Australian Government

Australian Institute of Marine Science

The AIMS Index of Marine Industry

2012

AIMS: Australia's tropical marine research agency.

Preface

Australia truly is a marine nation. Its total marine territories are around 10 million square kilometres. This is considerably greater than the Australian mainland (7.69 million square kilometres) and is one of the largest Exclusive Economic Zones in the world.

More than 85 per cent of our population lives within 50 km of the ocean, and more than 70 per cent of Australia's territory is beneath the ocean. It is therefore not surprising to see the important place the ocean plays in defining the national identity of Australians. But our ocean territory is also important as a source of food, in the control of our climate, to the national economy, and to national security.

The oceans surrounding us hold answers to the biggest issues now facing all of humanity: climate and climate change; environmental sustainability; economic growth; national security; energy security and food security.

The Australian Institute of Marine Science (AIMS) is Australia's tropical marine research agency. Its mission is to generate and transfer the knowledge to support the sustainable use and protection of the marine environment. Our research supports marine policy, evidence-based decisions, and regional industry development by providing independent advice and essential knowledge about tropical marine ecosystems. The *AIMS Index of Marine Industry* helps to highlight the economic importance of Australia's marine environment. Although the marine based industries already contribute more to the national economy than the agricultural sector - over $42 Billion in 2009-10 – much of Australia's ocean territory remains inadequately surveyed and our understanding of the complex interactions that sustain these marine ecosystems is inadequate to provide the certainty sought by both industry and regulators.

The analysis in this Index confines its focus to accessible economic data. However a recent study by the Centre for Policy Development (*Stocking Up: Securing Our Marine Economy*) found that our oceans contribute around $25 billion per year to the economy through ecosystems services. This is in addition to the economic data and provides further grounds for raising the profile of our marine sector in policy and investment decisions. This is critical if we are to capture the wealth from our oceans.

The 2012 release of the *AIMS Index of Marine Industry* once again highlights the importance of Australia's marine industries sector and why it is in the national interest to understand and sustainably manage our precious ocean resources.
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The economic value of Australia's marine industry

The value of marine industries

Industries associated with Australia's marine environment contribute significant benefits to our economy and society. Despite this there is not a consolidated 'marine industry' category that reports this contribution to Gross Domestic Product (GDP), Gross State Product (GSP), employment, and infrastructure at a national, State/Territory and regional level.

AIMS has commissioned the analysis in this report to bring together published economic data on the value of the Australian marine industry sector.

This is the fourth edition of the Marine Index. Originally developed for AIMS in 2008 it provides the most recent available assessment of the economic value of the marine industries.

The industry groupings and definitions used in the Index are the same as those used in the previous editions. They were developed through discussion with representatives from a wide range of organisations involved with the marine industries in Australia (AIMS, 2008). Collection of available information for these groupings provides information on the scale of Australia's marine industry and also highlights where information gaps exist in relation to each sub-sector of the marine industry. The industry groupings should be seen as an initial framework for considering the scope and scale of activities which are considered to be part of the 'marine industry'.

Approach to valuation

The main barrier to collecting the consistent and comparable data required to estimate the economic value of Australia's marine industry is that there is no single definition of which activities constitute this sector – that is, there is no agreed 'marine industry' grouping. For example, a number of industry sub-sectors included in the 1997 Marine Industry Development Strategy, which was developed by the Australian Marine Industries and Sciences Council, were excluded from the Marine Industry Action Agenda (developed later by the then Commonwealth Department of Industry, Science and Tourism).

This inconsistency has limited the identification of issues and trends affecting marine-related industries and activities. While a number of studies have estimated the value of marine-related activities at a regional level (in particular work about the Great Barrier Reef Marine Park), this has not been done at a national level.

In its 2004 report to the National Oceans Office, The Economic Contribution of Australia's Marine Industries, the Allen Consulting Group used analysis of previous studies to provide a view of the economic impact of the marine industries. This Index builds on their work to develop a framework which more explicitly accounts for activities within major marine industry groupings.

