance on statistical data should be always 'grounded in truth' as statistical data can be interpreted in a huge variety of ways with significantly different inferences drawn from the numerical data. It is absolutely necessary for all data to be made available to all stakeholders with the process to allow for scrutiny, confirmation, discounting and/or disagreement. An example of skewed conclusions can be demonstrated when some years ago there were DAF consultation port meetings which presented graphs showing reducing numbers of trawlers and increasing catch volume over several decades and both the fisheries managers and eNGOs representatives expressed their pleasure with this trend. On reviewing the graph for only a brief moment, commercial fishers discounted the conclusion because the data did not include either the value of the catch or the business expenses both of which were trending unfavourably.

Intentional recreational fishing effort by the few highly skilled fishers in the inshore and reef fisheries is expanding rapidly, regardless of the reduction in overall participation numbers, and if left unchecked will lead to over-fishing of certain target species unless bag limits are further reduced and policed. Failure to cap total recreational fishing take ensures that quota management systems in the commercial fishing sector cannot ensure sustainability of fish stocks.

Finding 13

All sectors (commercial, recreational, charter, game, Indigenous and freshwater and aquaculture) to be managed on a fair, equal and transparent basis for expansion or contraction. The recreational bag limit for shared target species need to be reduced and recreational take properly policed.

¹⁵ This section titled, 'Harvest Strategies', was drafted by QSIA.

6.2. RESOURCE ALLOCATION AND PURPOSE OF ACCESS

The fisheries act should be required to address the various uses and purpose of access acknowledging that:

- a) Primary industry food production; and
- b) Social access (recreational, charter, game fishing) to utilise the resource for personal fulfilment and self-supply of food; and
- c) Indigenous access to utilise the resource for cultural, heritage, personal fulfilment and self/community supply of food is based on vastly different priorities and outcomes than for the general public of Queensland.

The result of the State Government Burns Inquiry into Recreational fishing in 1992 posed recommendations regarding fisheries management that were directed towards commercial fishermen alone. The document quotes a then fisheries manager, as saying, "Recreational fishers are fisheries managers", and this is fast becoming a perceived reality in Queensland. Under the 'recreational fishing lobby management', many species have been prohibited to commercial fishers resulting in the under-utilisation of our fisheries resources and instead the increasing importation of seafood.

QSIA has observed that there is a growing divide between a segment of the recreational fishing lobby and commercial operators. Often the push by this segment of recreational fishers is to exclude access to fisheries resources by all other stakeholders including commercial fishing operations.

Recreational fishing efficiency has increased significantly with the use of larger boats, more efficient outboard motors, advanced electronic technologies and more sophisticated and mechanical apparatus (e.g. electric reels). Due to lack of measurement and research the recreational fishing effort, efficiency and catch is mostly goes unassessed and is unverifiable.

Queensland Fisheries do not manage the recreational fishing effort or take in the same manner as it does of the commercial fishing effort. Accepting that budgetary constraints may be restricting closer management of the recreational sector, there is no valid reason for the relatively low expectation of the department on the recreational sector to report their harvest volumes, particularly for highly valued, heavily sort species that are harvested from shared stocks and locations.

The Great Sandy Marine Park (from Double Island Point to Baffle Creek north of Bundaberg) includes a unique zone called Great Sandy designated area (striped red & yellow on charts) that permits additional lawful fishing activities, for both commercial fishers and recreational fishers which is different from those in other conservation marine parks which included continued access for commercial inshore net and line fisheries, vital for the local commercial supply of fish and recreational fishers are permitted to use 3 lines per person with a combined total of 6 hooks. This unique regional management arrangement was agreed and delivered in 2006, however recent demands by hard-line recreational fishers to exclude all commercial fishing activity in this Marine Park demonstrates lack of understanding and willingness to share fisheries resources.

Recreational fishing restrictions are almost nil and they have significant areas of water to fish. The only restrictions on recreational fishing areas are green and pink zoned marine parks, fish habitats and short term closures on tailor and barramundi. Successful fisheries resource management and allocation must be based on accurate catch data and harvest volumes across all sectors and regular stock assessments of shared bio-mass species.

6.3. CLOSURES

Most Queensland fishing closures apply solely to commercial fishing activities but remain open to recreational fishing, an example of these include:

- Weekends were traditionally the time taken off work for most Queenslanders however this dynamic has changed with people taking leisure time through the week not only weekends.
- Yellow, green, pink and dark blue zones in State and Federal Marine Parks.
- Pumicestone Passage is a recreational fishing only zone, introduced in 1995.
- Moreton Bay weekend closures.
- Hervey Bay recreational only zone and Hervey Bay trawl closure for winter whiting (during peak winter tiger prawn season).

This is evidenced in the Fishing and Fisheries Research Centre, School of Earth and Environmental Sciences, James Cook University study in 2011 which reveals¹⁶, *'Recreational fishers were largely unaware of the location of current ROFA (Recreational Only Fishing Areas) in the study area and therefore did not preferentially use these areas compared to areas open to commercial fishing. Likewise, recreational fishers did not deliberately avoid areas frequented by*

¹⁶ Tobin, RC (2010) Recreational Only Fishing Areas: Have they reduced conflict and improved recreational catches in North Queensland.

commercial fishers, and the presence or absence of commercial fishing was not a major factor influencing recreational fishing site choice’.

There is no evidence that ‘recreational only’ areas such as Pumicestone Passage have satisfied recreational fishers or produced their desired outcomes. Historical compromises allowing recreational fishers’ exclusive access through commercial sector closures and yellow zones has not satisfied or appeased the recreational sector, therefore there is no use in continuing with this management method.

Disturbingly recreational fishers continue to call for increasing exclusive access to Queensland fisheries resources, but they do not understand, recognise or consider accessing the hundreds of kilometres of saltwater creeks and rivers (from Baffle Creek to Cape York) that are permanently closed to commercial netting. QSI has been unable to ascertain from Fisheries Queensland why these waters have been closed to commercial fishers for decades and remain under-utilised by the recreational sector.

Finding 14

Resource allocation ought to be based on access to Queensland fisheries resources (including the seafood it produces) to all stakeholders, recognising the general public who want to consume Queensland seafood as the largest stakeholder and commercial fishers as the only sector which harvests seafood for the community – including consumers who do not fish for themselves.

Finding 15

The fisheries management framework needs to be based on regularly collected, verifiable catch data and harvest volumes across all sectors and regular stock assessments of shared bio-mass species with catch data and harvest reports being regularly released publicly.

Finding 16

Any and all harvest strategies developed ought to include provision for commercial fishers’ diversification with particular consideration for the economic impacts that would ensue for the many small multi endorsed fisheries.

Finding 17

As per the Recreational-only Fishing Areas Report by RA Tobin¹⁷, 'Further investigation is required to understand why recreational fishers do not choose to use current ROFA, the cause of conflict between the recreational and commercial sectors, and whether expected catch benefits of ROFA are being realised'. The 2010 Report raised real concerns that recreational fishers are not fully utilising recreational only fishing areas. Continuing resource access conflict and calls for more recreational only areas have little basis when current provisions are not resulting in preferential use or full utilisation by recreational fishers.

Commercial fishing operators should not be limited in value adding activities (e.g. filleting fish or shucking scallops) by prohibiting such activity at sea, in favour of undertaking processing at land-based facilities to lessen the burden on compliance officers. There are significant challenges to be addressed regarding harvest control and checks in fisheries that are shared between sectors – that is, net, crab, line and trawl fisheries.

Insert 4. Net Fishery

Urgent need to review apparatus controls (e.g. net size and length) to simplify the regulations for displaced or travelling fishers. The net lengths and mesh sizing measures need to have a more standardised approach in some areas. Regional management again would provide better plain English communication to fishers and better rulings on items as "taut", mesh combination measurements etc.

The regulations should not stipulate absolute controls but define minimum or maximum to allow greater apparatus variations and efficiencies (e.g. if a fisher chooses to use a larger mesh size or a smaller net length than what is stipulated it should not be a compliance breach). Anything that works in favour of increasing species selectivity and/or reducing interactions with non-target species should be encouraged and permitted.

Source: QSIA MRAG submission.

Insert 5. Crab Fishery

Input and output controls include a set number of pots for the commercial and recreational sectors, minimum size and sex.

Source: QSIA MRAG submission.

¹⁷ Tobin RC (2010) Recreational Only Fishing Areas Have they reduced conflict and improved recreational catches in North Queensland.

Insert 6. Line Fishery

Input and output controls are of little use unless they can be adequately enforced across all competing interests and there is agreement and commitment between all sectors.

Source: QSIA MRAG submission.

Insert 7. Trawl Fishery

Several input controls (e.g. maximum brake horsepower of main engines and vessel length) are blatantly disregarded and/or circumvented by some operators. Together with the current provision of limiting maximum hull units when calculating effort units' conversions has created an uneven playing field. Whilst these provisions need close scrutiny, better equality and compliance review any increase to vessel dimensions has the potential to open this fishing sector to interstate investment pressure and would greatly disadvantage current cash strapped operators who would not be able to take advantage of the expanded opportunities.

Source: QSIA MRAG submission.

The maximum length of nets in the trawl fishery should remain with the demarcation of the 50 fathom contour, effectively applying a vertical regional management control to swept area effort of deep-water trawl gear in the shallow water. The output controls limiting permitted by-products and on-vessel processing is reducing economic return at a time where expenses keep rising. In-shore trawlers need to be able to retain saleable and commercial quantities of flathead, sole, winter whiting etc.

The practice of keeping the recreational bag limit of fin fish for personal consumption by trawler crews and their families has occurred since the introduction of the trawl plan close to 15 years ago. This archaic and illogical rule incites honest commercial fishers to break the rules just so they can take a feed of fish home to the family.

Recreational bag limits on commercial vessels has not been actively checked or enforced for many years. Clearly the fish taken by all sectors under a recreational bag limit must be for personal consumption only and not sold or exchanged for personal gain. Compliance officers need to be assisted by upstanding recreational and commercial fishes to eradicate this 'black market' within all fishing sectors.

Finding 18

With advancements in personal communication devices, mandatory catch and effort reporting ought to be implemented in the recreational, charter, game, Indigenous and freshwater sectors, to match the reporting obligations of the commercial sector. Complete catch data and stock assessments can then be used to set accurate and binding harvest levels for the highly valued and heavily targeted species.

6.4. IMPEDIMENTS TO HARVEST STRATEGIES AND SEAFOOD PRODUCTION

The influence on commercial fishing from market and external forces are many and varied. Some such as exchange rates and international market conditions are beyond the direct influence of fisheries management or industry. However below are a non-exclusive list of industry recognised impediments.

Loss of productive fishing grounds is a real and tangible threat to the Queensland fisheries resource. Human-created impacts pose the greatest threat, including port maintenance and development, increasing ships anchorage allocations, coastal development, land clearing, wetlands degradation, urban spread, population pressures and climate change (carbon emissions) are just a few. Seafood consumers, commercial, recreational, charter, game and indigenous fishers, the majority of the Queensland population potentially will lose benefit from the communal fisheries resources should developments and impacting activities like these are allowed to continue at the current rate.

Governments are obliged to be accountable for their decisions and genuinely consider the 'greater good' of the community before handing down policies and approvals. No industry or sector should be allowed to develop and/or expand at the detriment and/or contraction of another.

Finding 19

All developments that have a negative impact on the fisheries resources and associated marine environment, bio-diversity and sustainability obtain an independent cost benefit analysis, made public for scrutiny and comment. A trust needs to be established to be accessed and used by fisheries resource users. Full operational details of the trust fund to be developed and agreed with input from all fisheries resource users.

There is serious concern that non-fishing stakeholders are meddling in fisheries management to the detriment of commercial fisheries production. Queensland fisheries resources must only be managed by DAF and the department should be obliged to stand beside industry to publicise that fisheries management regulations are based on ecologic and sustainable practices and are recognised as some of the best managed fisheries in the world.

Finding 20

The fisheries act should be written to prohibit the buy-out of commercial fishing licenses by anti-commercial fishing groups who use their influence to deny Queensland and Australian consumers fresh local seafood.

The government undertakes review of fisheries management plans with a designated role and significant contribution from eNGOs (e.g. WWF and Queensland Conservation Council). This practice forces industry to continually defend every aspect of the fisheries management review and does not permit or encourage high level strategic thinking, industry development or economic challenges to be openly discussed with fisheries managers free from the critical eye and indifferent comments of eNGOs.

The current trawl management plan includes input controls of seasonal closures. These extensive seasonal closures have significant negative impacts on continuity of market supply which allows other suppliers, including imported products to fill the supply void at the continued and compounding detriment of the wild catch sector. There is also little provision in the regulations to investigate, agreed or assume improved management codes to protect juvenile stocks of prawn and scallop, in support of improved economic returns.

Finding 21

That there is sufficient flexibility and adaptability in the provisions of commercial fisheries management to allow for progressive modification of regulations, after robust consultation with entitled stakeholders to improve economic outcomes (e.g. real time management, or modification of seasonal closures to align with lunar cycle).

There needs to be better consultation and understanding of the business implications that regulatory changes have on staffing, profitability, business planning and financing.

6.5. Ecological Sustainability of Recreational Fishing

Is recreational fishing ecologically sustainable in Australia? McPhee et al (2002, p.48) have argued that the way in which recreational fishing is viewed and managed needs to change. McPhee and his colleagues also mention that the issue is a challenge for fisheries managers but one that must be met.

