Submission by the Australian SBT Industry Association (ASBTIA)

to the

Productivity Commission Inquiry into the Regulation of Australian Marine Fisheries and Aquaculture Sectors (2016)

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Note: A confidential paper is submitted separately on the Economic Structure of the Australian Southern Bluefin Tuna industry.

Range of this submission

We attempt to *identify* the areas that we think the PC can make a significant contribution. However, we have not gone into detail in areas that:

- (1) We have no specific expertise (eg aquaculture regulation outside SA; eg and why TAC's are being substantially undercaught in Commonwealth south-east fisheries). We assume others will submit all the detail (eg SA aquaculture regulations from the SA Government).
- (2) We have identified the issue, and have left it to the PC to pursue if they also think it fits the Terms of Reference.

Summary – general points

Australia is part of the fastest growing population and income area of the world whose preferred discretionary expenditure is often seafood. How can Australia maximise that opportunity in an ecologically and economically sustainable way?

The SBT industry welcomes the PC Inquiry as an opportunity to identify the next necessary steps in management of Commonwealth and State fisheries and State aquaculture - to achieve seafood's potential national and, particularly regional contribution.

Major progress has been made in the last decade, especially in management of wild fisheries. In general, fisheries are much more ecologically and economically sound – and this needs to be recognised as the platform for the next steps.

In aquaculture, the regulatory approach and the economic performance are sometimes also much improved since the last PC assessment in 2004. However, there remain significant barriers in some States to sustainable progress to achieve the efficient regulatory framework described by the PC in 2004. Tasmania and SA may be good case studies.

In both wild fisheries and aquaculture, there are examples in Australia and overseas of best and worst practice, and these need to be highlighted by the PC.

This submission partly reflects the experience of Southern Bluefin Tuna (SBT) – which:

- (1) Was the first Australian fishery to adopt ITQ's (in 1984), on the recommendation of the then Industries Assistance Commission (IAC 1984). Experience has shown that ITQ's are generally the best way to manage a single species fishery, as long as the access security is recognised long term. This will now be tested in SBT because of the charter and recreation catch increasing rapidly outside the Total Allowable Catch (TAC), as the cuts in the commercial TAC produce a stock recovery.
- (2) SBT is managed by three different jurisdictions the growout (aquaculture of wild-caught Bluefin) by a State Government, and wild fishing by an RFMO, and by AFMA and DAWR. We see the current situation as the best balance for an international species with onward growout.
- (3) SBT has made the shift to high value adding, and for export. We submit that ranching SBT is a high level of natural resource utilisation because:
 - What we are doing is annually re-locating 300,000 Bluefin from a low productivity environment in the wild (natural mortality of 20-30% pa and feed conversion ratio (FCR) of 5:1 (?) dry wt) to a high productivity environment in farms (natural mortality of 1%pa, FCR of 2.5:1 dry wt from sustainable feed sources, and doubling the weight in 6 months from maximising seasonal growth)."

- (4) SBT interacts with the whole spectrum of Commonwealth and State Agencies including DAWR Fisheries Policy, Biosecurity Australia, NOPSEMA, FWA, APVMA, AFMA, AMSA, PIRSA, DAWR Animal Health, Commonwealth and State Environment Departments, and EPA in SA. This provides wide experience in the efficiency of regulation.
 - The industry also interacts with Agencies in Japan, China, and other export markets.
- (5) Because SBT mostly operates under RFMO rules, government intervention is much greater, and with less scope for co-management. Therefore, the importance of efficient regulation is even more important in SBT.

Changes in (wild) fisheries management in Australia

In the last decade the quality of fisheries management (wild stocks) in Australia has been transformed to be among the best in the world in stock sustainability. The reasons are a conjunction of positive changes:

- (1) The formal adoption of stringent harvest strategies in 2006 by the Commonwealth, and largely followed to varying degrees by the States. This is reflected clearly in the Status Reports (Patterson 2015; FRDC 2014). In the United States, the 2006 amendments to the Magnusen-Stevens Act have had a similar effect.
- (2) For data-poor fisheries, the development of Ecological Risk Assessments (ERA's) to manage by tiered risk.
- (3) Australia's competitive advantage in fisheries stock assessment and other science. Groups such as CSIRO, ABARES (and in SA SARDI) are global centres of excellence. Many government agencies are very good at implementing the science.
- (4) Much of (3) would not have occurred without the influence of the Fisheries Research and Development Corporation (FRDC) which has made a major contribution to most outcomes in Australian seafood.
- (5) The widespread adoption in Australia of TAC's and ITQ's (see (6) below) has made a major contribution to ecological sustainability. This is equally correct globally for example, for tuna and billfish:
 - "When we take a look at the rate of change over the last 10 years, the biomass of TAC-managed stocks is increasing, and fishing mortality is declining, unlike those managed by input controls or with no controls." (Pons et al 2016).
- (6) The adoption of Individual Transferable Quotas (ITQ's) in almost all the major fisheries in Australia (Rock Lobster, Abalone, Tunas, Small Pelagics) and equivalent effort input units in prawn fisheries. Even in significant multi-species fisheries such as the South-East fisheries, ITQ's have substantially improved management, even if with teething issues. This correlation between secure access rights and successful stock outcomes is emphasised in a 2016 study (Costello et al) which found:

- "The analysis suggests that implementing reforms such as those based on secure fishing rights are critical to providing the combined benefits of increased fish populations, food production and profits. "Fishing rights" is a fishery management approach that ends the desperate race to fish by asking fishers to adhere to strict, science-based catch limits in exchange for a right to a share of the catch or to a traditional fishing area."
- (7) All the changes have no doubt been made easier by often buoyant market conditions for Australian catch, particularly export product. This has assisted the transition (allocation) to ITQ's, and in key areas (eg Western Rock Lobster) to adoption of Maximum Economic Yield (MEY).
- (8) At the Commonwealth level, the combination of a Statutory Authority and a policy Department has produced a better mix of fisheries management.
- (9) Increasingly, management of fisheries is more flexible for example, in SBT the provisions to carry back and carry forward quota from/to the following year.
- (10) We conclude that the disciplines in the EPBC Act have, in net terms, benefitted fisheries management. The Act has been applied in a constructive way for example, Conditional Approvals, and insertion of the Conservation Dependent category into the Act. The question now is whether the improved quality of fisheries management elsewhere means the overlap between the EPBC and Fisheries Management Acts needs to be fixed.
- (11) The large majority of fisheries management decisions are now based on scientific inputs rather than on political-social considerations, although political decisionmaking remains a problem in a number of States, and in the Commonwealth Small Pelagic Fishery.
- (12) There has been a much greater emphasis by managers and industry on ecosystem management, particularly to address bycatch of at-risk species. Most often, hard decisions are now being made. In Commonwealth fisheries, this ranges from seabirds to sea lions.
- (13) Some States have shown the way on formal resource-sharing eg in most State Rock Lobster industries, and in inshore finfish fisheries in States such as SA.
- (14) Where there has been resource access re-allocation, most jurisdictions have recognised in some form or another that existing rights holders should be compensated (called fisheries adjustment). This re-allocation has ranged from the creation of closed zoning for ecological reasons (eg Marine parks) or re-allocation to increase recreational access (eg Port Phillip Bay in 2015).
- (15) The 2006 Commonwealth fishery adjustment Program of \$240 million. Although significant errors were made in the Program, it still made a real difference to Commonwealth fishery economic viability and so made ecological adjustment easier in those which benefitted from the Program.
- (16) A number of RFMO's affecting Australia have operated much better for example CCAMLR, CCSBT and the Western and Central Pacific (Tuna) Fisheries

Commission (WCPFC) – although the WCPFC and Indian Ocean Tuna Commission still have to adopt formal harvest strategies.

Where the PC can add value - Continuing issues in (wild) fisheries management

There are remaining significant issues – and the PC can add value to resolving these. The issues include:

- (1) *Cost recovery*: We support the Department of Finance (DOF) Guidelines on cost recovery of attributable costs, but the reality is that many smaller fisheries are paying a very high percentage of GVP in regulatory charges. This is unsustainable and often leads to the requirement for restructuring assistance and relief. The only real enduring answer to this is strengthening of the secure status of the fishing right (see (2) below) to facilitate higher utilisation and investment in value adding. In other words industry would have to put up or shut up (see (2) below).
- (2) **Access security**: SBT is one example where the perceived higher status of the Statutory Fishing Right (SFR) has led to large investment in value-adding, and a rejection of any restructuring assistance. The industry accepts the ecological, economic and international fluctuations as normal business risks on the understanding that it is underpinned by the strength of the access right (see later section). This security is now in doubt and this needs to be addressed.
 - Again, the SBT industry has always accepted that the quid pro quo for property rights/secure access is no government subsidy. Even with the 67% quota cut in 1989-1990, the further 24% cut in 2009, and the difficult market conditions of the last 5 years the industry has never sought or received government assistance. These quota reduction setbacks, largely caused by Japanese overcatch (Polacheck 2012), are normal business risks.
- (3) Resource sharing: There are good case studies where the shares have been formalised, and where there is a solid foundation (eg marine finfish in SA; rock lobster in most States). However, in many States there is not even a charter or recreation licence and/or any formal resource sharing.
 - Many times in the past the Commonwealth committed to develop a resource sharing policy for example see AFFA 2003 and Coolangatta 2002.
 - A major challenge is how to assess the added economic value of charter and recreational fishing and the PC could add value by making an input.
- (4) Low catch/TAC ratios in Commonwealth and some State fisheries: In total Commonwealth fisheries, only 50-60% of the TAC's are being caught. This does not apply in Commonwealth fisheries such as SBT, Northern Prawn (TAE) and East Coast Tuna, but is a major issue in domestic market-driven fisheries in the South East

(Green 2016; Skirtun & Green 2015), and especially in the West Coast Tuna Fishery. In some State fisheries (eg WA Rock Lobster) the undercatching of the Potential Biological Removal (PBR) is because MEY is being applied (the optimum situation).

- (5) *Multiple jurisdictions:* The PC Issues Paper emphasises the potential problem of having so many jurisdictions in Australian fisheries. In addressing this in a practical way, we submit that the PC might identify:
 - a. How the recent ecological and economic gains in many Australian fisheries can be spread to all fisheries eg Harvest Strategies (Sloan et al 2014), Ecological Risk Assessments, and MEY (where suitable).
 - the ongoing OCS issues, including the economic cost, and a pathway to resolving them. The PC needs to highlight these – to accelerate solutions. We emphasise that the delays are often as much a fault of industry as much as government.
 - c. What it costs to issue a licence in Australia now compared with the single jurisdiction in NZ.
 - d. Other areas where cooperation between jurisdictions might produce more cost-effective outcomes (eg common licensing platforms, joint Vessel Monitoring Service (VMS); joint Electronic Monitoring (EM); joint E-logs.
- (6) Adding value: A problem can arise when the husbandry issues in adding value to a basic fish catch require different regulations. Good examples are the shift from exporting (dead) lobster tails to live lobsters, and the change in SBT from harvesting dead fish at sea to capture/transfer of live tuna into growout pontoons. These require a different regulatory approach. The PC might consider other species where value can be added, if the regulatory structure was more flexible.
- (7) *Increasing productivity*: A current example is the intense political and public debate over the trawler "Geelong Star" harvesting small pelagics. The realities are that:
 - a. The TAC's set for that fishery are set scientifically, are precautionary, and take into account the trophic impacts of harvesting (Smith 2015).
 - b. Large trawlers able to catch and preserve significant volumes on board have high productivity and achieve higher quality product.
 - c. A lesser number of boats catching efficiently are highly likely to be more ecologically friendly on incidental bycatch than a large number of operators.

The PC might assess this situation.

(8) *Crew availability*: Rightly so, Australia has very high regulated crew qualifications - and a boat can't legally go fishing without formally qualified crew. During the peak of the mining/offshore gas boom a large number of these crews left fishing to go to these industries. This, combined with the reticence of Australian crews to go

offshore, meant key offshore fisheries (not SBT) rely heavily on foreign crew under sponsored visas. The right to use these crews, at Australian remuneration rates, is a core part of the productivity performance of the industry.

The PC might assess this situation.