The Index limits the sub-sector definitions and data sources to quantifiable aspects of activities associated with the marine environment. In particular, to sources that available, comparable and reliable. This necessarily means that economic transactions and industry groupings are

emphasised and that data is focussed on value flows rather than on value stocks. Alternative approaches, which would make it possible to think about valuing the social, environmental and other non-tangible dimensions of the marine environment, are not considered in this exercise.

However, more broadly based estimates of economic value that include non-economic data illustrate that that the Index is a conservative estimate of the value of Australia's marine based industries. A recent estimate including the value of ecosystems services derived from Australia's oceans added a further $25 billion per year.[1] – a total value of over $69 billion per annum.

While this approach gives a limited construction of 'valuation', the focus on data that is accessible and repeatable means the performance of the marine industry can be measured and compared over time.

Where possible the data is updated to reflect any changes in the source data that may have occurred between issues.

Value in 2009-10

A summary of the major and most recent available data about marine industry activities in Australia is provided in Tables 1 and 2.

[1] Centre for Policy Development (CPD), Stocking Up: Securing our marine economy, September 2011

Table 1: Summary statistics for Australian marine industries (marine resource activities and industries), 2009-10.

Marine resource activities and industries				
	Industry Value Added (2009-10 $m)	**Value of Production (2009-10 $m)**	**Industry employment (2009-10)**	**Other**
Fishing				
Marine-based aquaculture [2]	n/a	$870.4m		
Commercial fishing (wild capture fisheries) [3]	n/a	$1,343.7m	6,107 employees (2006-07)	
Recreational fishing [4]	n/a	n/a (see note below)	n/a	$2,081.9m (expenditure on related services and products)
Indigenous fishing [5]	n/a	n/a	In 2000-01, around 37,000 indigenous people participated	2000-01 harvest: 1.89m fish, 0.84m crustaceans, 1.15m molluscs, 0.93m others
Offshore oil & gas exploration and extraction				
Oil exploration [6]	n/a	$2,745.5m		
Oil production [7]	n/a	$10,187.5m		
LPG [8]	n/a	$1,105.1m*		
Natural gas [9]	n/a	$7,788.7m*		
Marine pipeline services	n/a	n/a	n/a	
Other resource extraction and use				
Desalination	n/a	n/a	n/a	Emerging industry
Carbon capture	n/a	n/a	n/a	Emerging industry
Bio-prospecting	n/a	n/a	n/a	Emerging industry
Seabed mining	n/a	n/a	n/a	Emerging industry
Tidal power	n/a	n/a	n/a	Emerging industry

* export revenue only

[2] Australian Bureau of Agricultural and Resource Economics, Fisheries Statistics 2010
[3] Australian Bureau of Agricultural and Resource Economics, Fisheries Statistics 2010
[4] Department of Agriculture, Fisheries and Forestry , National Recreational and Indigenous Fishing Survey 2001 - Note that there is not agreement on whether recreational fishing should be included as a 'marine resource' activity or a 'marine-related service'. Work has recently been undertaken to estimate the value of fish caught by recreational fishers, however this has not been at the national level. Expenditure on recreational fishing related services & product, is based on the 2001 survey, with values inflated to 2009-10 dollars.
[5] Department of Agriculture, Fisheries and Forestry, National Recreational and Indigenous Fishing Survey 2001
[6] Australian Bureau of Statistics, 8412.0 - Mineral and Petroleum Exploration, Australia, September 2011
[7] APPEA, Production Statistics 2010, includes extraction from Bass, Gippsland, Bonaparte, Otway, Browse, Carnavon Basins,
APPEA & APPEA Financial Survey Results: 2009-10, APPEA
[8] Australian Bureau of Agricultural and Resource Economics, Commodity Statistics, June Quarter 2011
[9] Australian Bureau of Agricultural and Resource Economics, Commodity Statistics, June Quarter 2011

Table 2: Summary statistics for Australian marine industries (marine related service activities and industries), 2009-10.

