

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

Program: Division or Agency: 1: BOM **Question No:** 033
Topic: William Kininmonth – media reports
Proof Hansard Page and Date 85-86 (13/2/12)
or Written Question:

Senator Cameron asked:

CHAIR: During his employment with BOM, would Mr Kininmonth be described as an expert in climatology?

Dr Canterford: I would have to take that on notice. I do know of him and I did work with him, not directly, in the early part of my career and I do know that he was in charge of the National Climate Centre at that stage. He was overseeing a collection of data.

CHAIR: Is overseeing a collection of data the equivalent of a research scientist?

Dr Canterford: I would prefer not to comment.

CHAIR: It is a simple question. It is a very simple question, I think. Is that the equivalent of a—

Dr Vertessy: I believe there has been a misreporting in the media about the function that Mr Kininmonth fulfilled in the bureau. It has been said that he was heading up the climate change research part of the bureau. That was not the case. Mr Kininmonth was in charge of data analysis for climatology in an operational part of the agency. There is a different group of people typically in the research arm who are responsible for climate change studies and the attribution of climate change to certain things.

CHAIR: So he is more administrative than research?

Dr Vertessy: I would not say it is administrative but it was not researching the causes of climate change or the extent of climate change.

CHAIR: It is still being put that he is all of these things that I have just described. And he is on what is called a 'scientific advisory panel' for the Australian Climate Science Coalition. It says that he was a weather forecaster and worked in research and applied studies. Is that correct?

Dr Vertessy: I need to confirm that.

CHAIR: I am happy for you to take it on notice.

Answer:

Mr Kininmonth was a meteorologist with the Bureau of Meteorology who went on to head the Bureau's National Climate Centre (NCC) from 1986 to 1998. Work undertaken in NCC at that time included climate database management and climate monitoring activities; including improving the quality of datasets for monitoring climate variability and change; and developing monitoring processes and methodologies. This work recorded that Australia had significantly warmed since 1910. Mr Kininmonth was acknowledged for his expertise in climatology.

Overseeing a collection of data is not the equivalent of the work of a research scientist. Much climate research has focussed on the attribution of observed variations or changes in climate to environmental factors, for example the linking of observed climate change to Carbon Dioxide emissions/concentrations.

Earlier in his career with the Bureau, Mr Kininmonth worked as a weather forecaster in Darwin and subsequently in more senior meteorologist positions with the Research and Development Branch where the focus was on meteorological investigations and research to support operational products and services.

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Program: Division or Agency: 1: BOM **Question No:** 034
Topic: Reports prepared by Mr Kininmonth
Proof Hansard Page and Date 86 (13/2/12)
or Written Question:

Senator Cameron asked:

CHAIR: He is also purported to have coordinated the international review of an El Nino period. Was that part of his work with the BOM? Can you check that for me?

Dr Vertessy: I am sorry, Chair, I am not familiar with that but I would be happy to look that up.

CHAIR: Also, he prepared a World Meteorological Organisation publication called Climate into the 21st century. Was that part of his work with the BOM?

Dr Canterford: I have not got access to his CV so I would not be aware of his history.

CHAIR: Could you take that on notice, because there has been a fair bit of debate?

Answer:

The work referred to was not undertaken as part of his employment with the Bureau of Meteorology.

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Program: Division or Agency: 1: BOM **Question No:** 035
Topic: BOM – staff reduction
Proof Hansard Page and Date Written
or Written Question:

Senator Macdonald asked:

1. Why has there been a reduction of five staff in the Bureau of Meteorology field office in Cairns between 08/12/10 to 08/12/11?
2. Why has there been a reduction of two staff in the Bureau of Meteorology field office in Townsville between 08/12/10 to 08/12/11?
3. What job positions have been cut in the Townsville and Cairns offices since December 2010?
4. Did the staff members cut from the Townsville and Cairns field offices receive redundancy packages or were they relocated to other offices?
5. With good communication why is it that that cut back could not occur in capital cities with the work being done in regional areas?
6. What is the Next Generation Forecast and Warning System?
7. Has a decision been made as to whether staff will be cut with the introduction of the Next Generation Forecast and Warning System next year?

Answer:

1. The actual net reduction in permanent staff at Cairns over the year between 08/12/10 and 08/12/11 was one officer. The figures provided for Cairns in response to the previous Question on Notice (QoN 11-1484) were extracted as staff numbers at a specific date – 8 December in each year. This type of snapshot may reflect short term changes in staff numbers compared with the longer-term situation. In this case, the staff numbers at Cairns in December 2010 include staff who provide leave relief at Cairns and Townsville, and the staff numbers in December 2011 include one short-term vacancy. Together these factors bring about an apparent reduction of four staff over the intervening year.