Stevenson (2016) has argued that there is no evidence to support a cap on the overall effort of recreational fishing in Queensland supporting the observations made by McPhee et al almost 15 years ago.

Insert 8. Managing Recreational Effort

While there are bag limits on recreational fishers, there is no evidence of any cap on overall recreational fishing effort which, in spite of the precautionary principle written into the *Fisheries Act 1994*, threatens the overall sustainability of fisheries resources in spite of the efforts to ensure that commercial fishing is sustainable.

Source: Stevenson (2016, p.42).

There have been many reviews examining the benefits and issues relating to recreational fishing. In 2010, the New South Wales (NSW) Legislative Assembly published a report titled, 'Recreational fishing in New South Wales' examining the benefits of recreational fishing. Professor David Booth, Councillor, of the NSW Australian Marine Sciences Association (AMSA), noted that recreational fishing removes large numbers of important predators which impacts the marine ecology.

Insert 9. NSW AMSA Evidence

In fisheries management all sources of fish mortality must be considered to achieve fish sustainability. It is well established that recreational fishing removes large numbers of key fish species in New South Wales marine waters, including important predators such as mulloway, bream, flathead and also tailor.

Source: Evidence, 27 April 2010, p 2.

In the Queensland context, the ongoing impact of recreational fisheries on the marine ecology is unknown and a failure of fisheries and conservation management. This state of affairs is mirrored

across Australia as noted in a recent draft report by the Productivity Commission investigating the regulatory impediments to marine and aquaculture fisheries.

Insert 10. Draft Productivity Commission Report 1

Surveys are undertaken on an ad-hoc basis and there is therefore little information on shifts in fishing activity and catch. Relatively recent data indicates, however, that the total catch from recreational fishing is often less important than recreational catch of a particular species. For some species, the recreational take rivals or exceeds that of the commercial sector.

Source: Productivity Commission (2016, p.108).

QSIA supports the introduction of a recreational fishing licence or some form of user pays recreational catch monitoring system which is a prerequisite for workable harvest strategies and overall better management of the marine resource. This view is also supported by the Productivity Commission (see Insert 11).

Insert 11. Draft Productivity Commission Report 2

A well-designed licensing (or permit) system for all recreational fishers (including independent fishers, charter fishing operators and sports fishers) is a key step for managing recreational fishing. While some states have a licensing system in place these could be better used to collect more comprehensive information, and manage and support activity. The licensing of fishers is used as a key strategy in the management of many recreational fisheries worldwide.

Source: Productivity Commission (2016, p.111).

If the Productivity Commission's data is accurate the cumulative impact of recreational fishing and implications for the marine environment in the long-term is unknown. Is commercial fishing ecologically sustainable in Australia?

According to Hilborn and Kearney (2012, p.12) wild harvest fisheries have lower environmental impact than other sources of animal protein. The authors note that wild capture fisheries have lower greenhouse gas output, and use no fresh water, fertilizers, pesticides or antibiotics (see Table 7). Hilborn and Kearney (2012, p.12) support the view that commercial fisheries in Australia are underutilised noting, 'rather than closing areas to fishing because of their environmental consequences, countries with good fisheries management, such as Australia should be utilizing

fisheries fully'. So despite protestations from eNGOS and recreational fishing interests the sustainability of wild harvest fisheries compares well with other forms of protein production.

Table 7. Amount of water, fertilizer, pesticides, antibiotics and greenhouse gas emissions needed to produce one portion containing 40g of protein, for beef, chicken, pork, dairy and wild harvest fisheries.

	Water (L)	Fertilizer (g)	Pesticides (mg)	Antibiotics	Greenhouse Gasses (kg)
Beef	2200	50	494	21	16.7
Chicken	1331	18	163	55	2.5
Pork	1331	46	422	53	3.8
Diary	1178	34	299	50	2.7
Wild Capture Fisheries	Low	0	0	0	0.3-2

Source: Hilborn and Kearney (2012, p.12).

The Status of Key Australian Fish Stocks Report 2014 assess the biological sustainability of the key wild-caught fish stocks against a nationally agreed framework. The report examines whether the abundance (biomass) of fish and the level of harvest from the stock are sustainable. This data is provided to the FRDC by state fisheries departments¹⁸.

The report notes that the undefined stock classification does not necessarily mean that the stock is at increased risk; it means that there is limited or conflicting information available to undertake the assessment (Flood et al 2014, p.12). The stock status report, which is not referenced within the Green Paper, suggests Queensland fisheries are not at a tipping point.

¹⁸ Flood et al (2014, p.5).

CHAPTER 7. DATA AND INFORMATION

If the Department had the resources it could commission regular catch-effort-economic assessments¹⁹. This is what is done in SA and it works to the benefit of the department when difficult /unpopular decisions need to be made. Having been involved, on the ground, with these assessments the fishers tend to support them. An example is in Tor Hundloe's book "Fishing for Sustainability".

Unless the Department reverses its decision not to collect expenditure data from recreational fishers, it must discontinue to use dated and misleading expenditure data pertaining to recreational fishing. As the Department would have a seat at the table when national recreational fishing surveys are designed, it must demand that what is and what is not fishing expenditure be rigorously defined. No longer should there be mullet to snapper comparisons.

7.1. MONITORING

The recreational sector can no longer expect to be managed by boat ramp surveys and telephone polls – and continue to portray themselves as responsible credible users of the resource.

7.2. REPORTING – QUOTA AND LOG BOOKS

All sectors (commercial, charter, recreational and Indigenous) should be equally accountable and responsible for supplying catch data, quota usage and/or log book returns. Current commercial reporting processes are problematic due to need for notification, mobile phone coverage, deterioration of catch when Boating and Fishing Patrol Officer (BFPO) unload eskies or do not turn up for inspections as is experienced by the line fishery, for example.

No show by BFPO negatively impacts on fishers' productivity. Commercial fishers should not be expected to wait at ramps for possible compliance checks. This is unproductive and does not place any value on the commercial fisher's time, product quality or need to deliver product to market.

Finding 22

Reporting regimes must be reviewed to embrace simplicity, functionality, timely completion and available technology.

¹⁹ This section titled, 'Data and Information', was drafted by QSIA.

CHAPTER 8. CONSULTATION AND ENGAGEMENT

8.1. BUILDING TRUST

The QSIA position regarding consultation and engagement remains consistent with its submission to the previous MRAG Review process²⁰. Transparency and open dialogue needs to underpin a new consultation and engagement process. The message from QSIA members is that there is no trust in fisheries managers or the State government. A new process of engagement must allow stakeholders to participate in the main components of the management system – management, monitoring, and compliance.

Groups such as Management Advisory Committees (MAC) and Zone Advisory Committees (ZAC) provided a mechanism for industry to take local or sectoral issues forward. These groups were often large and seen as weighted strongly away from the commercial fishing sector, including various numbers of members from eNGO'S and conservation interests not compatible to the best interests of the commercial fishing industry.

Fisheries resource stakeholders need to be involved and address local matters and issues which are then fed into a state fisheries advisory board. This would forge closer links with a bottom up approach of regional or co-management.

Finding 23

There is an urgent need to restore open communication between government, fishers and key stakeholders along the coast.

8.2. LOCAL FISHERIES RESOURCES FOCUS GROUP

An all-inclusive local stakeholder group established to address local resource management functions and decisions. The membership of the local group may include commercial fishers, recreational fishers, charter operators, game boat operators, indigenous fishers, consumers, supply chain dependent businesses, BFPO, marine park regulators and local government.

²⁰ This section titled, 'Consultation and Engagement', was drafted by QSIA.

8.3. FISHERY ADVISORY PANELS

Fishery specific advisory panels would be established to oversee state-wide fishery matters, review and recommend amendments to management plans, assist in WTO approval process, including formulating recommendations and education about approval conditions, fishery development, and fishery research.

The fishery advisory panel is not just for management plan review activities but a regular and ongoing fisheries management advisory panel that meets at least quarterly and provides input into the State Fisheries Board. Participants of the specific fishery advisory panels would include:

- Financial stakeholders – commercial fishers, consumers, supply chain, dependent businesses;
- Non-financial stakeholders – fishery managers, researchers, conservationists (Department of Environment, Great Barrier Reef Marine Park Authority (GBRMPA) and Department of State Development); and
- Expert advisors, by invitation – economists, scientists (environmental, social).

All participants would work together in the one group so proposals or information tabled can be scrutinised, validated and/or discounted by the other members of the group.

8.4. STATE FISHERIES BOARD

Authorised and accountable for day-to-day execution of fisheries management decisions and delivery of harvest strategy computation etc. as per legislative provisions. Day-to-day management matters and decisions should be controlled outside of the state cabinet. Membership of the state fisheries board would be made up of expert and highly skilled individuals with considerable experience in fisheries matters, economic management, data analysis, business acumen and strategic insight, with similar due diligence, fiduciary responsibility and fit and proper status requirements, as that of a company director.

8.5. TRANSPARENCY OF REPRESENTATIVE STRUCTURE, FISHERY ADVISORY PANEL AND STATE FISHERIES BOARD

Terms of reference must include defined selection process, tenure of position, maximum term, disclosure of fishing interests and conflict of interest. The fishery advisory panels and state fisheries board would benefit from independent chairs. The selection process should be absolutely transparent including a selection criteria, nomination process and clear

appointment/voting methods. The tenure of positions should be such that there is good continuity but also provides for regular and controlled turnover of participants and include a maximum term of service. Clear Terms of Reference to be developed with full disclosure of fishing, researching, consulting, investment and conflict of interests to be publicly available. Annual review of chair, committee and governance to be undertaken and publicly published.

Composition – There needs to be a balance between ‘industry representation’ (those that have a financial interest/investment in the fishery, including supply chain and consumers) and ‘advisors’ (those that do not have a financial interest/investment in the fishery – i.e. other sectors, Queensland Fisheries managers, researchers, economists, conservationists, marine park regulators).

Regularity and Location of Meetings – Meetings should be as needed with a minimum of 4 per year. State fisheries board meetings may be closed meetings; however, there would be a great advantage to holding industry forums prior to regionally based meetings. All meetings need to be regular enough to ensure timely fisheries resource actions, decisions and modifications can be delivered.

Sitting fee – Quite often the ‘right people’ for the job are active commercial fishers who are self-employed. Attending meetings encroaches on their ability generate income and often meetings are had at times that suit the office workers, not the fishing industry. There needs to be recognition for the expertise, experience and insight brought to the table by and from the industry and therefore attendance fees must be paid, not just for the meeting time but the entire time, including travel that the representative is away from their enterprise.

Finding 24

That the new and improved version of Queensland fisheries management has robust and regular representative input through timely two-way information exchange both vertically and horizontally. That DAF start working co-operatively ‘with’ stakeholders and cease doing things ‘to’ stakeholders.

8.6. REGIONAL MANAGEMENT CONCEPT

Advancing the regional management concept would access the resource of active fishers with extensive anecdotal information of a particular region or fishery. At a frontline management level, a Code of Conduct or Environmental Management System would be easily implemented in the commercial sector. The drivers would be to increase profitability, gain more secure access and acceptance in the community through demonstrated ownership, problem solving and professionalism in 'on-water' fishing activities and in the workplace.

Regional management addresses each region for its uniqueness – a one size fits all is not seen as a suitable model. Close examination of other regional management successes (e.g. Gulf of Carpentaria net and line fisheries, Bowling Green Bay dugong protection, regional management in Great Sandy Marine Park, Spencer Gulf and the Burdekin experience etc.) would provide insight to scoping a regional management model. Why peruse regional management?

- Need to retain multi-endorsed licenses of the inshore fisheries and the current areas of operation for trawl sector. Security of access, better management of effort and controls supports increased profitability.
- Flexibility to re-define obsolete closures and protecting juvenile stocks to maintain fisher's viability.
- There is a real opportunity for regional management to be successful, if the legislative objectives clearly set allocation, primarily focused on fisheries resources to be proportioned in accordance to food harvest needs with all existing spatial closures available for amendment and the process commences using a clean 'slate' unzoned map.
- The negative outcome of creating a regional based management is the potential for conflict and increased targeting of areas for NFZs.

Finding 25

Increase enforcement to target illegal fishing and black market selling of catch by all sectors.

Compliance checks and enforcement should be risk based with significant and regular breaches being most heavily administered. Compliance officers must have the powers to undertake the full range of duties required to fulfil the role.

CHAPTER 9. FISHERIES COMPLIANCE

Fisheries compliance ensures integrity of management arrangements by ensuring everyone plays by the rules²¹. Are compliance activities targeted at the right issues? What is the perception of the levels of non-compliance?

9.1 COMPLIANCE MATTERS

In broad terms compliance can be grouped as follows:

- Compliance must be easier to observe and comply with than ignore and disregard.
- All forms of fishing that result in the 'black-market' sale of seafood must be dealt with using the full force of compliance, the law and result in hefty fines and the seizure of vessels and equipment.
- The black marketing of the recreational (including charter and game) catch requires high attention and additional resourcing to curb the escalation of the sale of reef fish in particular and to a lesser degree the sales of banana prawns from cast nets. This is a serious issue when there is no food safety programs in the recreational sector and in instances of ciguatera and histamine poisoning, the commercial sector suffers unnecessary blame and the sales of fish are severely impacted.
- Compliance officers need the appropriate resources, authority and powers to deliver compliance that is consistent in interpretation of the Fisheries Act and regulations.