Marine-related service activities and industries				
	Industry Value Added (2009-10 $m)	**Value of Production (2009-10 $m)**	**Industry employment (2009-10)**	**Other**
Boat / ship building, repair & maintenance services and infrastructure				
Shipbuilding & repair (civil and defence) [10]	$979.0m+	$2,637.0m	7,883 employees	
Boatbuilding & repair (incl recreational vessels) [11]	$447.0m	$1,221.0m	6,087 employees	
Marinas and boating infrastructure	n/a	n/a	n/a	
Marine equipment retailing [12]	$294.6m	$2,794.0m	4,365 employees	Wages & salaries $200.0m+
Marine tourism and recreational activities				
Cultural & recreational activity [13]	n/a	n/a	n/a	
Domestic consumption of tourism goods and services [14]	$9,869.6m	n/a	142,142 tourism-related employees	40% of domestic tourism
International consumption of tourism goods and services [15]	$1,750.3m	n/a	27,577 tourism-related employees	19% of international tourism
Aquaria	n/a	n/a	n/a	
Water transport				
Water transport [16]	$1,166m	n/a	9,000 ($636m wages and salaries)	$3,335m (income)
Marine environment management				
Scientific research & development	n/a	n/a	n/a	
Establishment & operation of management programs	n/a	n/a	n/a	
Marine safety (Australian Maritime Safety Authority - AMSA)[17]	n/a	n/a	285 AMSA employees	Operating expenditure $155.8 million

+ Based on new data availability this figure is provided in the index for the first time

[10] Australian Bureau of Statistics, 81590DO001_200910 Experimental Estimates for the Manufacturing Industry, 2009-10
[11] Australian Bureau of Statistics, 81590DO001_200910 Experimental Estimates for the Manufacturing Industry, 2009-10
[12] IBISWorld Industry Report G5245 Marine Equipment Retailing in Australia 1/06/2011
[13] Including boating/sailing, snorkelling, scuba diving, charter & game fishing by locals
[14] Australian Bureau of Statistics, Tourism Satellite Account cat.no. 5249 (2009-10). The percentage allocation of international and domestic tourism related economic activity is based on the calculation in the 1989 Report of the Review committee on Marine Industries, Science and Technology in Australia, Oceans of Wealth? This report used unpublished statistics from the then Bureau of Tourism Research to assess the proportion of visitor nights spent by non-business travellers in places (other than capital cities) where the main attraction is the sea. This share of nights was then used as a proxy for the share of total tourism that the marine tourism industry represents. These figures (19 per cent for international and 40 per cent for domestic) have subsequently been re-used in the Review Committee on Marine Industries and Sciences Council 1997 Report and the Allen Consulting Group's 2004 report to The National Oceans Office, The Economic Contribution of Australia's Marine Industries.
[15] Ibid.
[16] Australian Bureau of Statistics, 81550DO002_200809 Australian Industry, 2009-10
[17] Australian Maritime Safety Authority (AMSA), Annual Report, 2009-10

The information summarised in Tables 1 and 2 shows that there are a number of categories for which there is no suitable data available (n/a). However, for sub-sectors where data is available, comparable and reliable the values have been aggregated to provide a total measurable value for 2009-10 (see Table 3).

Table 3: Total measurable value from marine-related activities in 2009-10.

Marine resource activities and industries	
Fishing	
Marine-based aquaculture	$870.4m
Commercial fishing (wild capture fisheries)	$1,343.7m
Offshore oil & gas exploration and extraction	
Oil exploration	$2,745.5m
Oil production	$10,187.5m
LPG	$1,105.1m*
Natural gas	$7,788.7m*
Marine-related service activities and industries	
Boat/ship building, repair & maintenance services and infrastructure	
Shipbuilding & repair (civil and defence)	$2,637.0m
Boatbuilding & repair (incl recreational vessels)	$1,221.0m
Marine equipment retailing	$2,794.0m
Marine tourism and recreational activities	
Domestic consumption of tourism goods and services	$9,869.6m
International consumption of tourism goods and services	$1,750.3m
TOTAL	**$42,312.6m**

* export revenue only

Table 3 suggests that, in 2009-10, the total measurable value of economic activity based in the marine environment in Australia was around $42.3 billion. By way of comparison:

- The gross value of all agricultural production in Australia in 2009-10 was $39.6 billion[18]
- Sales and service income from automotive and automotive parts manufacturing in 2009-10 was $19.4 billion.[19]

It should be noted that the above is not a complete figure – not only is economic data unavailable for many marine activities, but there are also non-economic values which are not captured by this approach.

