

---

# THE SCUBA DIVE INDUSTRY IN AUSTRALIA:

## *TOWARDS ESTIMATES OF ECONOMIC SIZE AND IMPACT*

---

**March 2015**

**Report prepared by:**

**Daniel Beaver**

Director, Centre for Conservation Geography

Adjunct Fellow, Centre for Biodiversity and Conservation Science, University of Queensland

**And Thomas Keily**

Economist, Centre for Conservation Geography



**CENTRE FOR  
CONSERVATION  
GEOGRAPHY**

*Strategic Tools and Conservation Innovation*

## ABOUT THE AUTHOR

---

---

### CENTRE FOR CONSERVATION GEOGRAPHY

---

The Centre for Conservation Geography is a research group established in June 2011 to provide expert technical support and advice to government and non-government decision makers and stakeholders. The centre's focus is to apply world's best practice in decision support to planning for biodiversity conservation. Based in Australia, our goal is to build a multi-disciplinary team capable of providing support to conservation decisions being made across the world's ecoregions.

The Centre for Conservation Geography currently has projects in Australia and in the Southern Ocean. Our areas of expertise are in marine and terrestrial protected area planning including protected area performance assessment, cost-efficient conservation priority setting and planning for multiple objectives (e.g. carbon sequestration and biodiversity protection).

<http://www.conservationgeography.org/>

### BRIEF BIOGRAPHY: DANIEL BEAVER

---

Daniel is the director of the Centre for Conservation Geography and an adjunct research fellow at the Centre for Biodiversity and Conservation Science at the University of Queensland. With 15 years of experience in the theory and practice of systematic conservation planning both on land and in the ocean, Daniel has been engaged in planning for marine protected areas in Australia since 2004.

### BRIEF BIOGRAPHY: THOMAS KEILY

---

Thomas Keily graduated with first-class honours and a university medal in Economics from the University of Queensland in 2000 and spent 6 years working at the Reserve Bank of Australia. Since then, Thomas has consulted to a range of industries, including the public sector, transport and real estate, specialising in market analysis, economic modelling and forecasting.

## EXECUTIVE SUMMARY

The recreational Scuba Dive industry undoubtedly makes a large and important contribution to the Australian economy. Despite this importance, little work has been done to measure or quantify the true size of the industry, either in dollar terms or in the employment numbers.

While highlighting the need for further research, this paper seeks to sketch a broad outline around the potential size and contribution of the Australian Scuba dive industry.

While the results should be used with considerable caution, and while they demonstrate a clear need for better data, the figures presented here clearly show that Scuba Diving makes a large and important contribution to the Australian economy.

Working with the limited data available, we estimate that dive-related spending in Australia is potentially worth as much as \$2.2 billion a year.

**Table 1. Estimated dive related spending in Australia.**

<b>Dive Related Spending</b>	
Club Divers	\$125m
Domestic Tourists	\$406m
International Tourists	\$1.7bn
<b>Total</b>	<b>\$2.2bn</b>
<b>Total Economic Contribution</b>	<b>\$4.2bn</b>

The bulk of Scuba Diving occurs in Queensland, where dive related spending is potentially worth as much as \$950 million a year. However there are major dive industries in NSW and WA as well.

**Table 2. Estimated dive related spending by state.**

<b>State</b>	<b>Share</b>	<b>Dive Spend</b>	<b>Cont. to GSP</b>
<b>NSW</b>	23%	\$513m	\$969m
<b>QLD</b>	43%	\$951m	\$1,803m
<i>Nth Qld*</i>	21%	\$462m	\$877m
<b>WA</b>	20%	\$446m	\$843m
<b>Other</b>	13%	\$289m	\$541m

\* figure excludes club divers

---

## MEASURING A MAJOR INDUSTRY

---

In the absence of official estimates, we have attempted to piece together an estimate of economic size based on currently available data. We have broken the market into three analytically distinct components:

1. **Club Divers** – Australian residents who regularly engage in recreational diving through local clubs and associations. This is a measure of non-tourist diving. It may be possible there are a significant number of active, non-tourist divers who dive independently (i.e. not as part of a club or association). To the extent that this is true, our estimates will undershoot the true size of the industry.
2. **Domestic Tourists** – Australians who are not regular divers, but who have dived in the past year, as part of a domestic holiday.
3. **International Tourists** – foreign tourists who participated in diving while on holidays in Australia.

