

Australian Fisheries Management – A Comparative Assessment

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A Google search of web pages from Australia for “best managed fisheries” reveals about 4000 links. Many, if not most, of these relate to various State and Commonwealth fisheries departments claiming that their management is world leading. Although it is apparent that these claims are self awarded and without any actual criteria or comparison, an independent global assessment of fisheries management does in fact exist. It presents a quite different and somewhat surprising picture.

Last year The Fisheries Centre of the University of British Columbia in Canada published a 90 page report entitled A COMPARATIVE ASSESSMENT OF BIODIVERSITY, FISHERIES AND AQUACULTURE IN 53 COUNTRIES’ EXCLUSIVE ECONOMIC ZONES*. It assesses fisheries management in the world’s leading fishing nations in accord with 14 indicators rated on a scale of 1 to 10. The indicators are:

Biodiversity-related indicators -

- 1) Marine Protected Area Coverage;
- 2) MPA Investment, being the cost of maintaining MPAs relative to value of fisheries;
- 3) Change in EEZ Area Trawled relative to the area of its EEZ;
- 4) Ecological components of Mariculture Sustainability;
- 5) Seabird Protection reflecting both intention and effectiveness;
- 6) Marine Mammal Protection reflecting both intention and effectiveness;

Value-related indicators -

- 7) Landed Value Relative to GDP;
- 8) Fishmeal consumption by Mariculture;
- 9) Compliance with the FAO Code of Conduct for Fisheries;
- 10) Context-Adjusted Fisheries Statistics Indicator, which measures the effectiveness of countries’ fisheries reporting systems;
- 11) Subsidies Ratio, which measures financial resource allocated to management and surveillance relative to the sum of such ‘good’ subsidies and ‘bad’ (capacity enhancing) subsidies;

Job-related indicators -

- 12) Catch Relative to Fuel Consumption;
- 13) Subsidies Relative to Landed Value;
- 14) Socioeconomic Component of Mariculture Sustainability.

Aggregate unweighted scores were established for each nation by averaging the scores for the 14 indicators. The top 10 rating countries for marine resources management were:

* May be downloaded at: <ftp://ftp.fisheries.ubc.ca/FCRR/16-7.pdf>

Aggregate unweighted scores

Country	Aggregate Score
New Zealand	5.5
Peru	5.2
Germany	5.2
Netherlands	5.1
USA	4.8
South Africa	4.8
Australia	4.8
UK	4.8
Sweden	4.6
Senegal	4.6

Weighted Scores

In addition to these unweighted rankings, scores were established with different weightings for the different indicators in accord with four different priorities. These were Market First, Policy First, Security First and Sustainability First. They are defined as:

- **Market First** - is focused on using economic policies to drive development, including economic incentives to improve environmental management and technology to mitigate impacts.
- **Policy First** - focus is on the economic and social policies that facilitate development and override environmental concerns.
- **Security First** - seeks to optimize existing economic and social well-being. Environmental policies are supported only if there is economic or social benefit to do so.
- **Sustainability First** - aims to balance a mix of environmental and social policies.

The top five countries in these weighted rankings were:

Market First	Policy First	Security First	Sustainability First
Poland	Poland	New Zealand	Germany
Senegal	Senegal	Peru	Australia
South Africa	Egypt	Iceland	Sweden
USA	Spain	USA	Denmark
Spain	South Africa	Norway	Spain

Sustainability Alone

In a separate section of the study sustainability alone was ranked without weighting of the other indicators. The criteria listed were:

Sustainability Criteria

- Conserve and maintain the integrity of aquatic resources;
- Maintain sufficient biomass of targeted species for present and future generations, as well as the biomass of non-target species associated with the target species;
- Base decisions on best scientific evidence available and apply a precautionary approach;
- Develop environmentally safe fishing gear and practices;
- Minimize negative impacts from harvesting to processing and reduce waste;
- Protect and rehabilitate marine fisheries habitat where possible;
- Integrate fisheries interests into coastal management;
- Ensure fleet compliance with conservation and management measures and with relevant local, national and international laws and trade laws.

The results of this ranking were quite different, with the top ten countries being:

Sustainability Alone

Country	Average score
Peru	6.42
Namibia	5.10
USA	5.10
Germany	4.90
Poland	4.82
Norway	4.71
Senegal	4.70
Chile	4.67
South Africa	4.64
Ghana	4.59

In this ranking Australia shared equal 31st place with Japan at a score of 3.78.

