Senate Standing Committee on Environment and Communications
Legislation Committee
Answers to questions on notice
Sustainability, Environment, Water, Population and Communities portfolio
Supplementary Budget Estimates, October 2012

Program: Division or Agency:	GBRMPA	**Question No:**	269
Topic:	2011/12 revenue streams generated by licensing and enforcement in the GBRMPA		
Proof Hansard Page and Date or Written Question:	Written		

Senator Ian Macdonald asked:

1. What were the total revenue streams generated by licensing and enforcement in the GBRMPA in 2011/12?

2. What are the total estimated revenue streams to be generated by licensing and enforcement in the GBRMPA and extended Marine Park Zones in 2012/13?

3. What are the total estimated revenue streams to be generated by licensing and enforcement in the GBRMPA and extended Marine Park Zones in 2013/14?

4. What was the cost of enforcement in the GBRMPA area and associated Marine Parks in 2011/12?

5. What was the projected cost of enforcement in the GBRMPA area and associated Marine Parks for 2012/13?

6. What was the estimated projected cost of enforcement in the GBRMPA area and associated Marine Parks for 2013/14?

Answer:

1. Licensing revenue received by the Great Barrier Reef Marine Park Authority in 2011/12 was $8,529,852. This is generated from the Great Barrier Reef Marine Park, including its Commonwealth Islands. This includes permit application assessment fees, the environmental management charge for tourist visits to the reef. It also includes rent from island leases which is retained by the Department of Finance and Deregulation and not the Great Barrier Reef Marine Park Authority.

2. The Great Barrier Reef Marine Park Authority has predicted that it will generate $5,300,000 in licensing revenue in 2012/13 from the Great Barrier Reef Marine Park. This includes permit application assessment fees, the environmental management charge for tourist visits to the reef. It also includes rent from island leases which is retained by the Department of Finance and Deregulation and not the Great Barrier Reef Marine Park Authority.

   The Great Barrier Reef Marine Park Authority has predicted to the Department of Finance and Deregulation that it will collect $25,000 in fines in 2012/13 related to the Great Barrier Reef Marine Park. It is not possible to predict the enforcement generated revenue for 2012/13, most of which is determined by the Courts.

The reduction in 2012/13 occurs because the Environmental Management Charge on tourist visitation to the Reef was reduced from $5.50 per person/day to $2.50. This reduction was offset by government appropriation to maintain GBRMPA's overall funding level.

3. The Great Barrier Reef Marine Park Authority has predicted that it will generate $5,300,000 in licensing revenue in 2013/14 from the Great Barrier Reef Marine Park. This includes permit application assessment fees, the environmental management charge for tourist visits to the reef. It also includes rent from island leases which is retained by the Department of Finance and Deregulation and not the Great Barrier Reef Marine Park Authority.

   The Great Barrier Reef Marine Park Authority has predicted to the Department of Finance and Deregulation that it will collect $25,000 in fines in 2013/14 related to the Great Barrier Reef Marine Park. It is not possible to predict the enforcement generated revenue for 2013/14, most of which is determined by the Courts.

4. The Great Barrier Reef Marine Park Authority spent $3,338,128 on dedicated surveillance and enforcement in the 2011/12 financial year in the Great Barrier Reef World Heritage Area. This was funded through the joint Great Barrier Reef Field Management Program with the Queensland Government.

   In addition to the dedicated Great Barrier Reef Marine Park Authority effort, the following Commonwealth and State agencies undertake surveillance and enforcement activity within the Great Barrier Reef Region:

- Border Protection Command (Commonwealth);
- Australian Maritime Safety Authority (Commonwealth);
- Australian Federal Police (Commonwealth);
- Queensland Parks and Wildlife Service (State);
- Queensland Boating and Fisheries Patrol (State); and
- Queensland Police Service (State).

5. The Great Barrier Reef Marine Park Authority has an allocation of $3,749,210 for dedicated surveillance and enforcement in the 2012/13 financial year in the Great Barrier Reef World Heritage Area. This is funded through the joint Great Barrier Reef Field Management Program with the Queensland Government.

6. In the 2013/14 financial year the Great Barrier Reef Marine Park Authority anticipates a similar allocation to that of 2012/13 for dedicated surveillance and enforcement in the Great Barrier Reef World Heritage Area. This will be funded through the joint Great Barrier Reef Field Management Program with the Queensland Government.