Changes over time

In order to form an idea of the sector's performance over time (Figure 1), we compare the levels of economic activity for marine industry sub-sectors, for which reliable data on economic activity is collected annually. From 2001-02 to 2009-10, the marine industry value has increased by just under 80 per cent, however in the period since the last report (2008-09 to 2009-10) the value of the sector decreased by 4 per cent. This decrease was driven by:

- The fall in value of natural gas exports. These were $7.8 billion in 2009-10, compared with $10.1 billion in 2008-09, a decline of $2.3 billion (23 per cent). This was primarily due to a decrease in price, as production volume actually increased by 16 per cent over this time. The 2008-09 export figure was an historic high and despite the significant reduction in the value of

[18] ABS, 7503.0,Value of Agricultural Commodities Produced, Australia, 2009-10
[19] Australian Bureau of Statistics, 81590DO001_200910 Experimental Estimates for the Manufacturing Industry, 2009-10

natural gas exports, the 2009-10 figure is still one-third higher than two years before. The Australian Bureau of Agricultural and Resource Economics (ABARE) forecasts that natural gas exports will return to 2008-09 levels by 2011-12. [20]

- A $573 million (17 per cent) reduction in expenditure on total off-shore oil exploration. The majority of the reduction in expenditure was from Western Australia, where exploration expenditure decreased by $460 million. This reflected similar decreases in expenditure on resources projects in 2009, possibly due to the adverse economic conditions of that time.

  Despite this decrease, total expenditure on off-shore oil exploration in 2009-10 remains above the level of two years earlier and is forecasted to increase again over the next few years.[21] The number of offshore wells has remained steady.

Offsetting these decreases were modest increases in the total level of activity in:

- Boat/ship building, repair & maintenance services and infrastructure; and
- Marine tourism and recreational activities.

Overall, the reductions in marine resource related industries dominated the other sectors, resulting in an overall contraction of four per cent for the Marine Index. This compares with the Australian economy as a whole, which, in the 12 months to June 2010 grew by 1.3 per cent.[22]

Figure 1: Comparison over time: measurable Industry Value of Production from selected marine-related activities, 2001-02 to 2009-10

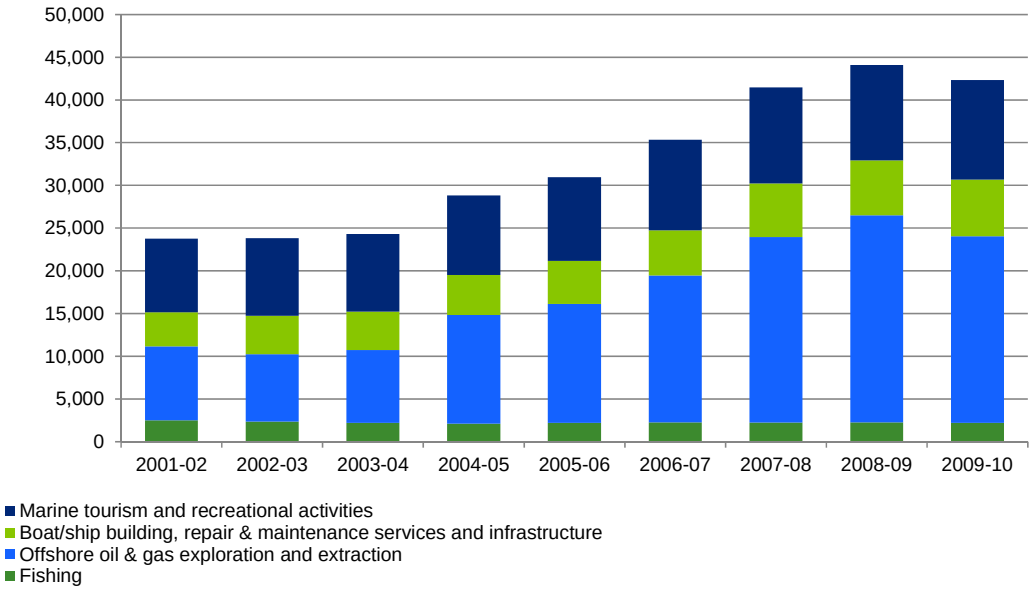

Table 4 provides the detailed data for each industry sub-sector's value from 2001-02 to 2009-10. References for this table are the same as for and Table 2. Footnotes relate to the comparability of data between years.