The number of permanent staff working at Cairns has been relatively constant in recent years and in 2010 was 13. In 2011 the number across all classifications was approximately the same, except for the reduction of one observer position, resulting in a total of 12.

2. There has been no net reduction in permanent staff at Townsville over the year between 08/12/10 and 08/12/11. The figures provided for Townsville in response to the previous Question on Notice (1484) were extracted as staff numbers at a specific date, 8 December in each year. As for question 1, these snapshots can sometimes reflect short term changes in numbers compared with the longer-term situation. In this instance, the staff numbers at Townsville in December 2010 include two staff who were transitioning to Willis Island. The net permanent number of staff in December 2010 was 12. In 2011 the number was the same.
3. Since December 2010 Cairns has had a net reduction of one permanent observer position, changing from 13 to 12. Townsville has had no net reduction, remaining at 12.
4. No staff members at Cairns or Townsville have been offered a redundancy. The reduction at Cairns was the result of a staff member successfully applying for another position off station. Townsville staffing arrangements have not changed since 2010.
5. Changes at the regional forecasting stations are usually driven by external funding and requirements from the aviation industry and defence, and decisions by staff to move.

It is important to maintain as far as possible staffing at capital cities because there is a need for a sufficient pool of forecasters to enable continued operations and provision of services during critical weather events, such as tropical cyclones and severe thunderstorms.

6. The Next Generation Forecast and Warning System (NexGenFWS) is a more efficient and flexible forecast process, which has the main objective of delivering seven-day forecasts for 650 locations across Australia, giving regional communities access to the same level of forecasting service as the capital cities. The system also enables the provision of forecast information for any geographic location via maps on the Bureau's website.

NexGenFWS is currently operational in Victoria, NSW, Tasmania, South Australia and is planned for implementation in WA in 2012, in Qld in 2013 and NT in 2014. In the states where it has been implemented the regional community response has been positive and strong.

7. In states where the system has been introduced permanent forecaster numbers in the capital city forecasting centres have not changed, but services have increased significantly. No decisions on staffing numbers have been made in relation to the introduction of this system in the remaining states and Territory.

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Program: Division or Agency: 1: BOM **Question No:** 036

Topic: Flood warnings – Northern New South Wales

Proof Hansard Page and Date or Written Question: Written

Senator Williams asked:

I refer to a flood warning bulletin headed “MODERATE TO MAJOR FLOOD WARNING FOR THE NAMOI RIVER AT GUNNEDAH AND DOWNSTREAM AND MINOR FLOOD WARNING FOR THE PEEL RIVER” issued at 9.33am EDT on Sunday the 27th of November , 2011.

Subsequent warnings were issued for the Gwydir River at Gravesend and Mehi River at Moree at 9.54am, and for the Severn and Macintyre Rivers at 1.11pm.

The next flood warning was issued at 7.22am Monday the 28th of November for the Gwydir river at Pallamallawa and the Mehi river at Moree.

1. Why is/was there a 22 hour gap in flood warnings being issued for the Gwydir River, and an 18 hour gap before any further flood bulletin at all was issued for this region?

Answer:

1. In the period between 9.33am Sunday 27 November 2011 and 7.22am Monday 28 November 2011, the Bureau’s Flood Warning Centre in New South Wales issued 11 flood warnings for the Gwydir, Macintyre, Hunter, Bogan, Macleay, and Namoi river systems.

Flood warnings were issued for the Gwydir River system at 2:00am, 4:56am, 9:54am and 9:01pm on the 27 November 2011 and again at 7:22am Monday 28 November 2011. The table below lists the warning headers. The largest gap between warnings on 27 and 28 November for the Gwydir River system was approximately 12 hours between 9:54am and 9:01pm.

All warnings issued also contained a link to water level information that is updated more frequently (1-hourly or 3-hourly depending on location) on the Bureau's website.

The frequency of the issue of flood warnings for New South Wales is agreed by the Bureau of Meteorology with the New South Wales State Emergency Service and is described in the New South Wales SES State Flood Plan.

Generally, flood warnings are issued more frequently during the developing stages of a flood when rain is falling and upstream river levels are rising. Flood warnings are issued on a daily basis for the area when upstream river levels are falling after the flood peak.