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Program: Division or Agency:	GBRMPA	**Question No:**	270
Topic:	Great Barrier Reef strategic assessment		
Proof Hansard Page and Date or Written Question:	Written		

Senator Waters asked:

1. Does GBRMPA agree that the development of new ports or other types of large infrastructure, ahead of addressing demand through strategic planning would
   a. "create a significant and largely irreversible negative impact" on the GBRWHA and
   b. undermine the effectiveness of the Strategic Assessment?
2. What documents were prepared in response to these (and other similar) statements from UNESCO?
3. In developing the terms of reference for the Strategic Assessment, did GBRMPA advise stopping the clock on new development approvals pending completion of the Strategic Assessment?
4. If yes, did GBRMPA make a recommendation to amend the terms of reference in order to address individual approvals?
5. What was the response to that recommendation?
6. Did GBRMPA recommend approval of the T3 development at Abbot Point?
7. Despite the large number of submissions relating to individual approvals, the GBRMPA consultation report does not have any response to this issue. Provide details of any documents prepared in relation to this issue as part of the finalisation of the terms of reference.

Answer:

1. No. The Great Barrier Reef Marine Park Authority (GBRMPA) is satisfied that appropriate measures are in place to ensure that development does not have unacceptable impacts on the Great Barrier Reef World Heritage Area and will not undermine the effectiveness of the Strategic Assessment.
2. The Department of Sustainability, Environment, Water, Population and Communities (the department) is responsible for the preparation of Australia's State Party Report.
3. No.
4. Not applicable.
5. Not applicable.

6. It is not the GBRMPA’s role to recommend approval of projects.

7. No, documents were prepared beyond the submission’s report. The final terms of reference were amended to include the following statement: "prior to finalisation of the comprehensive strategic assessment, the Australian and Queensland governments will continue to apply high environmental standards when considering development proposals that may affect the Great Barrier Reef World Heritage Area."

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Program: Division or Agency:	GBRMPA	**Question No:**	271
Topic:	Snubfin dolphins		
Proof Hansard Page and Date or Written Question:	Written		

Senator Waters asked:

1. Is GBRMPA undertaking or commissioning any research into the snub fin dolphin? If yes, please describe the research or other work being done, when it is likely to be completed and what funding has been allocated to the research.

Answer:

1. The Great Barrier Reef Marine Park Authority is not directly undertaking or has commissioned current research into the snubfin dolphin.

   We are, however, involved in the National Environmental Research Program (NERP) and are aware of two research projects currently being conducted on Australian snubfin dolphins within the Great Barrier Reef World Heritage Area (GBRWHA).

   The first is funded under the NERP, headed by Professor Helene Marsh and Dr Mark Hamann from James Cook University, to develop an understanding of the distribution and status of inshore dolphins in the northern GBRWHA. The key objectives of this project are to inform an assessment of the conservation status of coastal dolphins in the northern Great Barrier Reef World Heritage Area by addressing:

- What is the distribution and abundance of inshore dolphin species in the northern coast of the GBRWHA?
- How does distribution relate to coastal habitat type?
- What are the threats to inshore dolphins in the northern GBRWHA?

   This project commenced in July 2012 and is part of a wider project on marine species in the GBRWHA that will receive $750,000 (GST exclusive) between 2011 and December 2014.

   The second project is a marine megafauna survey of the Fitzroy River conducted by Dr Daniele Cagnazzi from Southern Cross University. This project has received funding of $105,000.

   We are also aware that there are other projects being conducted on Australian snubfin dolphins in the Northern Territory and Western Australia.

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Program: Division or Agency:	GBRMPA	**Question No:**	272
Topic:	GBRMPA - 2012-13 Financial Year Surveillance and Enforcement budget		
Proof Hansard Page and Date or Written Question:	93 (15/10/12)		

Senator Ian Macdonald asked:

1. On notice, could I get you to again indicate what your current financial year forecast or budgeting is for surveillance and enforcement, and where those funds come from? I understand that Queensland makes some contribution—is that correct?

Answer:

1. The Great Barrier Reef Marine Park Authority (GBRMPA) has an allocation of $3,749,210 for dedicated surveillance and enforcement in the 2012-13 financial year which is funded through the joint Great Barrier Reef Field Management Program with the Queensland Government.

   The Australian and Queensland governments will each contribute $8,372,000 in the 2012-13 financial year to the joint Great Barrier Reef Field Management Program.