- (9) Reducing research costs through technology and implementation of "Catch cost risk trade-off": As mentioned earlier, Australia's seafood research skills are world class, and give Australia a competitive advantage. However, for some fisheries, research continues to be a high proportion of their costs, particularly as public investment in fisheries research declines. Our questions are:
 - a. In some fisheries this has been addressed by using new technology to drive down costs and/or get more precise results (often allowing higher TAC's). SBT is a good example of that where CSIRO has developed genetic (DNA matching) to replace cost-intensive surveys. This may also be used to make State egg surveys more cost effective. What is the potential for wider use of these new technologies?
 - b. If the catch/TAC ratio is low in some major Commonwealth fisheries, why is the application of the catch cost risk trade-off approach (Dowling et al 2013) not considerably reducing research costs? Note that this can also mean multi-year quotas and flexibility between seasons and we know that in SBT these produce a much more efficient use of quota.
- (10) Implementation of harvest strategies and ERA's to State-managed fisheries is this proceeding fast enough? National harvest strategy Guidelines have been developed (Sloan et al 2014), but what is the performance of States in achieving outcomes?
- (11) *Legislated economic Objectives* the Commonwealth Fisheries Management Act has a number of key economic Objectives including (in Section 3):
 - "(a) implementing efficient and cost-effective fisheries management on behalf of the Commonwealth; and
 - (c) maximising the net economic returns to the Australian community from the management of Australian fisheries."

There is strong debate on what these mean in practice – and the PC could add value by making an input.

Changes in aquaculture management in Australia

What the 2004 PC paper did very well was provide all the data on regulations and licence costs so benchmarks could be set. Examples were:

(1) The cost of a licence/lease in each State.

- (2) Number of Agencies and regulations involved in deciding on applications.
- (3) The time it takes to get a decision on an aquaculture application.
- (4) Integration with coastal management policies.

Unfortunately, these have never been updated by bodies such as the Australian Fisheries Management Forum (AFMF) and National Aquaculture Council (NAC). However, recent studies on development of aquaculture in Queensland have gone some way to updating them (CIE 2014; Queensland Competition Authority 2014).

It is difficult for a body such as ASBTIA to assess progress – because, like salmon in Tasmania, we operate only on one species and in one State jurisdiction. We can only compare through anecdotal experience – including regular requests to brief other States on why the SA regulatory structure seems to work relatively well.

Therefore, what we can best contribute is our assessment of the evolution of the aquaculture regulatory system in SA. In doing that, we partly address the possible issues in other States, and the comments made by the PC in 2004.

Where the PC can add value – Our experience with aquaculture regulation in South Australia

We regard the SA aquaculture structure as a *competitive advantage*. More specifically:

(1) A separate Aquaculture Act – which the PC covered in 2004, in the early days of the 2001 SA Aquaculture Act. We understand the points made in other States that the cost of developing and administering an Aquaculture Act (or Marine Planning legislation) separate from a core Fisheries Act, can be expensive. This was all addressed in SA prior to proceeding with an Aquaculture Act – including industry concerns about cost and duplication.

However, we question the point in Queensland Agriculture and Fisheries 2016 that aquaculture can be just as effectively managed under fisheries administration. Our experience is that fisheries and aquaculture are completely different economic activities, with different regulatory requirements, and different cultures. The only common factors are that they are mostly done in the marine environment and are both highly regulated.

There was a significant development cost to the separate Aquaculture Act in SA – but the subsequent administration has been highly efficient. Within Primary Industries and Regions SA (PIRSA), the Fisheries and Aquaculture Sections share a common very senior management, but the remainder of the staff are largely separate. The skills required are very different.

Over time, as Aquaculture Zones are finalised, and management methods mature with experience, the SA Aquaculture Section has significantly reduced staff.

(2) **Duplication within the public sector:** The 2004 PC Report covered this in detail, noting the continued overlap between various regulatory Agencies, including in SA. Since then, in SA, the introduction of Aquaculture Zones meant that many of the regulatory Agencies had their input during that Zone consultation. The only ones that required continued approval into this decade have been the EPA (see next para) and, to a much lesser extent, Transport (for the sea bottom).

The remaining issues on duplication and timing were resolved during a "90-day Project" on tuna farming regulations in 2013 and 2014 (see sites such as www.publicsector.sa.gov.au; www.pir.sa.gov.au). The Projects effectively resulted in a one-stop shop for applications/outcomes; considerably rationalised the consultation process within the public sector; prescribed timetables for lease/licence applications by industry and for PIRSA's consideration of these applications; and resolved the way that issues such as seagrass and chemical use are processed.

In general, the processes in place before the 90-day Project created duplication and so more cost, but were manageable for the tuna industry – except for the TIMING of the decision. This has now been fixed, along with other streamlining. The accelerated decision time-tables also require deadlines for submission of applications, making industry accountable.

(3) **Co-operative management**: This was one of the streamlining/innovation options raised by the PC in 2004. For SBT, being an international fishery, many of the rules are imposed by CCSBT – and so there is much less scope for **formal co-management**.