It is possible to source estimates for the number of divers in each component market from available data. We then combine the number of divers with estimated average dive related spend, per diver, to estimate the total size of each component market. Dive related spending incorporates the direct cost of the dive itself, but also includes travel and accommodation costs associated with the dive.

Together the three components sum to an estimate of the national market. From there, the contribution to the Australian economy is estimated using multipliers reported by the ABS.

State contributions are arrived at via the same methodology, using reported state-shares for each component market.

---

## CLUB DIVERS

---

The 2010 Australian Sports Commission's *Participation in Exercise, Recreation and Sport Survey* (ERASS) found that 28,400 Australians had participated in diving as part of a club or association in the past year.

A 1996 survey of organised divers, conducted through a number of dive retail establishments around Australia, found that a "typical" diver spent \$2700 a year on their sport<sup>1</sup>. In 2014 dollars this equates to \$4,406 per annum.

Total club diver spend in 2014 was therefore estimated at:

$$\$4406 \times 28,400 = \mathbf{\$125m}$$

Industry consultation suggests that many regular divers dive independently, and not through official clubs and associations. Western Australia, for example, has a large number of divers engaged in Rock Lobster fishing. As such, and to the extent ERASS figures exclude independent divers, the estimate of non-tourist related dive spending may be understated.

Although the 1996 survey is quite dated now, it is the only estimate available, and consultation with dive industry professionals suggest that the figures are not unrealistic.

---

<sup>1</sup> Davis, Derrin; Banks, Simon A; Davey, Greg. **Aspects of recreational scuba diving in Australia**, in Prosser, Gary (Editor). *CAUTHE 1996: Tourism and Hospitality Research: Australian and International Perspectives; Proceedings from the Australian Tourism and Hospitality Research Conference*. Canberra, A.C.T.: Bureau of Tourism Research, 1996: [440]-[455].

---

## DOMESTIC TOURISTS

---

Tourism Research Australia (TRA) publishes an estimate of scuba diving activity in their National Visitor Survey (NVS). In year-ended 2014, 156,000 domestic overnight visitors participated in scuba diving.

The Tourism and Events Queensland (TEQ) *Recreational Dive and Snorkel Market Summary 2007* reported that domestic dive tourists spent an average of 5.4 nights per trip, and had an average daily spend of \$396. That equates to a total trip spend of \$2157 per domestic dive tourist. In 2014 dollars that equates to an average spend of \$2,602.

Assuming that domestic dive tourists spend as much in other states as they do in Queensland, we estimate a national dive related spend for domestic tourists of:

$$156,000 \times \$2,602 = \mathbf{\$406m}$$

Ideally it would be useful to know what domestic tourist spends in each state, and not use Queensland spending as a proxy, highlighting another useful avenue of research.

---

## INTERNATIONAL TOURISTS

---

Tourism Research Australia (TRA) publishes an estimate of scuba diving activity in their International Visitor Survey (IVS). In year-ended 2014, 279,655 international visitors participated in scuba diving.

The Tourism and Events Queensland (TEQ) *Recreational Dive and Snorkel Market Summary 2007* reported that international dive tourists had an average total trip spend of \$4949 each. In 2014 dollars that equates to an average spend of \$5,969 each.

Assuming that international dive tourists spend as much in other states as they do in QLD,

$$279,655 \times \$5,969 = \mathbf{\$1,669m}$$

Many international tourists would bundle diving holidays with other tourism activities, or would place diving as an activity within a broader holiday program. This makes it difficult to unpack exactly which holiday expenses are directly attributable to diving.

As such, these estimates potentially reflect an upper-bound, and more detailed data is necessary to refine these figures further.

