



Australian Government



AUSTRALIAN INSTITUTE
OF MARINE SCIENCE

TOWNSVILLE

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PERTH

5 October 2018

Ms Christine McDonald
Secretary of the Senate Environment and Communications References Committee
Department of the Senate, Parliament House,
Canberra ACT 2600

Dear Ms McDonald

**RE: QUESTIONS ON NOTICE FROM 21 SEPTEMBER 2018 PUBLIC HEARING OF
THE INQUIRY INTO GREAT BARRIER REEF 2050 PARTNERSHIP PROGRAM**

The Australian Institute of Marine Science (AIMS) is pleased to respond to questions on notice taken during the 21 September 2018 public appearance of AIMS at the Senate Environment and Communications References Committee Inquiry regarding the Great Barrier Reef 2050 Partnership Program.

Question: *What would it cost AIMS in additional overheads to manage an additional \$100m (over 6 years) for reef adaptation science?*

Answer: Additional overheads for AIMS to manage this would be in the range of 4-5 per cent of the \$100m which includes all governance, legal, IT, financial, contracting and human resources processes but excludes Program and Project Management.

Question: *When did AIMS first understand the Great Barrier Reef (GBR) was at risk from bleaching due to climate change?*

Answer: Although AIMS had been aware of the potential implications of climate change, it was the mass coral bleaching event of 1998, which affected approximately 40 per cent of the GBR, that prompted an initial tentative link between global warming and the occurrence of these events, i.e. that there were potentially regional consequences of global warming for tropical coral reefs. The 1998 GBR bleaching event was reported in AIMS 1998-1999 Annual Report.

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Subsequently, in response to a request from the Great Barrier Reef Marine Park Authority (GBRMPA), AIMS prepared a report *Sea Surface Temperature on the Great Barrier Reef: a Contribution to the Study of Coral Bleaching (Lough JM, 1999)*ⁱ. The study showed that: sea surface temperatures (SSTs) on the GBR in 1998 were the warmest in at least the past 95 years of observational records; that SST anomalies in 1997-1998 on the GBR were typical of an El Niño event; and that SSTs on the GBR had significantly warmed over the previous century. It concluded that “if the observed SST rise on the GBR is a response to the enhanced greenhouse effect then the frequency of warm temperature extremes is likely to continue to increase. Such an increase could result in an increasing risk of coral bleaching events and a reduction in the time for coral reefs to recover from bleaching events. In the absence of adaptive changes by coral communities this is also likely to increase reefs’ vulnerability to other natural and unnatural stresses”. This report was noted in AIMS 1999-2000 Annual Report.

Yours sincerely

Basil Ahyick
Acting CEO

Attachment A: Uncorrected proof of evidence: Hansard, Senate Environment and Communications References Committee, Great Barrier Reef 2050 Partnership Program, Friday 21 September 2018.

Hansard, Senate Environment and Communications References Committee, Great Barrier Reef 2050 Partnership Program, Friday 21 September 2018

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CHAIR: Could I ask something specifically in relation to your response a second ago, Dr Hardisty, about whether AIMS was set up to administer that kind of funding. You said that if you had \$100 million on reef adaptation - I can't remember exactly what you said - you absolutely could administer that. Could you give the committee - I also asked GBRMPA the same question - an idea of what kind of overheads your administration would be on something like \$100 million. Do you have those kinds of metrics at the moment for the projects that you manage?

Dr Hardisty: I'd have to take that one on notice and work it out -

CHAIR: Okay, if you could.

Dr Hardisty: Because it would be an aggregation on top of our already existing programs and systems. Just doing the math: 60 million a year total budget, 100 million over six years, that's 18 a year, so it's that sort of proportion and uplift over our current capability. It's a fraction of our current -

CHAIR: I think GBRMPA had to go away and do their sums as well. Could you take on notice what your overheads are for administering the kind of projects you are working on already around reef adaptation and restoration?

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CHAIR: Could I just ask you about one of the points you made there about if we acted 30 years ago. That would have been 1988. Did we know back then that corals were likely to bleach? Did we know climate change was a serious threat back in 1988?

Dr Hardisty: I'd have to check on that because back in 1988 I wasn't involved in marine science whatsoever.

CHAIR: Mr Mead?

Mr Mead: I'm trying to think when the first mass bleaching event was. I think it was slightly later than that.

Dr Hardisty: 1998

Chair: 1998 was the first one here. I think there might have been -

Dr Hardisty: I'm not going to hazard -

CHAIR: Could you take that on notice? I think that in a previous inquiry we had a witness flown in from - was it One Tree Island? It was a research station you guys use for monitoring water temperature in the Great Barrier Reef

1. ⁱ Lough JM (1999) *Sea Surface Temperature on the Great Barrier Reef: a Contribution to the Study of Coral Bleaching*. Research Publication No. 57, GBRMPA, AIMS, Townsville, Australia, 31 pp.