9.2 COMPLIANCE CONSISTENCY AND ENFORCEMENT

Compliance and enforcement issues require greater consistency and funding from the State government.

- Consistency of compliance interpretation is a long standing problem for the commercial sector with BFPO interpretations and application of the regulations varying significantly between officers and areas i.e. what is considered accepted by BFPO at one port is considered a breach of the regulations 200 km up the coast.
- For the commercial sector, there is a need for timeliness of general compliance checks. When at sea vessels must be able to conduct and undertake fishing activities at the peak times, without inspections adversely affecting their ability to continue fishing (i.e. if nets have just been set or are ready to be hauled) then the fishing activity must take precedence over

²¹ This section titled, 'Fisheries Compliance', was drafted by QSIA.

business interruptions for compliance inspection. Conversely, onshore enforcement must not be seen as a way to stop boats from fishing.

- There is an urgent requirement for consistent compliance enforcement because presently BFPO in different regions are enforcing inconsistent and often conflicting interpretations of the rules which is causing confusion and misunderstandings with commercial fishers. This makes it increasingly difficult for commercial fishers to comply with regulations as they move along the coast.
- Compliance matters should be checked and enforced according to the degree of risk relating to the situation e.g. expired band aids are disregarded but insufficient lifejackets is a major breach.
- Fin fish fishery and cast netting – there is an urgent need to enforce the bag limits in the Recreational sector and curb black market sales, particularly of quota managed species.
- Compliance officers must have the correct level of authority to enter and search to ensure consistent and dependable compliance and governance.

CHAPTER 10. RESOURCING

The Green Paper states, 'Effective fisheries management requires adequate resourcing²². Approximately 60% of the current costs of fisheries management are funded by the community through general government revenue. Recreational and commercial fishers each contribute 20% (or approximately \$4.5 million per annum)'. Industry and the community should definitely not be contributing to paying for compensation for poor fisheries policies such as the NFZs.

The public should be compensated for the loss of seafood from the NFZs already implemented by allocating other grounds to commercial fishermen for their access on behalf of the community. If every NFZ was matched by an exclusive commercial only zones equivalent in size to the NFZs, the demands for more NFZs would probably cease. The government's first priority should be their commitment to the community and industry as the legal suppliers to the community of fresh local seafood.

The commercial sector is licensed to provide the community with their share of the community resource. If there is no recreational fishing license and most on the water compliance-based activity is focused on the recreational sector, the commercial sector should not have to subsidise work undertaken for recreational fishers.

²² This section titled, 'Resourcing' and 'Commercial Fishing', was drafted by QSIA.

CHAPTER 11. PRIORITIES FOR FISHERIES MANAGEMENT REFORM

Without the relevant data being put on the table, some of what has been identified as requiring reform can't be argued for or against²³. However, there are some issues where the proposals are at odds with the empirical evidence.

The proposal to investigate further commercial NFZs would not be a priority if notice was taken of the significant and continuing decrease in recreational fishing. Not only is this decline continuing but an apple to apples comparison between the recreational and commercial sectors shows, and very clearly, the far greater economic and job-creation importance of commercial fishing. Why waste time and resources on what should not be an issue.

No fishery can be profitable without access to productive fishing grounds. For example, the northern inshore fishery harvests mainly tropical species such as the threadfin, barramundi, shark and a high proportion of the east coast harvest of grey, spotted mackerel and mud crab (Williams 2002, p.94). These grounds and others are at threat from poor government policy making.

Then there is the mention of possible economic decline of certain commercial fisheries. The only recent evidence (Pascoe et al 2016) reports under-utilisation and the ability to increase catches and income. This suggests expansion.

What is certain is that the consumer demand for seafood is increasing, and local product earns a premium and these factors augur well for the commercial sector.

Only if there is significant over-capitalisation should we be concerned with a restructure. Industry has not been presented with data suggesting that we have a problem.

²³ This section titled, 'Priorities for Fisheries Management Reform' was drafted by Emeritus Professor Tor Hundloe.

SUPPORTING THEMES

The QSIA submission is divided into multiple sections to ensure all of the critical issues are addressed²⁴. At this stage, this submission has addressed the issues identified within the Green Paper and posed recommendations for the government's consideration.

This section of the submission will provide an industry perspective on the following issues:

- Theme 1_Seafood Consumers
- Theme 2_Reform Funding
- Theme 3_Net Free Zones
- Theme 4_Seafood Supply Chains
- Theme 5_Tourism Values
- Theme 6_Strategic Plans
- Theme 7_QSIA Fishery Committee Feedback
- Theme 8_Community Engagement

²⁴ This section of the paper was drafted by QSIA and its fisheries committees. Contributions from other sources will be referenced.

THEME 1. SEAFOOD CONSUMERS

It must be recognised that seafood consumers are the largest stakeholder with interest in the resource for the purpose of food. This means that commercial fishing is the source of local seafood for a greater number of seafood consumers who do not catch their own seafood supply than the proportion of recreational fishers who do.

Insert 12. Industry Testimonial 2

'The impact on the consumer is never dealt with because government don't want you asking uncomfortable questions. The Green Paper was not written for the community to really question what lays at the heart of the reform process – fisheries politics and creating doubt in the community that industry is either overfishing or not looking after the public's marine resource which is not the truth.

Don't let government sell you half the story – your access and right not to pay more for seafood is important. Your rights are more important than that of a vocal minority of anglers or environmental groups that are anti-commercial fishing'.

Source: Keith Harris, Attachment 4, p.1.

Contrary to the case put forward by recreational fishing lobbyists, as end-users of fisheries resources, recreational anglers actually compete for access with seafood consumers who are also end-users of the resources. Not commercial fishers who fish for an entirely different purpose to recreational anglers.

By resorting to arguments related to their expenditure on their hobby, recreational fishing lobbyists have focused on their status in the economy as consumers. There has been no argument put forward which distinguishes them from any other consumer as being deserving of preferential treatment in the allocation of access to fisheries resources.

THEME 2. REFORM FUNDING

The paper is silent regarding the issue of who will pay for the reform process. Insert 13 provides a statement regarding the government's view of current fisheries management arrangements. The implication being that all stakeholders are responsible for the current state of affairs across our fisheries.

Insert 13. Extract from the Green Paper 1

Queensland's current fisheries management arrangements are based on approaches developed in the late 1970s. They are cumbersome, costly to administer, inflexible and increasingly less effective in ensuring the sustainability of the resources and the economic viability of the existing industry sectors.

Source: Green Paper 2016, p.3.

Current arrangements have been the product of consultation process that were, at one stage, inclusive of all key stakeholders. The current situation was, in part, a product of the following issues:

- Fisheries legislation and regulation have allowed for flexible fishing business arrangements, particularly in the Queensland inshore fisheries;
- Government steer clear of industry development activity as it is technical not fisheries management yet all of the government's and DAF fisheries allocation decisions have an impact on the economic viability of seafood industry businesses, pre-harvest (e.g. commercial fishers), post-harvest (e.g. retailers, wholesalers, fish and chip shops, specialty seafood outlets and restaurants) and allied businesses (e.g. net makers, ice works, fuel suppliers);
- Recreational fishers have been assigned more than their fair share of the marine resource – with over 200 closures to commercial fishers the idea of ensuring sustainability and economic viability of pre and post-harvest businesses, allied industries (ice works, mechanics) and is undermined;
- The creation of zoning in the GBR and complementary zoning in State marine parks have locked out commercial fishers for good. In the GBR for example 1/3 of the commercial fishing effort was removed; and
- Recent fisheries reallocation processes were subsidised from public funds under a false claim that it would help the long-term health of the GBR by removing one form of fishing. Cairns, Rockhampton and Mackay had sustainably managed fisheries. The reallocation process was a political motivated one.

The Green Paper shifts the blame for current management arrangements shortcomings on key stakeholders instead of focusing on it owns role in the current state of fisheries management.

Finding 26

The State government work with key stakeholders to determine reform costs. The State government should also guarantee seafood industry businesses (pre and post-harvest) are not lumbered with the costs of reform.

THEME 3. NET FREE ZONES

The Green Paper is almost silent regarding the issue of politics and the influence of poor policy making in the management of Queensland fisheries. Insert 14 provides a clear example of the State government's inability to step back from the continued use of NFZs as a fisheries management tool.

Insert 14. Extract from the Green Paper 2

In addition, the following Sustainable Fishing election commitments will be progressed:

- Sit down with both recreational and commercial fishing organisations to investigate how a commercial net-free fishing area can be best instituted in Moreton Bay for the benefit of the region.
- Examine further net-free zones after an open application process.

Source: Green Paper 2016, p.25.

The NFZ policy was introduced by the current Queensland government as an election commitment. At no stage has the government identified any economic modelling or sustainability issue to justify a resource reallocation from the commercial fishing to recreational fishing sectors.

This component of the QSIA submission provides some context in which the legislative and regulatory framework in which Queensland commercial fishers is flawed and needing an overhaul that removes political interference with fisheries management. The ongoing political interference in fisheries management puts at risk a viable food producing sector.

Stating that NFZs policy is an election commitment and embedding it within the paper that has been marketed as a way forward for industry is a blatant undermining of the document's intent and in no way 'fisheries management'.

T.3.1. FAILURE TO ALLOW PUBLIC SCRUTINY OF 'SUSTAINABLE FISHING POLICY'

Industry expected an opportunity to scrutinise government policy in an open and transparent manner. The outcome included:

- The release of a 'Sustainable Fishing Policy' on 29 January 2015, two days before the State election, see Attachment 5.
- No time provided for industry or public scrutiny of the policy.

- No economic modelling was ever provided to the community or industry.
- No publication of loss of seafood product from the NFZs by government.

T.3.2. CONSULTATION PROCESS

A Survey Monkey survey was developed by the State government that was promoted as a means to consult with the community. The survey instrument was focused solely on commentary on zone boundaries not the merits of the policy. The online poll attracted fewer than 6,000 responses in favour of the Government's plan – this is less than 1% of Queensland's 642,000 recreational fishers²⁵ and a minuscule percentage of Queensland's total population of 4.85 million residents.

The survey did not have demographic filters so that it is impossible to know if non-Queensland residents expressed views on the policy. It was also impossible to assess how many times responses were duplicated. Extensive industry-level investigations have revealed there was no discussion or engagement with any representative sector of the commercial fishing industry or the businesses that rely on the continuing supply of fish and seafood.

Insert 15. Industry Testimonial 3

Vicki Bush... At no stage were we approached for consultation by Local or State Government about the effects that the Net Free Zones would have on our business and local restaurants. Our wholesale trade has been decimated and our retail sales are also down by more than 35% of the previous year's sales of estuary fish sales.

Kelly Morgan... I feel the Green paper will have a very negative impact on our ability to supply and access fresh local Queensland seafood to our customers.

Source: Vicki Bush and Kelly Morgan, Attachment 4, pp.3-4.

T.3.3. POLICY JUSTIFICATION

The primary arguments used by the government to support the policy included:

- Ecological Sustainability;
- Building Recreational Fishing, Tourism and Charter Fishing Businesses; and
- Linkage to 2050 Reef Plan.

²⁵ Refer to the [Statewide and Regional Recreational Fishing Survey](#).

In terms of 'Ecological Sustainability' there is substantial evidence that sustainability is a spurious argument. Data compiled by the ABARES and the DAF indicates that commercial species in Cairns, Mackay and Rockhampton are sustainably harvested by the commercial sector.

Questions of sustainability only arise for species where there is insufficient control over the recreational take. Using ecological sustainability as a foundation for removing viable, family owned business does not make sense, when the control of recreational fishing is virtually self-managed, if managed at all.

In terms of 'Building Recreational Fishing, Tourism and Charter Fishing Businesses' Queenslanders are becoming more aware that there are no regulatory obstacles to any type of tourism or charter business establishing in Cairns, Mackay or Rockhampton now or ever. No evidence has been produced to suggest that the introduction of NFZs will lead to new tourism, recreational or charter related businesses being established.

Attempts to link the introduction of NFZs to the listing of the GBR as endangered are totally unfounded. The inclusion of the NFZ points in the 2050 Reef Plan was entirely the work of the Queensland Government and not by any means a requirement of the Australian government. Three undertakings were made by the Federal and State governments including²⁶:

- Establishment of an 80% reduction in pollution run-off in the property by 2025 and the commitment of an initial additional investment of \$200 million to accelerate progress in water quality improvements;
- Confirmation of protection of greenfield areas by restricting major new port development in and adjoining the property, thereby limiting capital dredging for the development of new or expansion of existing port facilities to within the regulated port limits of the major ports of Gladstone, Hay Point/Mackay, Abbott Point and Townsville, excluding Fitzroy Delta, North Curtis Island and Keppel Bay from future port development and ensuring consistency with the 2003 Great Barrier Reef Zoning Plan; and
- The commitment toward a five-yearly evaluation of the plan performance and adaptation of its actions and targets on the basis of the results of future Great Barrier Reef Outlook reports.