However, there is still a lot of scope for less formal co-management. This can be easier in SBT because 100% of farming operators belong to ASBTIA. For example:

- a. To avoid speculation in limited sites, PIRSA and ASBTIA agreed that a minimum quota holding was required for an applicant to be issued a lease site, and that the hectares allocated would be pro rata to the quota holding. The annual quota holdings are supplied by ASBTIA to PIRSA and able to be confirmed on the AFMA Public Register of quota holdings.
- b. Quota holdings can change quickly in the lead up to the annual site allocation – so PIRSA and ASBTIA agreed that smaller quota changes would not require the need to increase/decrease the size of individual sites, so avoiding new applications.

- c. ASBTIA farming Members decide together each year on site movements and other changes, so that the full package of applications does not require a government process. ASBTIA staff also contract a licensed surveyor to cover all the sites.
- d. PIRSA and ASBTIA consult on any required changes to the Aquaculture Management Plan covering the two Tuna Farming Zones. The Plan includes maximum stocking rates in a pontoon and on a site; and total maximum biomass within each Tuna Zone.
- e. Both PIRSA and AFMA require a Stock Register for each site. The Registers cover fish in, mortalities, harvesting, shipments and estimated growth rates. ASBTIA and the Agencies are trying to ensure a single Register can meet the audit requirements of both AFMA and PIRSA.
- f. Following a Biosecurity Australia (BA) Import Risk Assessment, the SBT ranching industry is only able to use specified imported feeds (eg some sardines) while water temperatures remain ≥ 15°C. ASBTIA works closely with DAWR in daily monitoring of the water temperatures, and reminding farmers when feeding must stop.
- (4) **Cost recovery**: PIRSA operates under full recovery of attributable costs, and uses the Commonwealth Department of Finance (DOF) Guidelines to determine recovery. ASBTIA agrees with the DOF cost recovery principles, as it is the only way to ensure governments and industry are focused on cost effectiveness.
 - PIRSA operates its Cost Recovery on an Activity based approach supported by data on actual time spent on that activity. The baselines for SBT have been established after constant scrutiny of costs. That baseline resulted in ASBTIA agreeing to a four-year agreement to increase the annual recovery by the SA public sector inflator, starting 2016/17. This is a good business outcome for both government and industry.
- (5) *Environmental monitoring*: Tuna ranching's environmental performance is monitored and enforced by an annual Tuna Environmental Program (TEMP). The Program has evolved from an initial regional Program to a mainly per site Program, and has just begun a more intensive regional Program combined with site assessments. All these changes have been based on external expert advice.
 - The per site monitoring produced very measurable results from each individual site for impact on the pontoon and surrounding environment. These results are published. If the threshold levels are breached, then action is taken, and the site assessed again the following year at the site company's cost.

- (6) Third party accreditation (TPA): The 2004 PC paper canvassed whether TPA could substitute for some environmental and other requirements. The SBT has gained TPA from the largest global seafood TPA body, Friend of the Sea (FOS). Tassal salmon and some other aquaculture have Aquaculture Stewardship Council (ASC), some others have FOS, and others have Best Aquaculture Practices (BAP).
 - Our experience is that none of the TPA's generate the actual research and rely on referring to the EMP's conducted by State Governments Therefore it is difficult to see where it could be a replacement for the current EMP's.
- (7) **Rehabilitation**: The 2004 PC paper canvassed options in SA, the SBT industry has totally funded a Rehabilitation Pool with PIRSA, controlled by PIRSA. This works well and over 15 years has never been drawn down.
- (8) **Community support**: ASBTIA does not support the term "social licence" because of the connotation that it is equivalent to a statutory licence. However, ASBTIA has a program to sustain community support on Eyre Peninsula because being a major employer and generating large economic activity is not automatic community support. The core parts of the Program are:
 - a. Being a good employer.
 - b. Full transparency eg full results of environmental monitoring are available.
 - c. Being always available to the media.
 - d. Beach clean-ups a voluntary tightly programmed schedule of beach clean-up under a formal structure, reporting to the SA Government.
 - e. Re-investment in Eyre Peninsula community facilities, tourism infrastructure, and major sponsorships.
- (9) **Allocating lease sites**: As described in (3) above, SBT sites are allocated in a different way from other aquaculture in SA but significant changes in lease site sizes still have to be approved by the Aquaculture Tenure Advisory Board (ATAB), even though there is only one applicant. ASBTIA supports this "red tape" because we have not yet found a way of institutionalising for the long term the current co-operative methods of operating.