Annex 1. Summary of Flood Warnings for the Gwydir River Basin on 27th and 28th November 2011

<i>Warning header and next issue time</i>	<i>Time difference from previous update</i>
<p>MAJOR FLOOD WARNING</p> <p>FOR GWYDIR RIVER AT GRAVESEND AND DOWNSTREAM, AND THE MEHI RIVER AT MOREE.</p> <p>Issued at 2:00 am EDT on Sunday 27 November 2011</p> <p>Flood Warning Number: 10</p> <p>Next Issue:</p> <p>The next warning will be issued by 5am Sunday [27/11/11].</p>	~3 hours
<p>MAJOR FLOOD WARNING</p> <p>FOR GWYDIR RIVER AT GRAVESEND AND DOWNSTREAM, AND THE MEHI RIVER AT MOREE.</p> <p>Issued at 4:56 am EDT on Sunday 27 November 2011</p> <p>Flood Warning Number: 11</p> <p>Next Issue:</p> <p>The next warning will be issued by 10am today [27/11/11].</p>	~3 hours
<p>MODERATE TO MAJOR FLOOD WARNING</p> <p>FOR GWYDIR RIVER AT GRAVESEND AND DOWNSTREAM AND THE MEHI RIVER AT MOREE.</p> <p>Issued at 9:54 am EDT on Sunday 27 November 2011</p> <p>Flood Warning Number: 12</p> <p>Next Issue:</p> <p>The next warning will be issued by 10am Monday.</p>	~5 hours
<p>MODERATE TO MAJOR FLOOD WARNING</p> <p>FOR GWYDIR RIVER AT GRAVESEND AND DOWNSTREAM AND THE MEHI RIVER AT MOREE.</p> <p>Issued at 9:01 pm EDT on Sunday 27 November 2011</p> <p>Flood Warning Number: 13</p> <p>Next Issue:</p> <p>The next warning will be issued by 10am Monday.</p>	~ 12 hours

<p>MODERATE TO MAJOR FLOOD WARNING</p> <p>FOR GWYDIR RIVER AT PALLAMALLAWA AND DOWNSTREAM AND THE MEHI RIVER AT MOREE AND DOWNSTREAM.</p> <p>Issued at 7:22 am EDT on Monday 28 November 2011</p> <p>Flood Warning Number: 14</p> <p>Next Issue:</p> <p>The next warning will be issued by 10am Tuesday.</p>	<p>~9 hours</p>
<p>MODERATE TO MAJOR FLOOD WARNING</p> <p>FOR GWYDIR RIVER AT YARRAMAN BRIDGE AND DOWNSTREAM AND THE MEHI RIVER AT MOREE AND DOWNSTREAM.</p> <p>Issued at 9:56 am EDT on Tuesday 29 November 2011</p> <p>Flood Warning Number: 15</p> <p>Next Issue:</p> <p>The next warning will be issued by 10am Wednesday [30/11/11].</p>	<p>~26 hours</p>

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Program: Division or Agency: 1: BOM **Question No:** 037
Topic: William Kininmonth – role within the Bureau
Proof Hansard Page and Date or Written Question: Written (14/2/12)

Senator Cameron asked:

1. Is William Kininmonth the “former head of climate research at the Australian Bureau of Meteorology”?
2. What position did he hold in BOM?

Answer:

1. No.
2. He was head of the National Climate Centre from 1986 until 1998.

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Program: Division or Agency: 1: BOM **Question No:** 038
Topic: Regional groundwater monitoring
Proof Hansard Page and Date or Written Question: Written

Senator Edwards asked:

1. In 2009-2010 \$56 000 was provided to the Adelaide and Mount Lofty Regional NRM Board (AMLR NRM Board) to upgrade regional groundwater monitoring at 12 existing and 4 proposed sites across the region in 2010.
2. Were you provided with feedback from the NRM Board that this was successfully completed? Can you provide a copy of the feedback you received from the AMLR NRM Board?
3. Were the upgrades completed on time and on budget?
4. What is the data is being used for and does it meet the KPIs for the initial funding hurdle?

Answer:

1. Funding was provided by the Bureau of Meteorology to the Adelaide and Mount Lofty Regional NRM Board (AMLR NRM Board) to purchase data logging equipment for 12 existing bore sites, as well as 4 proposed new sites (16 in total). The Bureau deed covered purchase and installation of equipment, it did not include the drilling of new bores. The total funding sought from the Bureau of Meteorology was \$386,000.