²⁶ UNESCO – Convention concerning the protection of the world cultural and natural heritage World Heritage Committee, Thirty-ninth session. Bonn, Germany 28 June – 8 July 2015. UNESCO response which does not mention commercial fishing impacts at any level nor does it recognise or place any importance on the proposed net free zones. Full transcript: <http://whc.unesco.org/archive/2015/whc15-39com-19-en.pdf>

The NFZ policy was never endorsed by the Federal government; the need to respond to UNESCO and the final inclusion of the NFZ policy in the 2050 Reef Plan was a product of a change of government. The outcome for Queensland commercial fishers:

- The 2050 Reef Plan Advisory Committee will target commercial fishing for funding to address so called impact of commercial net fishing (with no scientific evidence to back claims); and
- The State government will point to the inclusion of NFZs as proof that they are a necessary inclusion in the 2050 Reef Plan process.

Insert 16. Industry Testimonial 4

This Green Paper does not contain the changes that are needed for the future management of our fisheries and how can we really trust a government so sneaky as to implement the net-free zones last year the way it was done in spite of more public opposition than support and without adequate consultation with the public nor the commercial fishermen who catch fish for them. The Premier said she is not a dictator but only a dictatorial government would do such a thing and not care about taking fish off the masses to whom it belongs.

Source: Margaret Stevenson, Attachment 4, p.3.

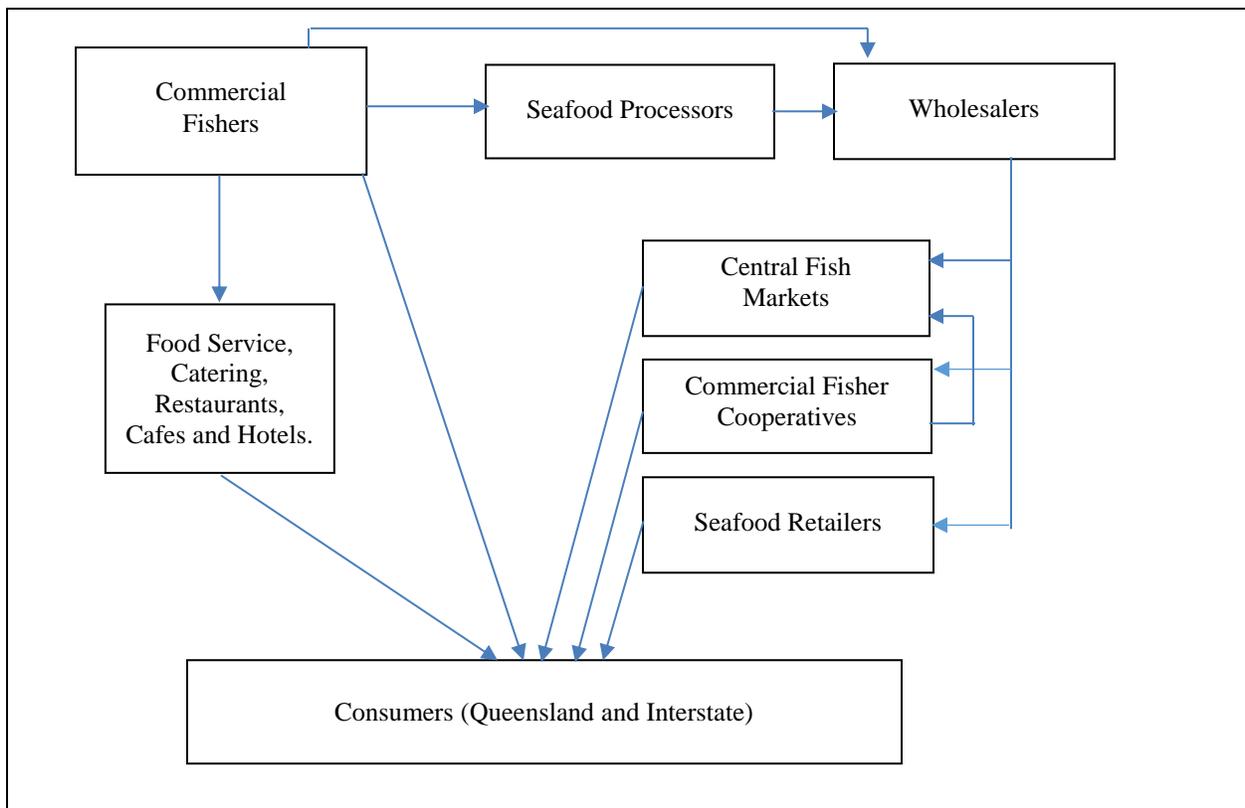
Finding 27

That the State government remove the use of NFZs as a fisheries management tool. That the State government commit to a process of removing political considerations from its fisheries policy agenda.

THEME 4. QUEENSLAND SEAFOOD SUPPLY CHAINS

The paper does not focus on the implications of fisheries management beyond the commercial fishing industry. Consequently, the government has not considered the implications of changes to catch on retail or wholesale businesses. Figure 2 provides a simplification of the connections between the harvest sector and other businesses in the Queensland seafood industry supply chains.

Figure 2. Queensland Seafood Industry Structure



Source: Adapted from “Australian Seafood Market Structure” market conceptualisations developed by Ruello 2008 and Spencer and Kneebone 2007.

The economic activity generated by the commercial seafood sector has been addressed in the main body of this submission. It is important to reinforce this message; at each node of commercial activity depicted in Figure 2 there is an income stream generated.

The Green Paper ignores businesses that provide services to commercial fishers, retail and wholesale businesses.

T.4.1. THE BUSINESS OF FISHING – CONNECTORS IN THE REGIONAL ECONOMY

The commercial fishing sector sources 90% of their goods and services within the local region of their home port. Fishing businesses require a high level of efficiency of plant and equipment for catching in peak seasons and optimizing in favourable weather conditions. For this reason, a “quick turnaround” of repairs, restocking before returning to fishing grounds can only be achieved by the ability to source locally and in the region. For example, if a Hervey Bay fisher cannot purchase in Hervey Bay – then Maryborough or Bundaberg is the next location to source the item.

This list of the types of businesses where industry trades for fishing operations does not include the private needs of fishing vessel owners or their employees. Any closures as a result of the implementation of the Green Paler to commercial fishing negatively impacts on businesses and jobs of locals employed in the following areas:

Fuel distributors, processors and wholesalers of seafood, sandblasting, insurance brokers, airlines (domestic and international), hire firms, ships chandleries, IT, computer and office support, refrigeration mechanics and supplies, shipbrokers, telephone sales and providers, upholstery, outboard sales and service, marinas, marine surveyors, engineering, trucking companies – refrigerated and general freight, security and fire suppressant services, auto and marine electricians, welders, shipyards, floor coverings, hardware and tool suppliers, gas fitters and supplies, accountants, banks, paint suppliers and painters, motor vehicle dealers, plumbers, inboard engine sales and repairs, electronics, financial planners, white goods, net makers, hydraulics, local government, mechanics, diesel services, ice works, graphic designers, printers, air-conditioning supplies, chemical suppliers, slipways, fiberglass, food providers newsagents, steel fabrication.

T.4.2. LOCAL INVESTMENT

The seafood industry supports significant private investment in Hervey Bay with the trawler wharf complex and roadway funded and maintained by local trawler operators, slipway and marina, 3 export registered seafood processing factories, 21 East Coast Trawlers owned by local families, inshore net fishing operators. Approximately \$200 million of local private investment across the region.

Maryborough: seafood processing factory and seafood wholesalers, Inshore net and crab fishers based in Maryborough, Tuan, Boonaroo.

The Tin Can Bay commercial fishing sector supports major infrastructure with two purpose built wharf complexes' – 100% funded and maintained by local fishing vessel operators, industrial sheds, a slipway, seafood processing and wholesale factories, retail and a fleet of 16 East Coast Trawlers, inshore net and line fishers.

Bundaberg and Burnett Heads support infrastructure catering for ship lifts, engineering and specialist electronics, seafood processors, seafood restaurants, marinas and a fishing fleet located along the Burnett River.

T.4.3. EMPLOYMENT

Some 400 locals from the cities and towns derive their incomes from across all sectors. The workers are sourced from the local pools in places as Bundaberg, Burnett Heads, Hervey Bay, Tin Can Bay and Gympie. They are trained on the job within the processing factories and at sea.

There is a significant seafood processing sector in all centres. Unlike other areas the majority of product unloaded is further processing is still carried out locally – with the shucking and grading of scallops, prawn processing to cutlets, crab processing and fish filleting to final pack for retail and wholesale orders.

T.4.4. SALES OF LOCAL SEAFOOD IN THE LOCAL REGION AND BEYOND

Contrary to the belief that the best seafood is shipped off shore, all seafood landed can be purchased locally at any of the locations where wholesalers also retail and the independent seafood outlets. Local brands as Clean Seas, Australian King Prawn Company are recognised as some of the highest quality seafood in the domestic and export marketplace.

Insert 17. Industry Testimonial 5

The recognition by the Queensland government that commercial fishing is an integral part of the Queensland economy is important. With a population of 4,808,771 and approximately 640,000 recreational fishers, Queensland has over 4 million seafood consumers that buy their seafood. Without the commercial fishing sector these consumers will be having to make the choice of going without the healthy food choice or buy non local seafood, which takes money out of the Queensland economy.

Source: Darren Line and Lydia Blehm, Attachment 4, p.3.

Wholesalers report strong growth in the demand for local seafood in the food service industry of the region. Many local restaurants now heavily focusing on the local species, particularly the Hervey Bay scallop, eastern king prawns and Bundaberg spanner crab. Local seafood wholesalers have experienced growth of 150% in sales of local seafood to local restaurateurs.

THEME 5. TOURISM VALUE

T.5.1. IMPORTANCE OF SEAFOOD TO THE TOURIST EXPERIENCE

Queenslanders are extremely proud of their seafood and take every opportunity to present it to visitors, including world leaders²⁷. In November 2014, Brisbane was the host to the G20 (called Brisbane G20). The following are the key components of the formal lunch menu of which four of the five meat dishes were seafood and three-quarters of the latter where Queensland seafood:

Insert 18. Brisbane G20 Menu

Salads	Various
Seafood	Freshly shucked rock oysters Cooked Mooloolaba King Prawns
Barbecue	Moreton Bay bugs Flinders Island butterflied leg of lamb Crispy skin Tasmania ocean trout

Source: Hundloe et al (2016, p.34).

While the average Australian, and average Queensland, is prone to think about the joys of a backyard barbecue, with the mandatory prawns sizzling, the occasional seafood dinner at a restaurant, or the next fishing trip if that is to one's desire, overlooked is the role local seafood plays in the nation's and the state's inbound tourism market.

Foreigners visiting our country and Queensland in particular (with its World Heritage properties, its fabulous beaches and its wildlife) have led to a major industry that employs a large number of people in coastal regions. But there is more. In 2012, Tourism Australia released the results of research project titled "Consumer Demand Project: Food and Wine", with the key results summarised here²⁸:

1. Fresh seafood ranked number two as preferred food across visitors from all overseas countries.
2. Fresh seafood was ahead of natural fruit and vegetables and high grade meat.

²⁷ This section (T.5.1) was drafted by Emeritus Professor Tor Hundloe. Sections T.5.2 and T.5.3 were drafted by QSIA.

²⁸ Tourism Australia: <http://www.tourism.australia.com/statistics/consumer-demand-research.aspx>

3. Visitors from Italy, Japan and the USA put fresh seafood as their number one preference.
4. All other overseas tourists put fresh seafood in their top three preferred foods.
5. In the following order out of 16 choices, foreign tourists associated Australia with: (1) fresh, local produce, grown in pristine natural environments; (2) fresh seafood; (3) high quality meat; and at (7) fish and chips at the beach.
6. Visitors state that the most appealing way to sample Australian produce is: “Australian seafood while taking in a breathtaking coastline”.

This ever so brief account of the role of seafood in one of our major foreign exchange earning industries provides an insight on the seafood story that is easy to overlook if the focus is limited to what happens on the water or the beach. We should also note that as a nation consumption of seafood is slowly increasing. Average per person consumption in 2015 was 15 kilograms per year. It is at 25 kilograms if the Food and Agriculture Organization (FAO) of the United Nations estimate is used, however this includes sardines that are not for human consumption and the fish weights are for whole fish. It is best to use the smaller number.

Finding 28

Our seafood is very highly regarded by foreign and domestic visitors. Tourism is an important employment generator in the Queensland economy which has been cited by the State government as a pretext for the net free zone policy. There is a real and critical link between local caught seafood and the tourist experience which has been missed by the Green Paper.

T.5.2. THE TOURISM EXPERIENCE AND SEAFOOD

The paper ignores the linkage between the seafood and tourism industries. Visitors to Australia come for a variety of reasons and it seems the food and wine experience is an important part of the Australian tourism experience – the Queensland tourist experience is important and is ignored because it does not fit the political narrative of the State government.

Insert 19. Industry Testimonial 6

‘They can eat steak, chicken or pork in any country they visit – I truly believe that these local delicacies being unavailable or in short supply will have a negative impact on tourist numbers. Our biggest selling dishes are all fresh local seafood dishes, that says a lot’.

Source: Andrew Mirosch, Attachment 4, p.4.

The seafood experience is a key component of the overall food and wine experience²⁹:

- A good range of multicultural food options is generally most important international visitors, followed by availability of fresh seafood and natural fruit and vegetables
- Australia is strongly associated with 'Fresh local produce grown or raised in pristine natural environments', 'fresh seafood' and 'livestock'.
- Most appealing food and wine 'concept' was food and wine experiences.