### Box A: Diving vs. non-diving tourists

The Tourism and Events Queensland (TEQ) *Recreational Dive and Snorkel Market Summary 2007* provides an insight into the stay and spending differences between diving and non-diving tourists.

**Domestic** dive tourists stayed only slightly longer than non-diving tourists, but spent almost three times as much: \$2157 per trip vs. \$762 per trip.

**International** dive tourist's holidays in Australia are 30% longer than non-diving tourists, and they spend 80% more than non-diving tourists on average (\$4949 vs. \$2765 per trip).

---

## TOTAL DIVE RELATED SPENDING

---

An estimate of dive related spending in Australia is therefore calculated as the sum of our Club Diving, Domestic Tourist and International Tourist estimates:

$$\begin{aligned} \text{Dive industry} &= \$125\text{m} + \$406\text{m} + \$1,669\text{m} \\ &= \mathbf{\$2.2\text{bn}} \end{aligned}$$

---

## CONTRIBUTION TO THE AUSTRALIAN ECONOMY

---

In 2013, Tourism Research Australia (TRA)<sup>2</sup>, based on ABS 2008–09 input-output tables, estimated the Tourism Multiplier to be 1.9. We have applied this multiplier to the domestic and international tourist figures.

We have chosen to apply the retail multiplier to Club Diver spending, since most clubs tend to be associated with Dive Retail outlets. TRA report that the retail multiplier is 1.7.

The total economic contribution (E.C.) is therefore potentially:

$$\begin{aligned} \text{E.C.} &= \textit{Tourism Multiplier} \times (\textit{Domestic and International tourist spend}) \\ &\quad + \textit{Retail Multiplier} \times \textit{Club Diver spend} \\ &= 1.9 \times (406\text{m} + 1,669\text{m}) + 1.7 \times 125\text{m} \\ &= \mathbf{\$4.2\text{bn}} \end{aligned}$$

---

## STATE ESTIMATES

---

The size of the Dive Industry in each State is calculated top down as follows:

$$\begin{aligned} \textit{State Spend} &= \textit{Total Club Diver Spend} \times \textit{State share of club divers} \\ &\quad + \textit{Total Domestic Tourists Spend} \times \textit{State share of domestic tourists} \\ &\quad + \textit{Total International Tourists Spend} \times \textit{State share of Int'l tourists} \end{aligned}$$

The Club Diver State share comes from the 2010 Australian Sport's Commission *Participation in Exercise, Recreation and Sport Survey* which has data on how many people in each state dove with a club or association in the past year.

The tourism shares come from TRA data.<sup>3</sup> Regional breakdowns are available for the National Visitor Survey, but not the International Visitor Survey.

We have therefore assumed that international tourists follow the same state distribution as domestic tourists – that is, they dive in similar destinations in similar proportions.

---

<sup>2</sup> *Tourism's Contribution to the Australian Economy, 1997–98 to 2011–12*, Tourism Research Australia, Canberra.

<sup>3</sup> Tourism Research Australia, 2015, *Pers. Comms.*

This may be a strong assumption, and domestic tourists may be more likely to dive closer to home, and international tourists more likely to dive at signature tourism destinations – such as the Great Barrier Reef and Sydney Harbour. International dive tourism may also have more seasonal variation than domestic dive tourism (if so year-round dive destinations like those in Queensland may be under-represented).

However in the absence of more detailed data, we consider distributing international tourism in line with domestic tourism a workable assumption. This methodology yields the following estimates:

**Table 3. Estimated dive related spending by state.**

State	Dive Spend
NSW	\$513m
QLD	\$951m
<i>Nth Qld*</i>	<i>\$462m</i>
WA	\$446m
Other	\$289m

\* figure excludes club divers

Note, that the *ERASS* does not provide estimates for North QLD the way the *NVS* does. The estimates for North Queensland therefore are for domestic and international tourists only.

## CONTRIBUTIONS TO GROSS STATE PRODUCT

The contributions to Gross State Product (GSP) apply the same multipliers used earlier. In this way the sum of state contributions is forced to equal to the national contribution.