After considering the initial request, the Bureau of Meteorology and the AMLR NRM Board provided \$56,000 and \$20,000 respectively to progress the project. Installation of the equipment, purchased through the Bureau deed, at the 4 new sites was dependent on the AMLR NRM Board sourcing further funding to first drill those 4 bores.

2. Project milestone reports, for 5 milestones, were completed as required by the funding deed. The project was designed and delivered in partnership with the South Australian Department of Water; this ensured good feedback on the project. A copy of the final Milestone 5 report dated 18 June 2010 is at **Attachment A**.
3. The Milestone 5 report itemises the installation of 11 loggers and notes that a 12th logger had not been installed at that time due to technical issues. The 12th logger has since been installed. The final 4 new bores are to be completed in a separate project in partnership with the South Australian Department of Water in 2012-13.
4. The data is being used to monitor the long-term trends in groundwater sustainability in the Adelaide Plains and Mount Lofty Ranges. The use of data loggers at key sites provides consistent and accurate monitoring information which will assist with the management of groundwater quality and quantity. The data is available to the South Australian Department of Water and to the Bureau of Meteorology.

The project has delivered the milestones agreed in the attached funding deed. A public website is being developed (to be hosted on the AMLR NRM Board's website) to make the monitoring data publicly available.

Modernisation & Extension Fund Final Progress Report

PIN: 3SA 04.10	Project title: Establishing a long term groundwater monitoring program in the AMLR region		
Milestone number: Final rept	Milestone Date: March 2012	Milestone payment amount: \$ 0	Project funding: \$56,000 bom
Recipient: Adelaide & Mt Lofty Ranges Natural Resources			

FINANCIAL INFORMATION

- GST exclusive – Please do not include GST in the amounts you are reporting
- Do not round amounts
- Amounts provided should be for the entire Project Period

1. Funding

Cash received from BoM	Recipient Contribution (if any)	Project Generated Income*	Total
\$56,000	\$20,000	N/A – Grant was claimed after expenditure	\$76,000

*Refer to 'Definitions' in the Funding Deed

2. Expenditure

Items	\$ Expended	\$ Total
Employee costs (installation)	20,000	20,000
Travel & general office supplies		
Equipment	56,000	56,000
Other (please specify)		
TOTAL		76,000

3. Balance of Funding

Remaining balance of project funding in recipient's bank account at the time of this report. Refer to 'Keeping of Funds' in the Funding Deed.	\$0
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4. Does the Bank Account utilised for the Funding earn interest? Yes , N/A

PROJECT PERFORMANCE

5. Discuss in detail the operation, mechanisms and processes employed by the Recipient to perform the activities of the Project and achieve the Objectives.

The project was delivered in partnership with the SA Department for Water (DfW). This ensured consistency in the monitoring methodology and equipment with the State monitoring network.

Data from the sites is also managed by DfW via the Obswell website and the combined data is send directly to the Bureau of Meteorology,

6. Discuss in detail the conduct, benefits and outcomes of the Project as a whole and the Project's results and findings.

The project will have a long-term benefit for monitoring the status of the groundwater resource in the Adelaide and Mount Lofty region.

As the network is new, results and findings are not yet discernable however, these will become available in future years as data trends can be determined.

The benefits of the project are:

1. It provides long-term sustainable monitoring of the groundwater resource
2. It assists in monitoring the efficiency of water allocation plan implementation
3. It provides the community and whole of government (including the Bureau of Met.) with high quality information on the status of the groundwater resource, using long-term key reference monitoring sites.

7. Evaluate the Project and include a detailed discussion as to whether the Objectives of the Project were achieved, and if not, an explanation of why any Objectives were not met.

The project has been successful in establishing 12 key, long-term, monitoring reference sites in the Adelaide and Mount Lofty region.

All of the sites were installed in the indentified locations with the exception of one site ADE 191. The well at this location was not suitable for long-term monitoring so a nearby site ADE 190 was installed instead.

The 4 remaining 'new' sites are yet to be constructed, as part of a separate funding program.

The logger equipment has been purchased for these locations however, budget issues have delayed the drilling of the new wells and these will be installed as the budget allows their development. (This was identified in the application and is not within the scope of works for this grant).

8. Other relevant information

The investment in monitoring from this grant will be sustained and protected by the AMLR Board via the operation and maintenance of the equipment as part of the Board's long-term regional monitoring program. These recurrent, maintenance costs are significant and will be met by the Board.