[20] Australian Bureau of Agricultural and Resource Economics, Commodity Statistics, June Quarter 2011, Tables 22b and 23b

[21] APPEA, Flowline, March 2012 <http://www.appea.com.au/images/stories/Publications/Flowline/e-flowline%20mar%202012.pdf>

[22] ABS 5206.0 - Australian National Accounts: National Income, Expenditure and Product, Jun 2011

Table 4: Total of measurable Industry Value of Production from marine-related activities, 2001-02 to 2009-10.

Marine resource activities and industries									
Value of output ($m)	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**
Fishing									
Marine-based aquaculture	731.2	708.9	724.6	634.1	742.3	806.0	869.3	866.6	870.4
Commercial fishing (wild capture fisheries) *	1783.9	1655.5	1499.2	1490.8	1461.7	1451.5	1382.0	1391.9	1343.7
TOTAL fishing	**2515.1**	**2364.4**	**2223.8**	**2124.9**	**2204.1**	**2257.5**	**2251.3**	**2258.4**	**2214.1**
Offshore oil & gas exploration and extraction									
Oil exploration *	718.1	803.8	713.6	774.6	906.1	1727.3	2541.1	3318.4	2745.5
Oil production	4441.0	3472.7	4898.5	7866.6	7570.3	9229.8	12123.6	9793.4	10187.5
LPG (export revenue)	856.3	981.1	717.3	861.3	1037.1	1037.7	1181.8	1043.5	1105.1
Natural gas (export revenue)	2613.0	2607.0	2174.0	3199.0	4416.0	5222.0	5854.3	10078.8	7788.7
TOTAL offshore oil & gas	**8628.4**	**7864.6**	**8503.4**	**12701.5**	**13929.5**	**17216.8**	**21700.8**	**24234.1**	**21826.7**
Boat/ship building, repair & maintenance services and infrastructure									
Shipbuilding & repair (civil and defence) [23]	1796.4	1839.0	1696.0	1721.0	1797.0	1777.0	1954.0	1997.2	2637.0
Boatbuilding & repair (incl recreational vessels)	818.0	1037.0	1108.0	1251.0	1488.0	1688.0	1829.0	1869.4	1221.0
Marine equipment retailing	1411.6	1632.8	1670.3	1709.6	1743.8	1804.8	2486.8	2559.3	2794.0
TOTAL boat/ship services	**4026.0**	**4508.8**	**4474.3**	**4681.6**	**5028.8**	**5269.8**	**6269.8**	**6425.9**	**6652.0**
Marine tourism and recreational activities									
Domestic consumption of tourism goods and services [+]	7336.8	7783.6	7725.6	7909.2	8326.0	9012.4	9534.4	9377.6	9869.6
International consumption of tourism goods and services [24] [+]	1271.9	1292.2	1376.7	1419.5	1468.7	1591.3	1703.5	1786.0	1750.3
TOTAL tourism	**8608.7**	**9075.8**	**9102.3**	**9328.7**	**9794.7**	**10603.7**	**11237.9**	**11163.6**	**11619.9**
TOTAL[◆]	**23778.1**	**23813.5**	**24303.8**	**28836.6**	**30957.1**	**35347.8**	**41459.8**	**44082.0**	**42312**

[+] Values for these series have been updated to reflect the most recently available data. Some values may not match quoted values from previous issues of the marine index.
[◆] Totals have been rounded.

Marine industry sub-sectors

The following paragraphs outline briefly some of the key issues associated with each of these categories. For further information, see the earlier AIMS discussion paper, *Valuing the Australian marine industry: assessing the scope, scale and value of the Australian marine industry*. This paper is available online here.

Commercial fishing and aquaculture

Commercial fishing includes marine-based aquaculture and wild-catch from Commonwealth and State and Territory fisheries. This may mean that data is collected across jurisdictions. Marine-based aquaculture operations are those in coastal waters or in ponds requiring a sea water source – while there are some inland operations using salt water, these are not included in this definition.