**Table 4. Estimated dive related contribution to gross state product.**

State	Contribution to GSP
NSW	\$969m
QLD	\$1,803m
<i>Nth Qld*</i>	<i>\$877m</i>
WA	\$843m
Other	\$541m

\* figure excludes club divers

---

## CONCLUDING REMARKS

---

There is much scope for more research and insight into the recreational Scuba dive industry in Australia. These estimates, based on the best available data, highlight the important contribution that recreational scuba diving currently makes to the Australian economy.

While the bulk of dive activity seems focused in NSW, QLD and WA, more research is needed to refine these estimates and provide finer scale regional data on the current and potential economic activity generated by recreational diving. This information is critical to ensuring that Governments are able to make decisions that support and provide for the future growth of the Australian recreational diving industry.

For example KPMG estimate that the establishment of the new Coral Sea Marine Reserve could provide for growth in the Coral Sea dive tourism sector of up to 150% and increase direct sales by \$9 million.<sup>4</sup> Equally the new marine sanctuaries established within the Ngari Capes Marine Park and Geographe Bay and Two Rocks Marine Reserves in Western Australia are expected to create new high quality dive sites, there by increasing the regional economic infrastructure for recreational diving.<sup>5, 6, 7</sup> Examples of current Government planning processes that could benefit from finer scale data on recreational diving include:

- The NSW Government's proposal to establish a Sydney Harbour Marine Park.
- The Federal Government's review of Commonwealth Marine Reserves.
- The West Australian Government's four proposed new marine parks, Roebuck Bay, Horizontal Falls, North Kimberley and Dampier Archipelago.
- The West Australian Government's reviews of the management plans for Ningaloo and Rowley Shoals.

More accurate, higher definition estimates of industry value may not be prohibitively difficult or expensive to obtain. Ideally, estimates would be built 'bottom up', with direct measures of spending from individual dive locations. This could potentially be achieved through regular surveys of dive retail centres to capture domestic diving activity, and surveys of tourism operators to capture tourist dives.

This is the approach currently being developed in the United States, where the Dive Industry Foundation has been running an industry wide survey of retail dive centres since 2002.<sup>8</sup>

While such an approach is reliant on cooperation from dive industry businesses and professionals, in an age of digital record keeping the time and effort required to extract the relevant data from the 'ore' of business records may not be onerous. After an initial push to create and communicate the infrastructure that would support the collection and collation of the relevant data, the process could then effectively be automated.

---

<sup>4</sup> KPMG, 2010. *Economic analysis of a Coral Sea Marine Park*, KPMG Econtech.

<sup>5</sup> The Allen Consulting Group, 2009. *The economics of marine protected areas*, The Allen Consulting Group, Melbourne, Victoria.

<sup>6</sup> Tourism Council WA, 2011. Submission to the Draft Commonwealth Marine Reserve Network Proposal for the South-west Marine Region.

<sup>7</sup> Western Australian SCUBA Diving Industry, 2011. Submission to the Draft Commonwealth Marine Reserve Network Proposal for the South-west Marine Region.

<sup>8</sup> See <https://diveindustrynews.wordpress.com/retail-page/retail-profile/> for more information.

A relatively small amount of upfront investment and effort could potentially create a powerful ongoing resource. It would enable the dive industry, both nationally, but also at specific locations and regions to quantify their value to the community, and to ensure they are properly represented in discussions around issues that might effect diving or their industry. It would also enable the industry to track, in relatively real time, the impact of government policy changes – such as the introduction of a marine park, or the introduction of no-take zones.

## RECOMMENDATIONS

---

- 1. Scoping study to identify what data could possibly be extracted from current business records at retail dive centres and dive tourism operators.**
- 2. Consultation with dive industry to determine what data is most useful to them, and most relevant to their discussions.**
- 3. Pilot survey in a specific location – e.g. for example Sydney Harbour, the Great Barrier Reef, the Coral Sea, Ningaloo or Geographe Bay.**