Insert 20. Industry Testimonial 6

'My customers at Sirromet expect fresh local product and pay a premium for it. About 50% of my customers are overseas visitors who come to Australia and eating fresh local seafood has been proven to be a major reason they choose to visit Queensland and Sirromet.

They don't want to eat seafood from other countries they want our own Moreton Bay Bugs, Rock Oysters, Mud, Sand and Spanner Crabs, Snapper, Whiting, Spanish Mackerel, Bream, Taylor, Gar and even Mullet harvested from our coast line'.

Source: Andrew Mirosch, Attachment 4, p.4.

T.5.3. QUEENSLAND SEAFOOD TOURISM EXPERIENCE IGNORED

Unfortunately, the seafood lovers of the 22 million visitors and over 4 million Queensland residents who do not recreationally fish have been overlooked as an important sector of the food tourism market and not experienced the local produce as these celebrities³⁰.

Whilst Tourism and Events Queensland funds events with seafood and have commenced a culinary tourism strategy as a key reason to visit Queensland, the historic apparent reluctance to include wild catch seafood in agri-tourism initiatives by DAF continues to impede the potential of the wild catch sector to grow its share of the international and domestic culinary tourism that is emerging across regional Queensland.

Demonstrating seafood as a tourism driver is the Hervey Bay seafood festival. This event highlights the potential of the seafood as a draw to drive tourism for the region.

²⁹ Tourism Australia, pp. 20, 22 and 26.

³⁰ Tourism Market Profile:

<https://www.business.qld.gov.au/invest/investing-queenslands-industries/tourism-investment/market-profile>

Insert 21. Hervey Bay Seafood Festival

The multi award winning Hervey Bay Seafood was established in 1998. It is managed by a not-for-profit organisation, the Hervey Bay Seafood Festival Association Inc. Its membership is made up of local fishers and friends of the seafood industry. It is the only seafood festival that is organised solely by the men and women of the seafood industry.

How it began – for decades the local fishing industry had been subject to campaigns to marginalise and discredit their fishing activities.

The aims of the festival is to create an awareness of the economic and social role of the seafood industry in regional Queensland by showcasing the products and the practices of industry in various forms.

Overview and Statistics

- Only local species are on sale.
- 2016 Attendance – 8,900.
- Over 50% of attendees travelled to Hervey Bay for the event.
- The intrastate captures the 400km drive market with visitors travelling from the Gold Coast, Brisbane, Toowoomba, Dalby and Rockhampton areas.
- The experience seeker foodies fly from Adelaide, Melbourne, Sydney and Brisbane for the higher end seafood and wine at the festival and the side events in the city.

The festival anchors the growth in seafood as a local tourism drawcard with a high uptake of local seafood at local eateries – the diners are demanding the local product. Seafood wholesalers have reported a 100% increase in sales to local restaurants, clubs and hotels.

THEME 6. STRATEGIC PLANS

Strategic plans are often used by government agencies to articulate the overarching goals and pathway for industry development. DAF has drafted multiple strategic plans with underlying themes of productive and prosperous commercial fisheries.

Insert 22. DAF Strategic Plans

Strategic Plan 2015-20

Productive and profitable agriculture, fisheries and forestry sector.

Strategic Plan 2015-19

Our vision Productive and prosperous agriculture, fishing and forestry sectors. We strive to be:

- A respected collaborator and connector across government, industry and research bodies.
- An outcomes-based regulator.
- A high-performing customer-focused organisation.

Source: DAFF Corporate Publications³¹.

The current reform process suggests that commercial fisheries are not as productive or prosperous as they could be. The three outcome areas noted in the 2015-19 Strategic Plan have had various degrees of success:

- Industry has no trust in government's capacity to collaborate without an underlying political agenda.
- What outcomes – mutual trust (Government failure); level playing field in terms of resource allocation (Government failure) and industry confidence at an all-time low (Government failure).
- The customer-focus should be industry and consumers but the Green Paper shifts this to charter and recreational fishing stakeholders.

Due to budget cut-backs, DAF has had little choice but to act as a regulator at the expense of targeting black market activities, using science to develop resource allocation policy and industry development. Given the economic analysis prided by Professor Hundloe it is clear that an investment in commercial fisheries is income and employment generating.

³¹ DAF Corporate Publications: <https://www.daf.qld.gov.au/about-us/corporate-publications/strategic-plan>. Strategic Plans contained at Attachments 7 and 8.

Finding 29

Increase budget to DAF to achieve four outcomes: (1) fisheries regulation, (2) fisheries enforcement, (3) science-based management and (4) industry development.

THEME 7. QSIA FISHERY COMMITTEE FEEDBACK

The QSIA represent key fisheries (crab, line, net and trawl) and each of these fisheries have unique and shared concerns regarding current fisheries arrangements. The Green Paper (see Insert 23) asserts that Queensland fisheries are on the verge of overexploitation. This is not the case.

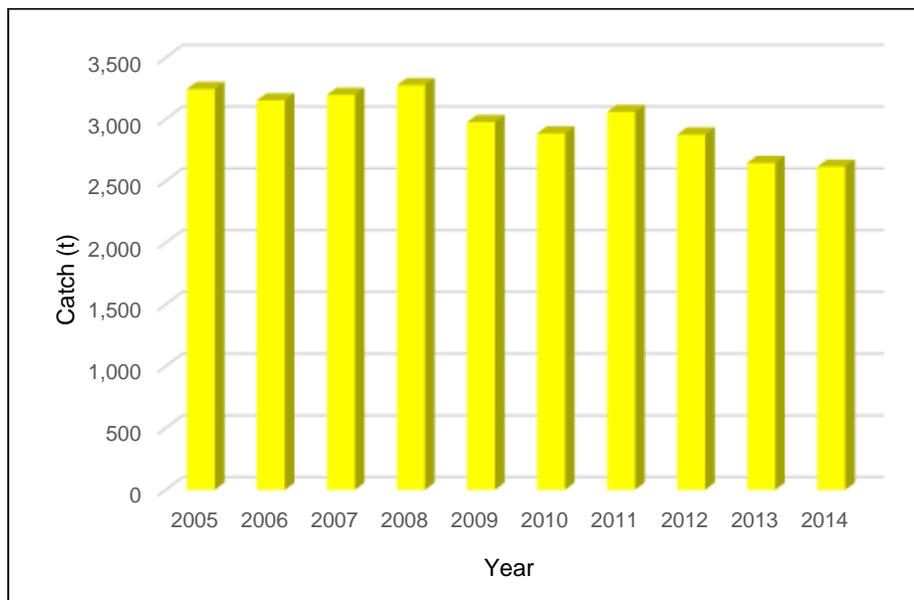
Insert 23. Extract from the Green Paper 3

In recent decades, pressure on our fisheries resources has escalated. We are now facing potential overexploitation of these resources by all sectors, and this is causing increasing conflict and competition between users of the resources and concern in the wider community.

Source: Green Paper 2016, p.2.

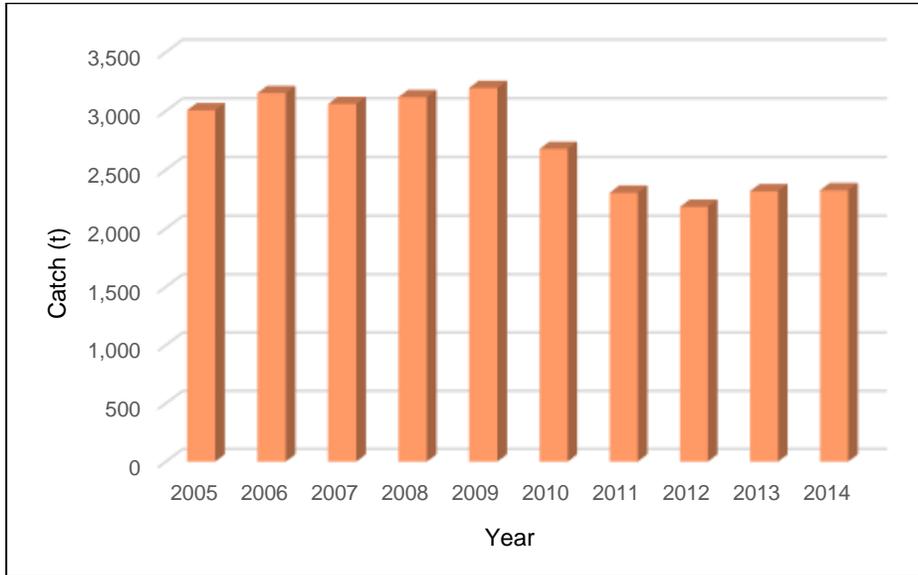
By way of example, data obtained from Queensland Fishing (QFish) for the Crab, Line, Net and Trawl fisheries suggest stable catch levels on a year to year basis between 2005 and 2014.

Figure 3. Queensland Crab Fishery Catch Levels



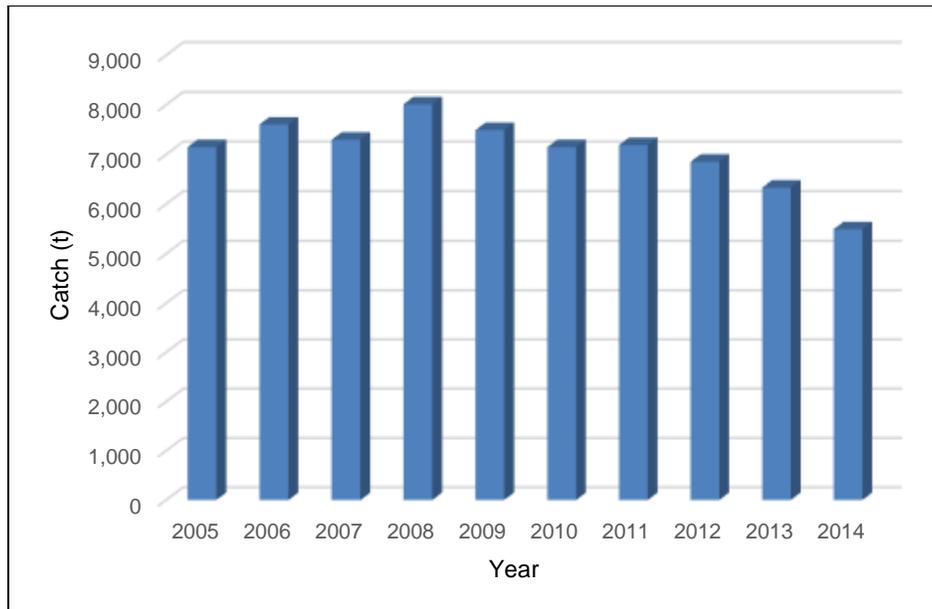
Source: QFish 2016, Crab fishery catch data.

Figure 4. Queensland Line Fishery Catch Levels



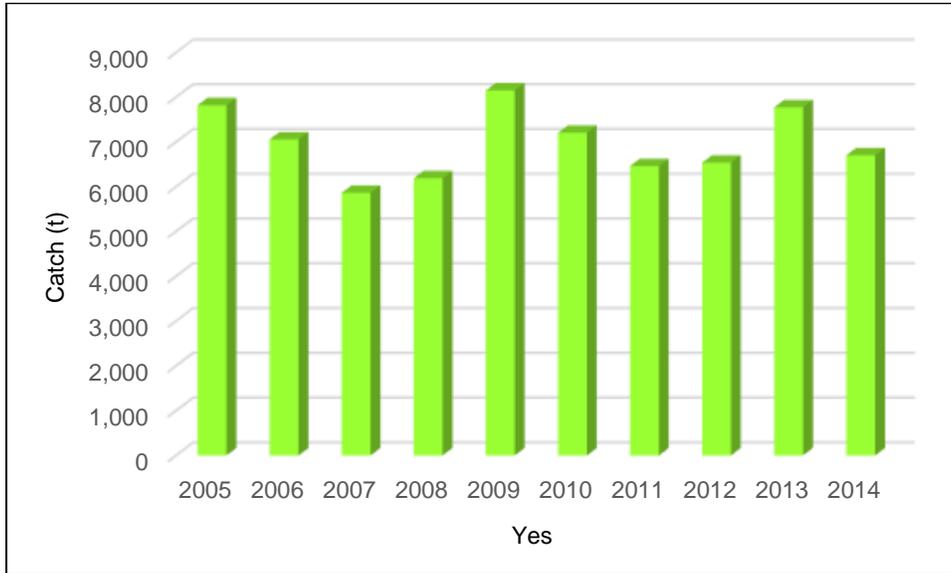
Source: QFish 2016, Line fishery catch data.

Figure 5. Queensland Net Fishery Catch Levels



Source: QFish 2016, Net fishery catch data.

Figure 6. Queensland Otter Trawl Fishery Catch Levels



Source: QFish 2016, Otter Trawl fishery catch data.

T.7.1. CRAB COMMITTEE

The QSIA Crab Committee posed 11 survey questions to QSIA crab fishers and their responses are noted below.

Question 1. There has been a significant transfer of effort from the net to the crab fishery on the Queensland east coast and the Gulf of Carpentaria. Do you agree? What impacts have you seen in your region from increased crab fishing effort?

Table 8. Response to Crab Survey – Question 1

Agree – 89%	Disagree – 11%
<p>Feedback</p> <ul style="list-style-type: none"> • The introduction of the net free zones. • Focus of government on closing net fishing in favour of recreational fishing. • Single endorsements have led to an increase in fishing pressure. • Poor management is leading to more pressure on the fishery. • Down turn in mining – people shifting from mining to crabbing. • Increased bad publicity from bad operators. 	<p>Feedback</p> <ul style="list-style-type: none"> • What impacts have you seen in your region from increased crab fishing effort? • Its recreational fishing effort that is increasing and having an impact on commercial catch levels.