[23] There have been several ABS series used to create this series. Figures from prior to 2006-07 are drawn from ABS, 8221.0 - Manufacturing Industry, Australia, 2006-07. Figures shown for 2007-08 and 2008-09 are drawn from 81590 Experimental Estimates for the Manufacturing Industry, while values for 2009-10 are taken from Australian Bureau of Statistics, 81590DO001_200910 Experimental Estimates for the Manufacturing Industry, 2009-10.
[24] Ibid.

Recreational fishing

Quantifying the economic value of recreational fishing is challenging because of the difficulties of collecting and comparing data about activities which occur in a relatively informal way and across a fragmented sector. In addition to any intrinsic environmental or heritage value, the fish caught by recreational fishers could be seen to represent an economic value; they are not, however, part of a market transaction, and determining how much they are worth therefore would requires alternative approaches to valuation.

Currently, the only data available about recreational fishing's economic impact is for expenditure on registration fees, ice, bait, fishing/boating/safety equipment, and travel costs. It also includes some activities which could be considered tourism or other services. Using this as the primary economic activity definition, recreational fishing would be considered marine-related service industry rather than as a marine resource industry. This information is based on a study in 2001 that observed that 3.4 million Australian engage in recreational fishing spending $2.26m annually.[25]

There have been several more recent studies that have placed an economic value on recreational fishing; however these have been for one particular state or region. For example a recent report by Ernst and Young valued the economic impact of recreational fishing in Victoria at $824 million per annum.[26] While another report, by Access Economics, valued the expenditure on recreational fishing in the Great Barrier Reef at $267 million in 2006-07.[27]

Offshore oil and gas exploration, extraction and processing

The energy resources industries – including petroleum, LPG, and LNG – make up a significant portion of marine-based economic activity. In addition to the value arising from the domestic or export sale of resources extracted offshore, which is reliably reflected in production statistics, there is substantial activity generated through exploration and the development and ongoing maintenance of infrastructure (e.g. pipelines).

Other resource extraction

A number of other activities have been identified as emerging industries, with little current impact but the potential for an increasing contribution in the future.

Boat and ship building and maintenance equipment, services and infrastructure

The ANZSIC Manufacturing division includes marine equipment and supplies including activities such as the manufacture of winches, diving equipment, marine engines, acoustics equipment, sails and marine flooring. This is not currently separated out from general transport-related manufacturing.

Marine equipment retailing (ANZSIC 5245) is also in this category, although some activities such as retail of recreational and sporting equipment should be excluded, and counted among the recreational and leisure category.

In addition, this category includes activities in marinas and boating infrastructure. This sub-sector is highly diffuse, and there is no single source of consistent data. While a number of industry associations produce partial statistics, these are not considered reliable.

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[25] Department of Agriculture, Fisheries and Forestry (2001). *National Recreational and Indigenous Fishing Survey*, 2001
[26] Ernst and Young, *Economic Study of Recreational Fishing in Victoria - VRFish,* 20 November 2009
[27] Access Economics, *Measuring the economic and financial value of the Great Barrier Reef Marine Park, 2005-06, Report for the Great Barrier Reef Marine Park Authority*, 2007

Marine tourism

Assessing the value of marine tourism is perhaps the most challenging part of valuing the marine industries. At the same time, the very substantial contribution of this sector to the economies of marine and coastal communities means that its importance should be recognised.

Identifying tourism activities differs from other industry categorisations, as these activities are defined by the classification of the consumer rather than, as is more typical, of the producer. The ABS develops its tourism satellite account based on internationally agreed standards for measuring tourism activity.[28] Internationally, approaches to defining the 'marine' components of tourism vary considerably. While there is consensus on approaches to the development of general tourism statistics, there does not yet appear to be a single framework for consistently identifying the portion of this attributable to marine tourism. While the tourism survey made it relatively straightforward to report tourism activity, the contributions in relation to marine tourism should be viewed as broad indicators of economic activity rather than precise estimates. The only existing methodology for this apportionment was developed in the 1989 report Oceans of Wealth? This report classified 19 per cent of international and 40 per cent of domestic tourism as marine tourism. It is recommended that further work, perhaps in the form of a survey, should be undertaken to determine an approximate measure for the proportion of Australian domestic tourism which is motivated by marine-related factors.