We do not support auction or tender of new lease sites – as we do not see how this leads to the most efficient development of the site. As the 2004 PC report notes – SA has multiple criteria for allocation, including timetables for development. We It is difficult for a tender to include such tight development conditions.

(10) Harmonising regulations between States to a nationally consistent approach: The 2004 PC paper canvasses this – but notes all the different coastal management approaches between States, and other barriers. A most obvious one is the Great Barrier Reef issue in Queensland. Other interested parties have raised the need for better coordination between States (GoodFishBadFish 2016).

Our concern is not so much targeting harmonisation or national consistency. Our first question is whether State regulators are learning from the experience elsewhere and that should be one of AFMF's core functions (see Joll et al, 2014).

Specific issue – charter and recreational SBT catch

The background is:

- (1) A basic rationale for ITQ' s is that the property right drives much more rational fisher behaviour, avoids over-investment, encourages value-adding – and allows the ITQ to be used as collateral (eg see IAC 1984, Geen et al. 1989; Kaufmann et al. 1999). In SBT, ITQ trading and the use of quota as collateral have been the major internal adjustment mechanism for economic and ecological changes in the fishery, without the need for government intervention.
- (2) This is how it has worked in SBT since 1984 with over 70% of the quota changing hands, and quota and investment gravitating towards the use which maximises returns to the community (see www.afma.gov.au; Geen et al. 1989; Kaufmann et al. 1999).
- (3) This was reinforced by the introduction of Statutory Fishing Rights (SFR's) in the FMA 1991, and the amendment to the Act to ensure that if a Management Plan is revoked, then the SFR's have to be re-issued in the same proportions as the revoked Plan.
- (4) It was also reinforced by continued assurances by Australian Governments at CCSBT that the CCSBT allocation to Australia was the commercial quota.
- (5) The SBT industry has always accepted that the mutual obligation for the SFR property rights is that there is no government adjustment assistance and the industry has not asked for or been given any adjustment assistance even when the majority of the industry was in receivership or Bank control after the quota cuts in the late 1980's.
- (6) Under the AFMA Acts and SBT Management Plan, it is the ongoing SFR's which are traded and recorded on the AFMA quota Register, not tonnes. All the *fixed* number of SFR's in the fishery are allocated. The number of FCR's (and so share of the fishery) is the property/access security right.

- (7) As envisaged by the 1984 IAC Report and multiple literature (eg Geen et al 1989; Kaufmann et al. 1999), the SFR's are used widely as borrowing collateral to buy quota and other capital investment in a fishery. In SBT, because it is export and is a value-added fishery, the use of the statutory right as collateral has gone much further. For example, as noted the SBT are captured live, and grown out for around 6-7 months, without any forward market to set a price in Yen. Therefore, the quota is necessarily used as the collateral for operating capital and for hedging the currency risk.
- (8) At various times the Commonwealth Government has indicated it would develop a wider resource sharing policy (eg AFFA 2003). Under the OCS agreements with each State, the Commonwealth has the management responsibility for SBT in all waters (except inside 3 miles in NSW). The Commonwealth currently chooses to delegate management of SBT charter and recreational fishing to the States.
- (9) Australia has indicated to the CCSBT that it may begin to include charter and recreational catch in the CCSBT allocation of Australia's quota from 2018. One problem is how to measure that actual catch, and over a multi-year period. To do this, an ABARES study was released December 2015 quantifying the cost of different options to survey the catch (Moore et al. 2015). The Government is currently considering the options. Like the ABARES study, we support a national licensing system for SBT managed through vouchers (and possibly) tags for each individual fish. This is the system used widely for comparable terrestrial licences (eg NSW DPI 2016), and in other Australian fisheries.
- (10) SBT is listed in both Victoria NSW as endangered. Acting on that, NSW has reduced its bag limit from 2/day to 1/day. Tasmania and SA are considering their bag limit options.