<ul style="list-style-type: none"> • When someone leases a licence their care factor is limited because of chasing of the dollar. • Too easy to become a crab fisher – professional standards are so variable it will tarnish the fishers that have been in areas long-term. • Unnecessary conflict between all sectors (commercial and recreational). 	
<p>A downturn in the mining sector may have contributed to increased effort in the fishery. Where new crab fishers have entered areas local practices are largely ignored. This outcome has led (in some areas) to potentially damaging bad publicity due to conflict. Current effort shift is leading to unnecessary conflict between commercial and recreational fishers.</p>	

Question 2. Are the number of crab fishers sustainable? Why have you chosen this response?

Table 9. Response to Crab Survey³² – Question 2

Yes – 28%	No – 56%
<p>Feedback</p> <ul style="list-style-type: none"> • Totally sustainable if effort can be managed. • 100 pot licenses will let you make a living; 50 pots are difficult to make a living from. 	<p>Feedback</p> <ul style="list-style-type: none"> • If too many more licenses become active. • Too many crabbers. • Too much/increasing recreational effort in the fishery. • Sustainable but not profitable. • Seasons are variable and effort seems to be increasing. • Too many new entrants. • Smaller and smaller financial returns. • No restriction on entry to the fishery. • Perhaps more restrictions on entry into regions or zones. • Loss of access (over time) in other fisheries unnecessarily exerting pressure on the crab fishery.
<p>Over half of the respondents do not believe the number of crab fishers is sustainable. This is contrasted with almost one-third suggesting the numbers are sustainable. The context in which this finding is based:</p> <ul style="list-style-type: none"> • An effort shift based in part from poor government policy decisions (e.g. NFZs); • Loss access amongst other fisheries in the past; and • Increasing recreational effort. 	

³² Unsure – 16%. Feedback Question 2 – NFZs may have increased effort.

Question 3. Should the State government should implement a tag system for recreational crab fishers? Your View?

Table 10. Response to Crab Survey³³ – Question 3

Yes – 72%	No – 17%
<p>Feedback</p> <ul style="list-style-type: none"> • Manage recreational take. • Potentially stop black market sale of crab. • Limit pot theft. • How would you implement at low cost? • Could be a way for government to raise revenue. • Could use a serial number system to trace who purchased the crab. • Educating the public on soft versus hard crab. 	<p>Feedback</p> <ul style="list-style-type: none"> • Too difficult to police. • Better to lower bag limits.
<p>The implementation of a tag system seems to have support:</p> <ul style="list-style-type: none"> • Help to manage recreational take; and • Minimise black market activity. 	

Question 4. That government Implement a bag limit of 4 and a boat limit of 10 crabs? Your view?

Table 11. Response to Crab Survey – Question 4

Agree – 89%	Disagree – 11%
<p>Feedback</p> <ul style="list-style-type: none"> • Help limit black market activity. • Help monitor crab catch. • Will help ensure an adequate catch. • Lower the bag limit. 	<p>Feedback</p> <ul style="list-style-type: none"> • Prefer a lower boat limit alone.
<p>There is strong support for lower bag limits.</p>	

³³ Unsure – 11%. Feedback Question 3 – No feedback provided.

Question 5. The State government should introduce a recreational fishing license. Your view?

Table 12. Response to Crab Survey³⁴ – Question 5

Yes – 78%	No – 11%
<p>Feedback</p> <ul style="list-style-type: none"> • Potentially better management outcomes. • Need a system to help police the catch. • Log book. • Help pay for fisheries management. • Funds raised could be raised through log books could help recover costs. • Pro-recreational fishers need education particularly around better fishing practice. • Fee could be used to educate and monitor catch. 	<p>Feedback</p> <ul style="list-style-type: none"> • Potentially more power to recreational fishers if licensed.
<p>There is strong support for a recreational fishing license.</p>	

Question 6. Grading of crab – There should be no take of C Grade crab. Your view?

Table 13. Response to Crab Survey³⁵ – Question 6

Agree – 83%	Disagree – 11%
<p>Feedback</p> <ul style="list-style-type: none"> • Need a chance to grow – taking C Grade crab is a waste of a resource. • If left alone for 4 to 6 weeks, you can catch a B or A grade crab. • Protection of stock comes from avoiding the take of C Grade crab. • Grading an issue. • Should take only A Grade crab. • Hard to police and who funds this? • How do you judge/make grading? • Needs to be legislated for all crab fishing sectors. • This cannot be achieved with the current amount of crab fishers 	<p>Feedback</p> <ul style="list-style-type: none"> • How do you determine C Grade crab? • Market is demanding C Grade crab. • When does a C Grade become a B Grade. • Need better definition for C grade and B Grade and that the grading method is accepted. • How do you educate the industry?
<p>There is strong support for no take of C Grade crab.</p>	

³⁴ Unsure – 11%. Feedback Question 5 – Perhaps tracking the avid recreational fisher and How will fisheries monitor catch?

³⁵ Unsure – 11%. Feedback Question 6 – No feedback provided.

Question 7. What are your views regarding the introduction of a harvest strategy? Your view?

Table 14. Response to Crab Survey³⁶ – Question 7

Support – 50%	Do not Support – 33%
<p>Feedback</p> <ul style="list-style-type: none"> • Recreational take unknown and should be monitored. • How do you achieve this without quota or TAC? • Some control needed to make the industry profitable. • Does this mean zoning or regional management? • Need to know more specifics. • Need realistic target / ref points to work off. • Linked to accurate reporting from all sectors. • Allocation to all sectors. 	<p>Feedback</p> <ul style="list-style-type: none"> • What model – there is too little information to make a call on a harvest strategy? • Current approach of size and no take of female crab is enough to help manage the fishery. • Stopping the take of C Grade crab and zones could remove the need for a harvest strategy.
<p>There are mixed views regarding the introduction of a harvest strategy.</p> <p>Members indicated that support for a harvest strategy is difficult without a clear sense of the management agenda government is proposing for the fishery.</p> <p>Are there potential management arrangements that do not use quota or total allowable catch as the basis for managing effort?</p>	

Question 8. Do you support quota as part of a harvest strategy? Your view?

Table 15. Response to Crab Survey – Question 8

Support – 11%	Do not Support – 89%
<p>Feedback</p> <ul style="list-style-type: none"> • Will depend on how it is implemented? 	<p>Feedback</p> <ul style="list-style-type: none"> • How is allocation determined? • Bad policy which is open to political interference. • How is allocation determined if a fisher has more than one C1 endorsement? • It can be used as a political tool.
<p>A clear majority of members do not support a quota managed fishery.</p>	

³⁶ Unsure – 17%. Feedback Question 7 – What does a harvest strategy entail? Need more information – what is the goal, what is involved and potential impacts on my business? Can't be done without putting people out of work.

Question 9. Do you support total allowable catch (TAC) as part of a harvest strategy? Your view?

Table 16. Response to Crab Survey – Question 9

Support – 17%	Do not Support – 83%
<p>Feedback</p> <ul style="list-style-type: none"> • Need to determine a reasonable limit. • Crab fishing is a seasonal fishery. 	<p>Feedback</p> <ul style="list-style-type: none"> • Increased effort has led to problems in the fishery. • Seasonality/weather will restrict take. • Poor way to manage the fishery – will lead to increasing targeting C Grade crab and increase pressure.
<p>Members do not support TAC to manage the fishery.</p>	

Question 10. Better standards are needed for recreational crab pots – this type of equipment causes a hazard in the marine environment. Your view?

Table 17. Response to Crab Survey – Question 10

Agree – 94%	Disagree – 6%
<p>Feedback</p> <ul style="list-style-type: none"> • Ghost fishing is an issue. • Standards should be the same across commercial and recreational. • Current gear too disposable. 	<p>Feedback</p> <ul style="list-style-type: none"> • No comment.
<p>A clear majority of members agree that better crab fishing equipment standards are needed for recreational crab fishers.</p>	

Question 11. Should commercial and recreational crab fisher pots should include a minimum of 28 ply and an escape vents/BRDs? Your view?

Table 18. Response to Crab Survey³⁷ – Question 11

Agree – 78%	Disagree – 17%
<p>Feedback</p> <ul style="list-style-type: none"> • Support for minimum ply and escape vents/BRDs. • 10ml ring thickness on collapsible pots. 	<p>Feedback</p> <ul style="list-style-type: none"> • Need to be adaptable to the region in which you fish.

³⁷ Unsure – 5%. Feedback Question 11 – No feedback provided.

- Excluder or escape vents is a good idea.
- Recreational pots have very little weight – they become navigational/safety hazards causing more (unpaid work) for commercial fishers.

Majority of responses suggest that minimum standards would be helpful.

In the longer-term industry will still need to liaise with government to ensure new management arrangements do not negatively impact commercial fishing businesses and that industry is not solely burdened with the costs of change.

Table 19. Additional Issues

Effort

- More restrictions on recreational take.
- Capping of effort across recreational and commercial fishers.
- Consider looking at a limit of days.
- Need recreational mentoring paid for by the recreational fees.

Pot Numbers

- Remove the use of 100 pots but consider 100 pots for fishers working in remote areas.
- Uncoupling of 2 * C1's.

Fishery Dynamics

- Crab fishery is extremely weather dependent.

Black Market

- Black market is becoming more of an issue.

Funding

- Boating and fishing patrol need more funding.

Management Arrangements

- Regional management arrangements should be considered. This approach will keep the industry alive in the long-term.
- Need some kind of restrictions to stop cowboy operators.
- If proper management arrangements in place – industry led proposal – that all State yellow zones on Queensland coast be open to commercial crabbing to be taken to the environment. This restriction has hampered the management of the fishery.
- Spawning closures could work along the coast to help manage crab stocks.

Other

- Involve a combination of fishing history and knowledge of local fishing inspectors to verify catch history.
- Lower crab fisher numbers will restrict crab supplies and therefore have supply chain issues in Queensland and interstate.
- Separate Gulf and East Coast and separate Sand and Mud Crab fisheries.
- Industry funded restocking.

T.7.2. NET COMMITTEE

The QSIA Net Committee sought information from QSIA Net fishery members regarding the Green Paper.

Table 20. QSIA Net Fishery Policy Positions³⁸

Policy 12. Revisit over 200 closures to commercial fishing in Queensland through an independent review.
Policy 13. Remove investment warning from the net fishery.
Policy 14. Opening of river closures in the complimentary State marine park yellow zones.

Source: Queensland seafood industry association fisheries policy positions – pp.5-6, see the full document at Attachment 6.

The Green paper incorporates the NFZ policy and despite the State government's pronouncements that it must pursue its election commitments the policy is flawed and was never based on science but a crass political agenda. In February 2016, the Net Committee surveyed QSIA members and there was support for a variety of forward looking fisheries management policy approaches.

Table 21. QSIA Net Fishery Policy Survey Items

Survey Items	Support (%)	Do Not Support (%)
Regional Management	75	25
Fisheries Resource Framework	88	12
Recreational Fishing Licences	94	6
Fair and equitable access for the community to seafood	94	6
Developing a Food Security Policy	94	6
Moving away from politicised fisheries management	92	8

Source: QSIA Net Fishery Survey 2016 – p.1, see Attachment 9.

³⁸ Queensland seafood industry association fisheries policy positions – 25 May 2016. Document submitted to government and opposition agriculture ministers.

There were mixed views on management approaches, TAC and the use of quota.

Table 22 – Net Fishery Operations Survey Items

Survey Items	Support (%)	Do Not Support (%)
Management areas of the Queensland Coast	69	31
TAC	62	38
Quota	38	62
Retaining Netting Endorsements	84	16

Source: QSIA Net Fishery Survey 2016 – p.2, see Attachment 9.

The discussion paper yielded many themes including:

- Management arrangement need to change sooner rather than later.
- Status quo is not good enough and maintains the management of the Queensland net fishery is based on the whims of recreational fishers and their political influence.
- There seems to be too little emphasis on the impacts of recreational fishing. The development of the 2050 Reef Plan completely ignored the impacts of recreational fishing in Queensland and potential impacts on the Great Barrier Reef and focused on a highly suspect NFZ policy to help improve the Great Barrier Reef’s health.
- What is considered fair and equitable? Commercial fishers are being forced out of open areas to coincide with election cycles. This can be attributed to the number of recreational fishers is growing. The State government has still not decided what is more important for the long-term social, economic and environmental benefit of the State – food production or recreational activity.

T.7.3. LINE COMMITTEE

The QSIA Line Committee sought information from QSIA Line fishery members regarding the Green Paper.

Lack of Science – 60% Unfished Population

- The Government is proposing that targets for Queensland’s fisheries resources move towards benchmark, a level equivalent to 60% of the unfished population for shared stocks or maximum economic yield for predominately commercial stocks. This is inconsistent with a

40% benchmark which is more in line with normal fisheries management practice. Industry has been given little rationale (no science presented or debated) and it would also appear the benchmark is a green / environmental lobby request.