   In addition to the dedicated GBRMPA effort, the following Commonwealth and State agencies undertake surveillance and enforcement activity within the Great Barrier Reef Region:

- Border Protection Command (Commonwealth);
- Australian Maritime Safety Authority (Commonwealth);
- Australian Federal Police (Commonwealth);
- Queensland Parks and Wildlife Service (State);
- Queensland Boating and Fisheries Patrol (State); and
- Queensland Police Service (State).

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Program: Division or Agency:	GBRMPA	**Question No:**	273
Topic:	Abbott Point T3 Project		
Proof Hansard Page and Date	94 (16/10/12)		
or Written Question:			

Senator Waters asked:

Senator WATERS: So you did express your opinions on the impact of the values of the World Heritage area from T3 going ahead.

Dr Reichelt: Yes—

Senator WATERS: What was the substance of that advice to the minister or that opinion that you expressed?

Dr Reichelt: I do not have those with me.

Senator WATERS: Perhaps you could take that on notice.

Answer:

The T3 terminal project at Abbot Point was originally called the X110 expansion. The X110 project included onshore and offshore components and dredging and disposal. In October 2008, the Great Barrier Reef Marie Park Authority provided advice in relation to assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) to the then titled Department of the Environment, Water, Heritage and the Arts stating that the "expanded Abbot Point Coal Terminal (X110) may affect matters of National Environmental Significance". The advice raised potential impacts associated with:

- increases in turbidity associated with dredging and disposal;
- noise on animal behaviour;
- the Caley Valley Wetlands;
- the surrounding environment and groundwater, and
- the associated increases in shipping and the impacts associated with the increases in greenhouse gases.

On 8 August 2011, the X110 expansion project was officially varied under the EPBC Act and became the T3 terminal project. The variation included removing the dredging and dumping component of the original X110 expansion project to another proposal by North Queensland Bulk Ports to incorporate all the dredging requirements for the port areas (for all terminals), under EPBC 2011/6213.

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Program: Division or Agency:	GBRMPA	**Question No:**	274
Topic:	Receipt of funds from proponents		
Proof Hansard Page and Date or Written Question:	92 (15/10/12)		

Senator Waters asked:

1. Could you take those on notice and provide the details of those contributions to date, including any information, if you have it, as to whether that is expected in future, just from your knowledge base?

Answer:

1. Four approvals under the *Environment Protection and Biodiversity Conservation Act 1999* require the proponents to use offsets for activities to support field management of the Great Barrier Reef: Australia Pacific LNG Pty Limited EPBC 2009/4977; Queensland Gas Company Limited and BG International Limited EPBC 2008/4402; Santos Limited and Petronas Australia Pty Limited EPBC 2008/4057; Hancock Coal Pty. Limited EPBC 2008/4468.

- Australia Pacific LNG Pty Limited and Queensland Gas Company Limited / BG International Limited are required to develop their indirect offsets strategy in consultation with the Great Barrier Reef Marine Park Authority (GBRMPA).

- Santos is required to provide their indirect offsets to the Australian and Queensland government's joint program of field management for the Great Barrier Reef World Heritage Area.

- Hancock Coal is to provide their offsets to the Great Barrier Reef Field Management Program and the GBRMPA.

- No contributions have been received to date.

- The offset funding for the three LNG approvals is required, via the approval conditions, to be provided for the life of the project; Hancock Coal's approval condition states the offsets are to be provided from construction until the expiry of the approval or cessation of operations, whichever is sooner.

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Program: Division or Agency:	GBRMPA	**Question No:**	275
Topic:	Reef In Brief publication		
Proof Hansard Page and Date	95		
or Written Question:	(16/10/12)		

Senator Cameron asked:

I am having a look at your *Reef in Brief* publication and there is a Mr Terry Hudson from Southern Cross Sailing Adventures under the heading 'Climate action good for business'. Please explain what that report is about.

Answer:

The article that appeared in the Great Barrier Reef Marine Park Authority's (GBRMPA) monthly e-newsletter shows how marine tourism operators are taking action on climate change as part of wider efforts to help build the resilience of the Great Barrier Reef. Terry Hudson's Southern Cross Sailing Adventures is an example of a high standard tourism operation which has achieved ECO certified standards for business and environmental management, as well as interpretation and education.