This grouping should also include marine-related cultural and recreational activity by local people who are not counted in typical 'tourism' datasets, including fishing; boating/sailing; snorkelling, scuba diving; charter and game fishing. There is currently no single dataset which identifies this activity. In addition, there is a degree of 'double counting' involved in relation to marine tourism and other marine sectors, given that nearly all of the broad (ANZSIC) industry groups are involved to a greater or lesser extent in tourism.

In 2008-09 the ABS changed the method for calculating the Tourism Satellite Account (cat.no. 5249) [29]. The new method of calculation includes only the direct economic impacts of tourism, whereas the previous method also included indirect economic impacts. The figures included in the Index have been corrected to reflect this changed methodology and are comparable between years, but are not comparable to all previous editions of the index.

A recent example of where the economic impact of tourism in a specific region has been studied in depth is a recent Access Economics report for the Great Barrier Reef Marine Park Authority. This report found that tourism expenditure in the Great Barrier Reef Catchment Area totalled over $5.8 billion in 2006-07. The report also found that tourism accounted for 94 percent of the following total economic impacts of the Great Barrier Reef:

- direct and indirect national contribution of 53,800 Full Time Equivalent jobs.
- Australia-wide contribution to value added of just over $5.4 billion.

It is likely that for an accurate assessment of the economic impact of marine tourism to be compiled, similar detailed regional studies of major marine based tourism destinations would be required.

[28] ABS, *Australian National Accounts: Tourism Satellite Account, 2008-09*, ABS cat.no. 5249.0
[29] For more information on the change see:
http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5249.0Explanatory%20Notes12008-09?OpenDocument

Water transport and Services to water transport

The challenge of capturing and appropriately attributing the value of all transport activity that, strictly speaking, occurs in Australia or Australian waters is considerable, given the frequently multinational nature of the transport operators. Therefore, in order to avoid double counting and to present a reliable base line level, this sector is restricted to include only the industry sub-sectors for which the ABS collects data.

Marine environment management

This grouping includes activities which provide management services for the marine environment, including scientific research and development and knowledge transfer, the establishment and operation of environmental management programs, and marine safety activities. In general, the major challenge to establishing the level of activity in this area is that it often occurs in a relatively diffuse way, spread across research institutes, universities, and the national, state, and even local levels of government.

References

Access Economics (2007). *Measuring the economic and financial value of the Great Barrier Reef Marine Park, 2005-06, Report for the Great Barrier Reef Marine Park Authority.*

AIMS (2008). *Valuing the Australian marine industry: discussion paper*. Produced in conjunction with Deloitte Touche Tohmatsu. Australian Institute of Marine Science, Townsville Queensland)

Allen Consulting Group (2004). The Economic Contribution of Australia's Marine Industries, Report to the National Oceans Office.

Australian Bureau of Agricultural and Resource Economics (ABARE)

- *Commodity Statistics, June Quarter 2011*
- *Fisheries Statistics 2010*

Australian Bureau of Statistics (ABS)

- *5206.0 Australian National Accounts: National Income, Expenditure and Product, Jun 2011*
- *7503.0 Value of Agricultural Commodities Produced, Australia, 2009-10*
- *5249.0 Tourism Satellite Account (2009-10)*
- *81590DO001_200910 Experimental Estimates for the Manufacturing Industry, 2009-10*
- *8412.0 - Mineral and Petroleum Exploration, Australia, Sep 2011*

Australian Maritime Safety Authority (AMSA), *Annual Report*, 2009-10

Australian Petroleum Production & Exploration Association (APPEA),

- *Financial Survey Results: 2009-10*
- *Production Statistics 2010*
- *Flowline, March 2012*

Centre for Policy Development (2011). *Stocking Up: Securing our marine economy*

Department of Agriculture, Fisheries and Forestry (2001). *National Recreational and Indigenous Fishing Survey*

Ernst and Young (2009). *Economic Study of Recreational Fishing in Victoria - VRFish,*

IBISWorld Industry Report (2011). *G5245 Marine Equipment Retailing in Australia*