- The Governments sustainable election commitments should not be a feature in the Green Paper as it is not based on politics but science.
- The target has raised questions that the State government has not answered. These questions are noted below:
 - What is the science to support this?
 - Where is there sufficient species information or data to use as starting point to achieve measurable improvements in biomass?
 - Which stocks are fully exploited or overfished and where is the data to support this?
 - Attempting to reach this target will in many fisheries result in significant reduction in effort – catch levels and operators. How will this be apportioned or implemented?
 - What plans are there to compensate removals from the commercial fishery and how will this be funded?
 - What consideration has been given to the impacts on the post-harvest sector and infrastructure industries that support the commercial fleet?
 - Aiming for a target biomass requires data on catch levels if catches are to be controlled to achieve that target. The recreational catch data is largely unknown – the mechanisms for obtaining data on recreational catches to date are inaccurate with very wide confidence limits and are insufficient to hope to achieve a target biomass. How will this be resolved?
 - What strategies are proposed to improve recreational data to a point where biomass targets can be measured?
 - How will improved data collection be funded?

Catch Data

- A largely unknown recreational catch and better data is absolutely necessary. According to the Green paper steps to obtain this are an integral part of the plan.

Harvest Strategies and Quota

- The Line committee agrees that harvest strategies should be implemented providing:
 - There is an allocation to all sectors.
 - There is compulsory reporting from the recreational and charter sectors by a simply mobile phone app or something similar for all line fisheries where recreational must report before

returning to boat ramp. This would take place when an agreed catch reference point is reached, bag or boat limits are reduced for the rest of the year or the fishery is closed to that sector. Similar to what occurs to the coral trout fishery.

- Quota should be considered for the rocky reef fishery as well as major species (those species fished by commercial and recreational).
- The QSIA Line Committee is supportive of these initiatives as recommended by the MRAG Review providing that the data is accurate for appropriate catch sharing arrangements in multi-sectoral fisheries.
- The introduction of quota is also supported in fisheries and with species where this is suitable recognising this is not the case across all fisheries. Mechanisms for quota allocation are problematic and a new mechanism would have to be devised.
- The Snapper Stakeholder Working group formed by the Queensland Government in 2008 – 2009 to address overfishing of snapper developed a catch sharing arrangement and quota allocation to commercial, recreational and charter sectors together with catch reporting systems for each sector. These were rejected by the then Government largely due to opposition from Sunfish. This fishery was to be reviewed in 2014 and this remains outstanding.

Legislative Change

- Does the State Government have the will to make changes to the Legislation to support these elements in the Green Paper?
- These include increasing authority and powers of entry for Queensland Boating and Fisheries Patrol (QBFP), removing political interference from fisheries policy by individual politicians and introduction of a recreational fishing license. The fisheries agency must have the flexibility to effectively manage fisheries without undue political interference.
- QBFP must have effective powers to control black-marketing by unlicensed fishers.

Resourcing

- Who will pay for the resources required to obtain better rec. data, scientific assessments of stock levels, proposed removal of operators from the commercial sector, improved compliance?

Compliance

- Fisheries Compliance – VMS. If it is deemed necessary to introduce VMS to the line fishery the following conditions should be observed:

- Providing it is compulsory across all sectors – if VMS is concerned with compliance and protecting our fish stocks in green zones.
- All sectors should face the financial burden of policing take – but it cannot solely be VMS tracking commercial take.

Other Issues

- The line fishery is undervalued – it is far more than the \$9.50/kg beach price as stated in the Green paper.
- Decision making framework – the Queensland government must take the politics out of managing commercial fisheries. Changing management rules need to be made at an executive level through industry request and open and transparent consultation processes guided by a work group structure, undertaken in an acceptable timeframe to assist industry.
- Recreational fishers need to be educated and understand it is a privilege and not a right to catch fish and should be managed accordingly.
- The public should have accurate information presented to them concerning the impact of fishing on the environment and especially the impact of the changing environment on fisheries; the latter is typically ignored by government.

T.7.4. TRAWL FISHERS

The commercial trawl fishery like all Queensland fisheries are set to undergo change process according the State's Green paper. QSIA has some concerns regarding this process. An issue by issue overview is presented in the next section of this paper.

New Trawl Plan

- Industry has waited almost a decade for a 'new' trawl plan which has yet to be drafted, stifling investment and employment opportunities. The trawl industry has changed requiring a new trawl plan that does take another decade to implement.
- The trawl sector has been rationalised already and does not need to be quota or share based as is occurring in New South Wales.

From Bycatch to By-Product

- Trawl by-product returned to marketable product (e.g. diver whiting, flathead with an in possession limit).

- Blue Swimmer Sand crab catch limits could be increased in the trawl fishery. Trawl whiting and flathead returned with a trip limit. This by product makes up approximately 25% of a small trawlers revenue.

Use of Additional Licenses

- L1 licenses on trawlers must be freed up to improved productivity and allow fishers to utilise voyage time.
- Trawl operators with additional licenses on their primary (e.g. L1 and L2) are discriminated against. If the trawl catches are low – operators cannot diversify while at sea. They are forced to return to port and advise DAF and remove all trawl gear (e.g. a 2-day job for vessels in many instances). Currently N1 and N2 net operators can operate their C1 simultaneously with net fishing operations.

Scallop Fishery

- The scallop fishery needs to be reviewed:
 - Research funds for the scallop fishery are needed;
 - The southern and northern closures should be reviewed given the reduction in the trawl fleet over the last decade; and
 - The management of the scallop fishery is a barrier to productivity. The processing of scallop aboard vessels is a backward step. This has led to poor quality through poor skills and destroys jobs onshore.

THEME 8. COMMUNITY ENGAGEMENT

T.8.1. INTRODUCTION

QSIA has managed to discuss outline the issues surrounding the Green Paper through various public engagement platforms.

T.8.2. PUBLIC SUPPORT FOR COMMERCIAL FISHING INDUSTRY

The community across Queensland and Australia have sent letters of industry support to the Minister for Agriculture and Primary Industries and State members of Parliament – 375 letters to the Minister and 87 letters to local members.

T.8.3. PUBLIC SURVEY

Nine questions were posed and as at 14 October 2016 QSIA had received 175 responses. A significant number of respondents (74%) were aware of the review process. Access was important to almost all respondents (95%). There was strong disagreement with access to seafood being restricted (91%). Respondents were aware of the net free zone issue (78%).

Over three-quarters of respondents were aware that over 70% of seafood is imported (75%). Almost all respondents indicated choice was important to them (94%). Individuals who recreationally fish want access to fresh local fish (90%). Almost all respondents would not be happy to substitute local caught seafood with imports (97%). Respondents indicated that price was an important issue (98%).

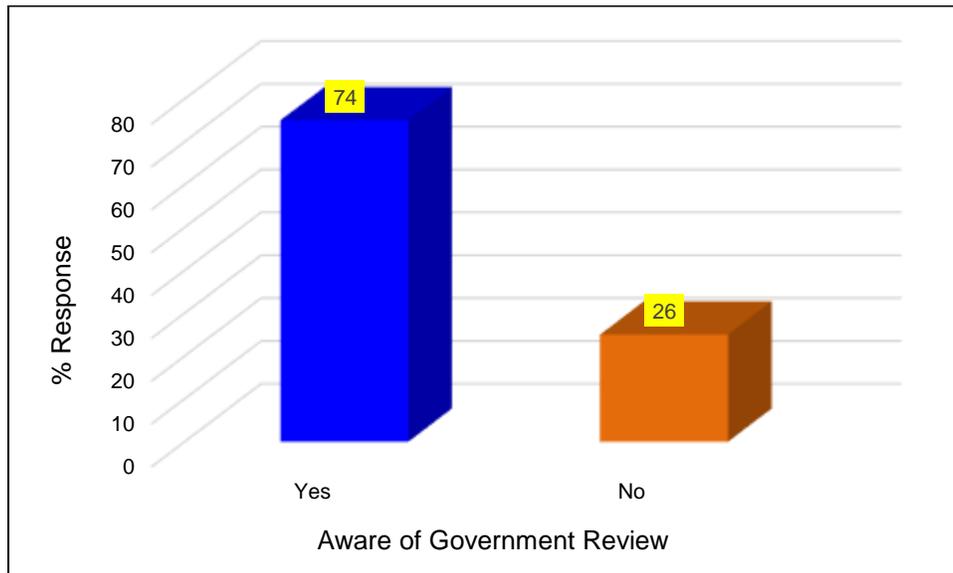
In terms of demographic data:

- The majority of responses were provided by individuals in the '45-54' and '55-64' age range.
- Almost 90% of responses came from Queensland seafood consumers.
- Broken down by postcode:
 - Queensland responses – 156 responses were sourced from 55 locations.
 - Interstate responses – 19 responses were sourced from 19 locations

T.8.4. SURVEY RESPONSES

Q.1. Were you aware that the state government is reviewing Queensland's fisheries management and that this review may impact the availability of wild caught seafood to Queensland consumers?

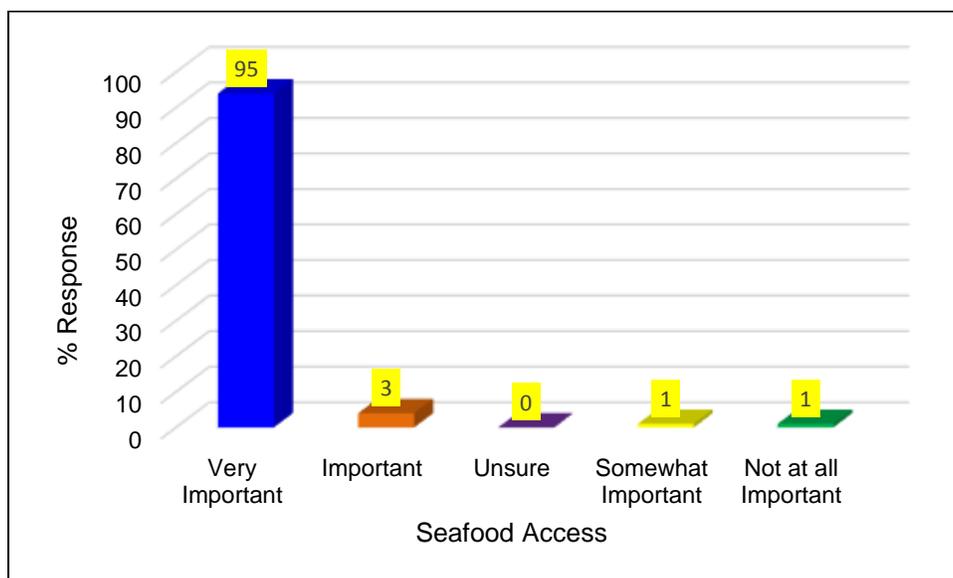
Figure 7. Responses to Question 1



Source: QSIA Community Survey Results (n = 174).

Q.2. How important is your access to fresh Queensland caught seafood?

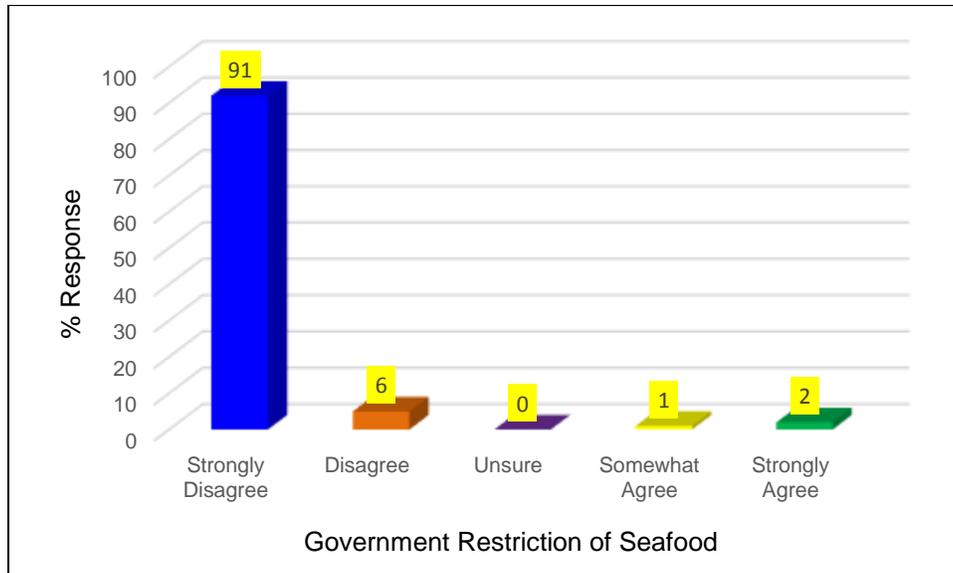
Figure 8. Response to Question 2



Source: QSIA Community Survey Results (n = 173).

Q.3. Do you agree with the government further restricting your access to local Queensland seafood?