Indicative estimates of the historical Australian recreational SBT catch submitted to CCSBT by Australia (via ABARES in 2011 and 2015), compared with the Australian allocation from CCSBT (the commercial quota) are:

er/Recreational Catch (t)	CCSBT quota (t)
na	21,000 (Tripartite Ag)
na	14,500 (IAC recommend.)
na	6,065
na	5,265
16	5,265
Insufficient data	5,265
38	5,265
3	5,265
10	5,265
	na na na na 16 Insufficient data 38

2001	60	5,265
2002	85	5,265
2003-2009	na	5,265
2010-2011	na	4,015
2012	na	4,528
2013	na	4,698
2014	na	5,147
2015-2017	na	5,665

Source: CCSBT – www.ccsbt.org

Regarding the Australian quota from CCSBT:

- (1) The cuts in the late 1980's and the late 2000's were both due to the large illegal catches by Japan outside their quota identified by CCSBT in 2006 (Polacheck 2012).
- (2) The current increases in the CCSBT quotas are based on the CCSBT scientific model. The quota for the 2018-2020 triennium will be decided in October 2016.

The solution

We are discussing the issue with government Agencies and charter and recreational groups

For the industry, the only option is that the quota to cover any charter and recreational catch from 2018 must be purchased.

Any re-allocation would totally undermine the confidence of the lending institutions and the industry. The impact on the principles underlying access rights would go well beyond SBT.

ASBTIA 5/5/16

REFERENCES

AFFA 2003. Looking to the Future. A Review of Commonwealth Fisheries Policy. Commonwealth Department of Agriculture, Fisheries and Forestry – Australia (AFFA). June 2003.

Arnason, R, Gissurarson, H, 1999. Individual Transferable Quotas in theory and Practice. University of Iceland Press 1999.

CIE, 2014. Comparative review of aquaculture regulation. Prepared by the Centre for International Economics for the Queensland Competition Authority Office of Best Practice Regulation. January 2014.

Coolangatta Workshop Communique 2002. The Principles and Strategies to underpin the development of Recreational Fishing Rights and Resource Allocation in Commonwealthmanaged fisheries. Prepared by Workshop participants as recommendations to Commonwealth, State and Territory governments. 2002

Commonwealth Government of Australia 1989. New Directions for Commonwealth Fisheries Management in the 1990's – A Government Policy Statement. AGPS, December 1989.

Costello, C, et al 2016. Global fishery prospects under contrasting management regimes. PNAS, Vol 113, June 2016.

DAFF 2004. Memorandum of Understanding between the Australian Government and Queensland, New South Wales, Victoria, Tasmania, South Australia, Western Australia and the Northern Territory with respect to proposed resource sharing arrangements for Commonwealth fisheries. Department of Agriculture, Fisheries & Forestry, Canberra.

Dowling, N, Dichmont, C, Venables, W, Smith, A, Power, D, Galeano, 2013. From low- to high-value fisheries: Is it possible to quantify the trade-off between management cost, risk and catch? Marine Policy 40 (2013).

Ezzy, E, Scarborough, H, & Wallis, A, 2012. Recreational value of Southern Bluefin Tuna fishing, Economic papers, vol. 31, no. 2, pp. 150-159.

FRDC, 2006. Co-management: Managing Australia's fisheries through partnership and delegation. Fisheries Research and Development Corporation Project No. 2006/008.

FRDC, 2013. Status of Key Australian Fish Stocks 2014. FRDC December 2014.

Geen, G, Nayar, M, 1989. Individual Transferable Quotas and the Southern Bluefin Tuna Fishery. Occasional Paper 105, Australian Bureau of Agricultural and Resource Economics, April 1989.

Giri, K, Hall, K, 2015. South Australian recreational fishing survey. Fisheries Victoria Science Report Series.

GoodFishBadFish 2016. <u>www.goodfishbadfish.com.au</u> – web site which comments on seafood including aquaculture regulation. Accessed February 2016.

Green, R, 2016. Measuring boat-level efficiency in Commonwealth fisheries: An example using the Commonwealth Trawl Sector of the Southern and Eastern Scalefish and Shark Fishery. ABARES Outlook Conference paper, February 2016.

Green, C, Brown, P, Giri, K, Bell, JD & Conron, S 2012. Quantifying the recreational catch of southern bluefin tuna off the Victorian coast, Recreational Fishing Grant Program – Research Report, Department of Primary Industries, Victoria.

Haynes, J, Geen, G, & Wilks, L, 1986. Beneficiaries of Fisheries Management. Discussion Paper 86.1, Bureau of Agricultural Economics, September 1986.