Mariculture Sustainability

In an index for mariculture sustainability 13 separate indicators were utilised. The top ten ranked countries were Germany, Netherlands, Spain, Japan, Russian Federation, North Korea, South Korea, Ireland, France and Argentina. Australia came in at 40th place.

Statistical Reporting

As catch statistics are of high importance in fisheries management, the quality of statistical reporting was evaluated. The top ten countries were New Zealand, Portugal, USA, Spain, France, Chile, UK, Russian Federation, Norway and South Africa. Australia came in at 35th place with a score just under half that of South Africa in 10th place.

MPA Costs

Estimates of costs of MPAs were assessed for the year 2000 in S.U.S. The cost index is the cost of running MPAs as a percent of the ex vessel catch value.

Rank	Country	Costs for MPA \$ u.s.	MPA Cost Index
1	Sweden	30,046,000	15.0
2	Germany	12,610,000	12.3
3	Australia	111,893,000	11.5
4	Denmark	21,100,000	8.6
5	UK	70,685,000	5.8
6	Egypt	2,969,000	5.5
7	Ukraine	1,053,000	4.0
8	Canada	141,275,000	3.9
9	Italy	19,258,000	3.6
10	Netherlands	4,335,000	3.2
11	*USA	119,162,000	3.2

* USA includes Alaska and Hawaii

How Australian Fisheries Management Ranks

It is obvious from this assessment that contrary to all the self congratulations of our managers, their results are far from world beating. In fact, they leave a lot to be desired even when compared to the better managed third world nations. Australia ranks highly only in environmental regulation and expenditure. Although this may seem commendable it is also misplaced as we also have the lowest fishing harvest rate in the world at only 1/30th the global average. There was very little problem to begin with and we have the most costly protection where it is needed least. The bottom line is the most expensively managed and least productive fisheries in the world.

The MPA costs are particularly telling. In 2000 our MPAs cost more than anywhere else but Canada and U.S.A.; however, their cost was only 1/3 that of ours when figured against the value of their catch. Since then we have greatly increased our MPA area and costs while downsizing our fisheries even more. Worse yet, we are in the process of still greater increases in MPAs and even further downsizing of our fisheries.

We import two-thirds of the seafood we eat. Over \$165,000,000 in canned tuna each year is just one item on this account. Most of it comes from Thailand; but, much is caught under license in PNG waters. PNG now produces more tuna alone than all Australian Fisheries and aquaculture combined. These tuna are shared stocks with our Coral Sea area which could easily produce all of the tuna we now import. Instead of developing our own fishery, we have a crash plan to put the whole of our Coral Sea EEZ into the world's largest no take MPA. The fish we will be "saving" in the Coral Sea will swim on into PNG waters in their annual migrations and be caught by Asian fishermen to be sold back to us by the Thai canning companies.

Like all our imports this will be paid for in part by selling off our non-renewable mineral inheritance and the balance will add to the ever increasing amount we owe foreign creditors. Even a moron could see this is unsustainable and those who keep lending to us are not morons. They will keep lending until we can no longer meet repayments. Foreclosure will eventually deliver our assets at bargain prices and in the meantime we will be bled for interest. We are being managed either by fools or by traitors and like sheep we are going along with it. When are we going to wake up?

Addendum

Since writing the above, I have been made aware of another relevant study entitled: *Evaluating the Performance of Australian Marine Capture Fisheries, A Report to the Fisheries R&D Corporation Resource Working Group, July 2009*. Edited by Ewan Colquhoun and Deborah Archbold, Bridge Partners, 116 pp. It is based on an analysis of confidential interviews with more than 70 national and international experts and is available online at:

http://www.frdc.com.au/literature_41539/Evaluating_the_Performance_of_Australian_Marine_Capture_Fisheries

Twenty three major fisheries representing 60% of total catch tonnage for Australia and 80% of value were evaluated for each year from 2002-03 through 2006-07. Each fishery was rated on a scale of 1 – 10 for its economic output with respect to what was deemed to be its “best use” potential. While such rating is highly subjective and involves considerable individual variation, both the overall average as well as the ratings for each fishery clearly indicate again that independent experts think there is considerably more room for improvement in management than is indicated by the praise our managers have so generously lavished upon themselves.