Mr Hudson is one of 58 tourism operators, who carry more than 60 per cent of all visitors who travel to the Great Barrier Reef, that are now part of GBRMPA's high standard tourism operators program which began in 2004. These operators are independently certified by Ecotourism Australia at the Ecotourism or Advanced Ecotourism levels.

GBRMPA actively rewards these operators and provides incentives for others in the sector to improve their performance. The major benefit is an extended permit term of 15 years for tourism program permits.

Terry Hudson's Whitsunday tourism operation – along with other enterprises – is also using a carbon emissions calculator developed by GBRMPA. This online tool allows operators to easily calculate their carbon footprint, and has served as the basis for a similar tool for the commercial fishing industry.

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Program: Division or Agency:	GBRMPA	**Question No:**	276
Topic:	Proceedings of the National Academy of Sciences of the USA study of the Great Barrier Reef – critique of the study		
Proof Hansard Page and Date or Written Question:	Written		

Senator Boswell asked:

1. I also refer to the critique of the study by Walter Starck (with assistance from Dr. Bob Carter) entitled, "Reef Alarmists Jump The Shark, published 9 October 2012 on the "Watts Up With That" (WUWT) website – the world's most viewed site on global warming and climate change. Is the Environment Dept aware of this critique of the PNAS study? If so, what were the Dept's initial impressions?

2. The critique reveals how the PNAS study presents the results of its surveys of coral cover over the last 27 years with great precision (to hundredths of a per cent) without any qualifying explanation as to the high margins of error that such visual surveys contain, which are also highly surveyor-dependent (based on experience and learned expectations). Is the Environment Dept concerned by this lack of scientific and statistical transparency?

3. The critique also reveals how, "… the reported sudden decline in coral cover in the last couple of years is almost certain to have been exaggerated by surveys made to assess the damage from severe cyclones crossing the reef in 2009 and 2011, with few of no surveys in unaffected areas in those years."

   If only parts of the reef can be surveyed each year, and survey efforts tend to choose parts of the GBR ravaged by recent cyclones, is it little wonder that overall results of such surveys are so dramatic and alarming, and vulnerable to end-point bias, even manipulation?

4. The PNAS study states that, "Cyclone intensities are increasing with warming ocean temperatures…". Yet as the critique of the study points out, "This statement is unsubstantiated and contrary to available evidence. The most definitive recent studies find no increase in tropical cyclone frequency or intensity. On the GBR, severe cyclone activity for the past century has also been well below the level for the preceding century."

   Is the Environment Dept aware of how quite the world and GBR cyclone activity has been this century relative to the past, contrary to what climate models and consensus has been telling us all along?

5. The PNAS study also states that, “The recent frequency and intensity of mass coral bleaching are of major concern, and are directly attributable to rising atmospheric greenhouse gases.” Yet as the critique of the study points out, “No evidence exists for this claim. The mass-bleaching events of recent decades have coincided with surface water warming resulting from periods of extended calm associated with strong El Nino events. This impedes normal evaporative cooling as well as wave driven mixing. There is no evidence of any increase in the frequency or strength of El Nino events, and climate models project increased wind speeds from warming, not more calms. What is the Dept’s view on the many and varied risks that may contribute to coral bleaching?

6. Why don’t strong La Ninas, which deliver some of the warmest Pacific waters to our GBR (for example, in 2010 11), cause mass coral bleachings?

   Compared with the La Nina boom years for GBR coral (unless damaged by cyclones that are more likely in the area during La Ninas), aren’t the calms of the El Nino years more testing for GBR coral due to: weaker trade winds and evaporation, allowing the build-up of local heating and hot spots near the surface; slightly lower sea levels relative to the La Nina and neutral years, due to the trade winds and currents, exposing or stressing the growth from the boom years; and less flow over of outer and deep Pacific ocean nutrients, again relative to the La Nina boom years?

   For GBR coral, are La Ninas and El Ninos not unlike the rains and droughts that these systems bring to the Australian mainland, causing proliferation in the good seasons and die-backs in the bad?

7. The critique also calls into question the PNAS study’s claim that sedimentation rates and nutrient loads since European settlement have increased 5 to 9 fold, on the basis that the 1870s staring point estimate is dubious?

   Overall, does this study constitute little more than policy based evidence that, with just a little scepticism and scrutiny, raises more questions than it answers – about how science is increasingly being done under public funding nowadays, as opposed to what it is uncovering?

   Might it be just another example of activism and over-reach – a naked grab for attention and further funding in this area that is being increasingly challenged and scrutinised?