IAC 1984. Southern Bluefin Tuna. Industries Commission Report. AGPS Canberra, 28 June 1984.

Joll, L, Cartwright, I and Sloan, S, (Eds), 2014. Fisheries Management Workshop. Australian Fisheries Management Forum. Adelaide, March 2014. FRDC Project No 2013/235.

Kaufmann, B, Geen, G, & Sen, S, 1999. Fish futures, Individual Transferable Quotas in Fisheries. Fisheries Research and Development Corporation, 1999.

Kearney, R, 2001. Fisheries property rights and recreational/commercial conflict: implications of policy developments in Australia and New Zealand. Marine Policy 25 (2001).

Lyle, JM, Stark, KE & Tracey, SR 2014. 2012-13 Survey of recreational fishing in Tasmania, Institute for Marine and Antarctic Studies, Tasmania.

Moore, A, et al, 2015. Developing robust and cost-effective methods for estimating the national recreational catch of Southern Bluefin Tuna in Australia. FRDC Project No. 2012/022.20. December 2015.

New South Wales Department of Primary Industries (NSW DPI) 2016 'Game licensing', New South Wales Department of Primary Industries, available at http://www.dpi.nsw.gov.au/hunting.

Parliament of the Commonwealth of Australia 1997. Managing Commonwealth Fisheries: The Last Frontier. House of Representatives Standing Committee on Primary Industries, Resources, and Rural and Regional Affairs, June 1997.

Patterson, H, Georgeson I, Stobutzki, I and Curtotti, R (eds) 2015. *Fishery status reports*. ABARES, October 2015.

PIRSA 2011, Management Plan for the South Australian Charter Boat Fishery, Primary Industries and Resources South Australia, Adelaide 2011.

Polacheck, T, 2012. Assessment of IUU Fishing for Southern Bluefin Tuna. Marine Policy September 2012.

Pons M, Branch T, 2016. Effects of biological, economic and management factors on tuna and billfish stock status. In Fish and Fisheries, April 2016.

Productivity Commission, 2004. Assessing Environmental Regulatory Arrangements for Aquaculture. Research Paper 2004.

Queensland Agriculture and Fisheries 2016. Government response to the Queensland Competition Authority final report on aquaculture regulation in Queensland, April 2016.

Queensland Competition Authority 2014. Aquaculture Regulation in Queensland. Final Report to the Queensland Government. September 2014.

Rowsell, M, Moore, A, Sahlqvist, P & Begg, G 2008. *Estimating Australia's recreational catch of southern bluefin tuna*, Bureau of Rural Resources, Australian Government, Canberra.

Skirtun, M, Green R, 2015. Financial and economic performance of the Southern and Eastern Scalefish and Shark Fishery. ABARES December 2015.

Sloan, S, Smith, Tony, Gardner, C, Crosthwaite, K, Triantafillos, L, Jeffriess, B, and Kimber, N, 2014. National Guidelines to Develop Fishing Harvest Strategies. FRDC Project 210/061, March 2014.

Smith, A, Ward, T, Hurtado, F, Klaer, N, Fulton E, A.E. Punt, A, 2015. Review and update of harvest strategy settings for the Commonwealth Small Pelagic Fishery Single species and ecosystem considerations. FRDC Project 2013/028. January 2015.

Tracey, S, Hartmann, K, McAllister, J, Conron, S & Leef, M 2015. Capture stress and post-release survival of recreationally caught Southern Bluefin Tuna, Final report FRDC project 2013-025, Institute for Marine and Antarctic Studies, Hobart.

Tracey, SR, Lyle, JM, Ewing, GP, Hartmann, K & Mapleston, A 2013. Offshore recreational fishing in Tasmania 2011/12, Institute for Marine and Antarctic Studies, University of Tasmania, Hobart.

VRFish 2015. Economic Study of Recreational Fishing in Victoria. Study by Ernst & Young for the Victorian Recreational Fishing Peak Body (VRFish), November 2015.

Ward, P, Moore, A, and Stobutzki, I (2012b). Development of methods for obtaining national estimates of the recreational catch of SBT. Technical Advisory Committee Meeting 1, Parkroyal Melbourne Airport, 30–31 July 2012

West, L, Lyle, J, Murphy, J, Stark, K and Doyle, F, 2015. Survey of Recreational Fishing in New South Wales and the Australian Capital Territory, 2013/14, NSW Department of Primary Industries.