The overall rating for all of the fisheries was 6.0. This represents an annual economic performance shortfall of about \$400 million below best use potential.

Rankings and Comments for Three Fisheries

Three individual fisheries of which I have some detailed knowledge warrant comment:

The **Western Rock Lobster Fishery** was rated 5 (i.e. 50% of potential economic best use). Among the comments offered in the report were:

- *Well managed commercial fishery but still trying to manage by property rights for effort instead of property rights for catch. The current approach is better than nothing but can be improved.*
- *No real increase in prices in recent years but costs increasing.*
- *MSC certified but seeing a collapse in the catch. Need to understand the reasons why this has happened.*
- *Trying to meet social outcomes but ‘the fleet is going broke’.*
- *The fishery cannot adjust for poor recruitment of juvenile rock lobsters – no flexibility.*

WS comment:

The comment on rights to effort vs. rights to catch assumes that stock estimation accuracy is sufficient to reliably predict upcoming sustainable catch at least a year in advance. Experience indicates this is not true in the WRLF or any other lobster fishery. Cost increases are to a large extent a direct consequence of management charges and restrictions. The “collapse” in catch and fleet going broke are also a direct result of “precautionary” management restrictions, not a collapse in stocks. Whether such restrictions were excessive or even necessary at all to prevent overfishing is problematic. Poor recruitment of juveniles is only an assumption from low puerulus counts on collectors. It is conflicted by indication of unusually high numbers of juveniles farther offshore. Lack of flexibility is entirely a result of management constraints.

A rating of 5 and a fleet that is going broke for what is repeatedly claimed to be the best managed lobster fishery in the world is not impressive. If this is the best, one might well wonder about the condition of the others. Their performance clearly shows that they actually aren’t the disaster area

one might expect. As one might also be beginning to suspect the WRLF management claim is simply bullshit.

The **East Coast Tuna and Billfish Fishery** was rated 5.3. Comments in the report included:

- *Had a major collapse and a \$120m buyout to reduce excess capacity.*
- *Now open access with input controls but moving to a management strategy. The fishery is going in the right direction but improvement is still needed – the resource is finite. Interaction with recreational fishers not dealt with well.*

WS comment:

The collapse and buyout were imposed by management restrictions not a collapse in stocks. That the size of the resource is much greater than claimed by management is proven by catch rates and the PNG catch from the same stocks (see above, next to last paragraph p.4).

The **Great Barrier Reef Line Fishery** (Reef Fish and Mackerel) was rated 6.2. Comments in the report included:

- *ITQs. Reporting can be onerous.*
- *Well and over managed. Reformed and is now generating profit.*

WS comment:

The reporting is indeed onerous. Well and over managed is a contradiction in itself. The profit comes from improved prices overseas, not from improved management. The GBR commercial fishing catch is restricted to a level that equates to an average harvest level of 9 Kg/Km²/year when 4000 Kg is considered an average conservative estimate of sustainable yield for reef fisheries. Most of the reef isn't fished at all and the actual potential for reef fisheries has never been assessed. Without doubt it has to be at least several times greater than the pitifully small limit now being arbitrarily imposed.

Some Other Rankings

The **Northern Prawn Fishery** was one of the highest rated at 7.5. However, it is down to about 50 boats from over 200 in 1990. Net Economic Return has been low to negative in recent years and boats are selling at near scrap prices.

The **Southern Bluefin Tuna Fishery** was the second highest ranked at 8.6; but, it is still being cut back when fishermen are seeing the most fish in decades and are catching their annual quota in only a few days fishing. Even more incongruous is the fact that these unequivocal indications of healthy stocks have come after two decades of gross overfishing of quotas by Japan. That the stock estimates bear no relation to reality is one of those obvious things nobody seems willing to mention.

The **Exmouth Gulf Prawn Fishery** at 9.8 had the highest rating of all. It also has only one company operating in the fishery and simplified, real time, performance based management aimed at operating efficiency. It is essentially self-managed by the industry with the bureaucracy serving only for oversight. As the most successfully managed fishery in Australia this should have something to teach us.

Perhaps we should consider incorporating every fishery with rights holders becoming shareholders and the company responsible for its own resource management.