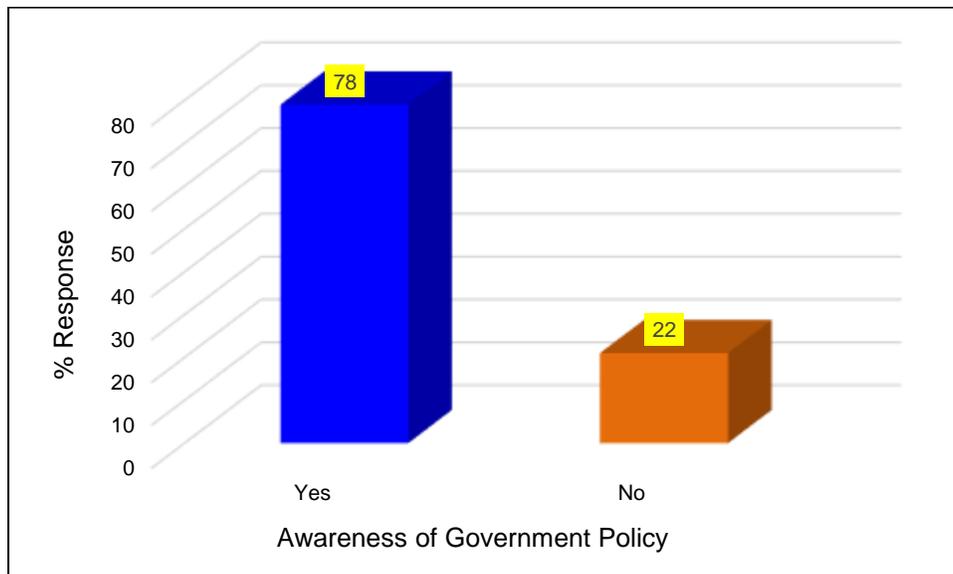
Figure 9. Response to Question 3



Source: QSIA Community Survey Results (n = 174).

Q.4. Are you aware that some recent political decisions have over-ridden fisheries managers and created commercial free fishing zones to appease recreational fishing lobbyists?

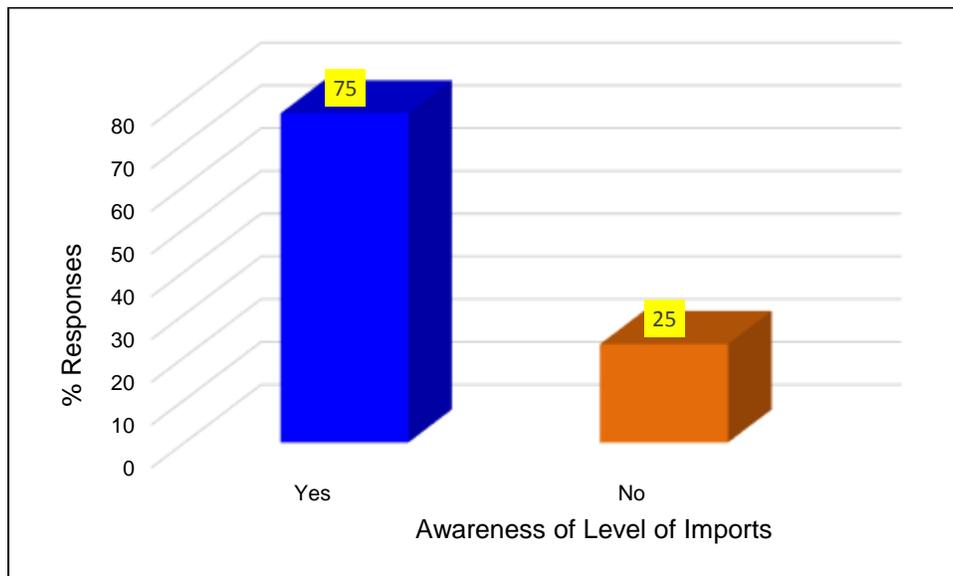
Figure 10. Response to Question 4



Source: QSIA Community Survey Results (n = 175).

Q.5. Did you know that over 70% of seafood for sale is imported?

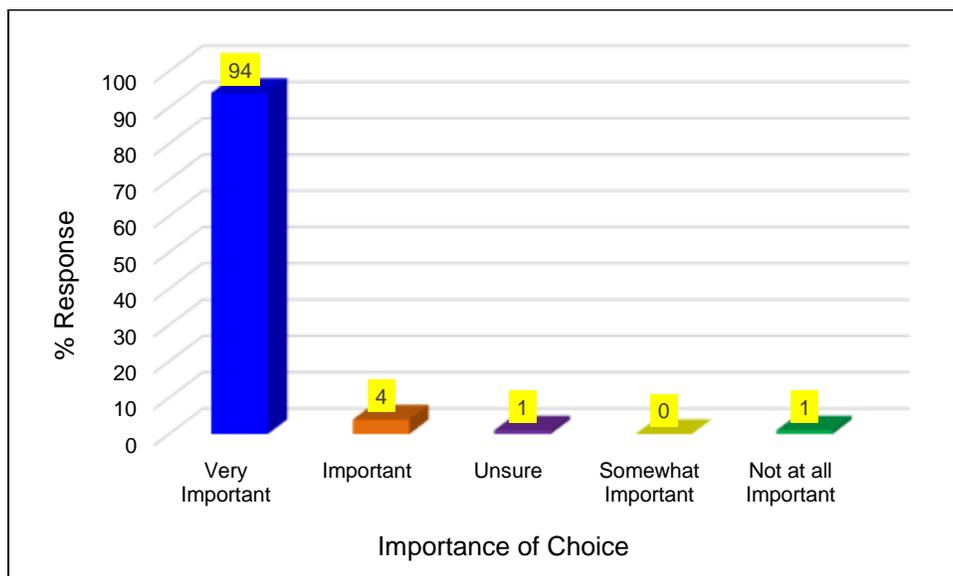
Figure 11. Response to Question 5



Source: QSIA Community Survey Results (n = 173).

Q.6. How important is choice when purchasing fresh local seafood?

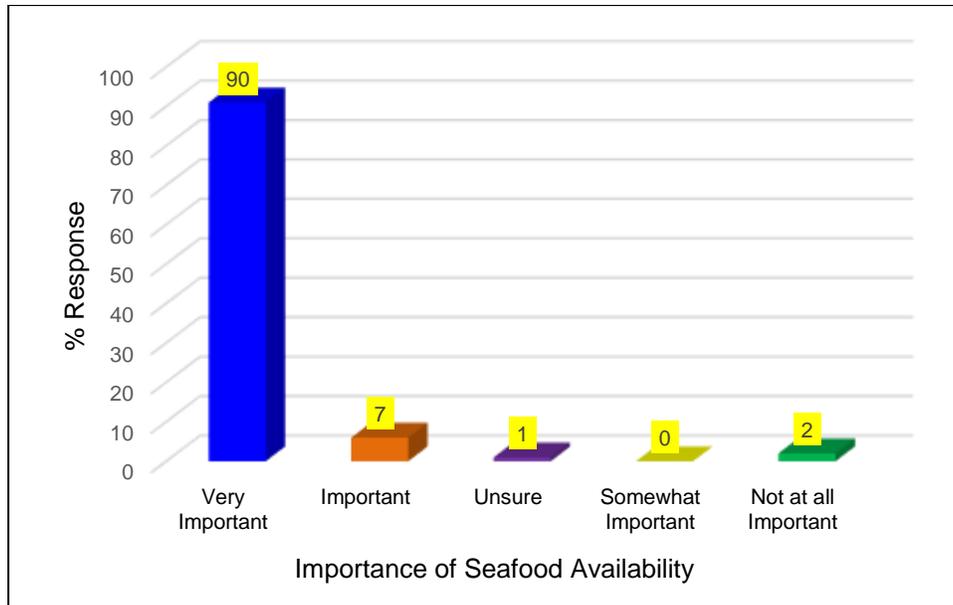
Figure 12. Response to Question 6



Source: QSIA Community Survey Results (n = 173).

Q.7. If you do fish recreationally yet wish to purchase seafood, how important is the availability of fresh local Queensland seafood?

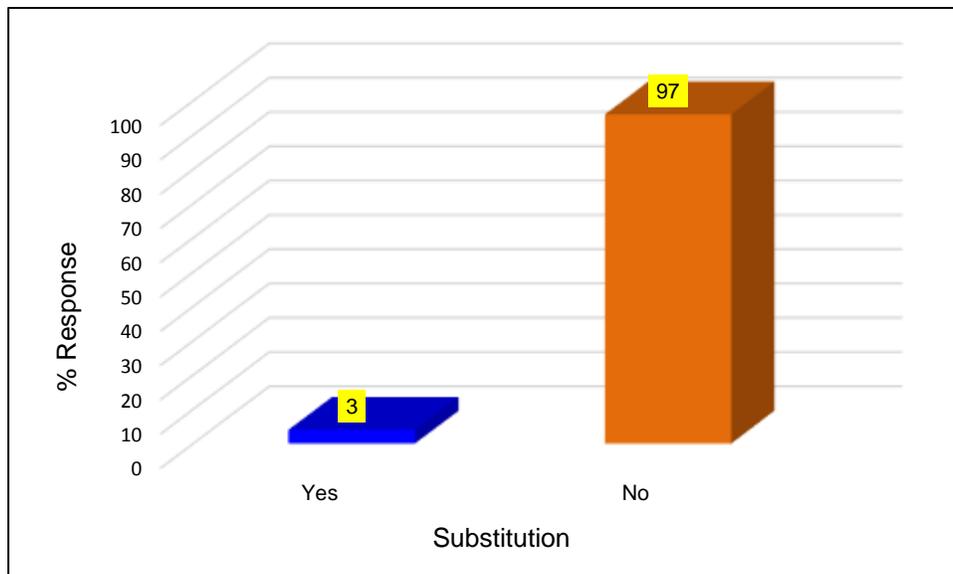
Figure 13. Response to Question 7



Source: QSIA Community Survey Results (n = 171).

Q.8. Would you be happy to substitute your Queensland caught seafood with imported seafood?

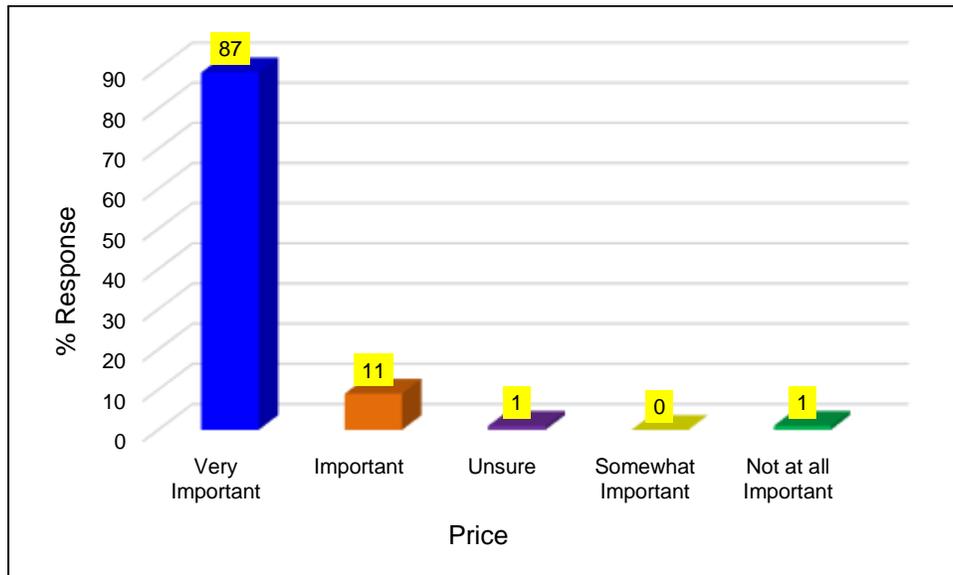
Figure 14. Response to Question 8



Source: QSIA Community Survey Results (n = 172).

Q.9. How important is your ability to source fresh local Queensland seafood at a reasonable price?

Figure 15. Response to Question 9



Source: QSIA Community Survey Results (n = 172).

Q.10. Age Range

Table 23. Respondent Age Range

	% Response
18-24	6
25-34	10
35-44ter	15
45-54	23
55-64	28
65 years or older	18

Source: QSIA Community Survey Results (n = 174).

Q.11. Which State do you live in?

Table 24. Responses by State

	% Response
Qld	88
NSW	9
VIC	1
SA	1
WA	1

Source: QSIA Community Survey Results (n = 174).

Q.12. What is your postcode?

Table 25. Postcodes

Queensland	Responses	Interstate	Responses
4001	1	2035	1
4017	1	2077	1
4054	2	2228	1
4066	1	2256	3
4069	1	2257	1
4074	1	2261	1
4121	2	2446	1
4123	1	2456	1
4130	1	2463	1
4133	1	2485	1
4157	1	2536	1
4165	3	2551	1
4215	1	2775	1
4216	1	2830	1
4224	1	3071	1
4285	1	5540	1
4500	1	6225	1
4501	1		
4507	1		
4508	3		
4510	2		
4551	7		
4553	1		
4556	1		
4557	2		
4560	1		
4563	1		
4580	3		
4650	4		
4655	10		
4660	1		
4670	14		
4680	5		
4700	5		
4701	12		
4702	1		
4703	1		
4705	1		
4711	1		
4717	1		
4737	2		
4740	19		
4741	1		
4751	3		

Queensland	Responses	Interstate	Responses
4805	11		
4810	1		
4811	1		
4814	2		
4852	1		
4865	1		
4869	1		
4870	4		
4871	5		
4873	2		
4869	1		

Source: QSIA Community Survey Results (n = 173).

T.8.5. LETTERS TO QUEENSLAND PARLIAMENTARIANS

Over 520 letters of support for ongoing access to fresh local Queensland seafood³⁹. The public supports:

- Continued access to fresh local seafood.
- That consumers should not have to pay more because of the reform process.
- Government engage with industry in the reform process.

³⁹ The letters will be provided to Queensland Parliamentarians in due course.

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