8. The critique estimates that the level of government funding across all sources has been around $200 million per year, yet half the coral cover has been lost in that time.

   If the effect of research and restrictions on economic and other practices in relation to the reef is a halving of the coral in a quarter of a century, has the research and restrictions been an abject failure and a terrible waste of time and money?

   If the reef is on such a death spiral, shouldn’t we just withdraw all funding of research, and all enforcement of restrictions, on it and just enjoy the reef to the fullest in its last few palliative years? Or are there things we are missing here?

Answer:

1. The article referred to is very similar to previous opinion pieces written by Dr Starck in which he disagrees with a range of published science relating to climate change, fisheries management and marine protected areas among other subjects. This opinion piece, like its predecessors, is not peer reviewed, not published in the scientific literature, and relies on a number of unfounded assumptions. In contrast, the science Dr Starck criticises is independently peer reviewed, published in one of most highly respected scientific journals and based on the rigorous collection of long term data.

2. There are very strict operational procedures that minimise the error of these surveys, including the error potentially generated by different observers. This work, including the methods used to generate the data, has been independently peer reviewed by experts in the field and published in one of the most respected scientific journals.

3. Although it is possible to sample only a few percent of all reefs in any one year, the spread of the surveying extends over nearly the full length and breadth of the Great Barrier Reef in every year. For the PNAS study the database was screened to extract the most unbiased set of observations to ensure that the analysis was based upon even coverage of reefs in all regions across all years. The results were generated by a statistically designed, rigorous, long-term monitoring program explicitly designed to track long term changes in environmental health of the Great Barrier Reef.

4. Studies suggest the number of cyclones in the Australian region may decrease in the future as the climate changes. However, cyclone intensities are generally expected to increase as the oceans warm. While in future there may be fewer cyclones per year overall, average maximum wind speed is expected to be higher, meaning a larger proportion of cyclones will be severe. This prediction is supported by a range of modelling studies.

5. There are many mechanisms that can lead to coral bleaching, which is a clear sign of environmental stress in coral colonies. Bleaching can occur as a result of lowered salinity, exposure due to extreme low tides, elevated temperatures for protracted periods and bacterial infections or a combination of one or more of these factors. Two mass bleaching events have been extensively documented on the Great Barrier Reef in 1998 and 2002 and a localised event in the Southern Great Barrier Reef in 2006. Lower level bleaching has been observed in a range of other years during the peak of summer.

   The observational record of coral bleaching on reefs around the world indicates that there is an increasing risk of widespread bleaching events. To date, the Great Barrier Reef has fared relatively well in comparison to other coral reef ecosystems, in part because of the ameliorating effects of the trade winds and cloud cover generated by the summer monsoon. Nevertheless the Intergovernmental Panel on Climate Change based temperature forecasts for the rest of this century indicate an increasing risk of widespread coral bleaching occurring on a more frequent basis with legacy consequences that impede coral growth, reproduction and recovery from other impacts such as tropical cyclones.

6. Strong La Nina weather periods do not tend to cause heat-induced mass coral bleaching because the cloud cover associated with the monsoon trough ameliorates warm temperatures and moderates the amount of light stress and usually results in cooler waters over the Great Barrier Reef compared with waters in the Coral Sea.

Even the fastest growing corals species take several years to become adults and produce offspring whereas the largest slow growing coral species can take decades to centuries. Hence, the issue is how frequently and severely these highly dynamic systems are disturbed, as discussed extensively in the Proceedings of the National Academy of Sciences of the United States of America study.

7. The science that demonstrates that the loads of nutrients and sediment have increased significantly since European settlement is now based on multiple lines of evidence. These lines of evidence were brought together into a synthesis of evidence to support the Scientific Consensus Statement on Water Quality in the Great Barrier Reef and published in 2008. This Consensus Statement was developed by leading and well-published scientists working across a range of disciplines.

8. The management of the Great Barrier Reef Marine Park and the science that underpins it are widely recognised as world leading. None-the-less that programme of management and science is dealing with significant regional (water quality) and global (climate change) issues and it is not possible to protect the ecosystem from all forms of impact. Although the ecosystem has suffered impacts from various sources, most notably extreme weather in recent years, it is still resilient and has the capacity to bounce back if there is a hiatus in extreme weather events in the short to medium term and if we continue to protect biodiversity and improve water quality.