

The Senate
Select Committee into the Scrutiny of Government Budget Measures
ANSWERS TO QUESTIONS TAKEN ON NOTICE
Canberra Public Hearing
7 April 2016

AGENCY/DEPARTMENT: CSIRO

TOPIC: Potential new partners or sources of external revenue

REFERENCE: Written Question Taken on Notice

QUESTION 1:

Were the Business Units that had been identified for significant cuts given an opportunity to identify potential new partners or sources of external revenue between the December and January ET meetings? How long were they given and what was the process?

ANSWER

This was answered at the Hearing of 7th April (page 16 of the *Hansard*) for the case of Land & Water as follows. This answer is also applicable for the other business units.

Senator KIM CARR: I am just interested to know if the reason given to Land and Water for the significant job cuts proposed was a result of the shortfall in this external revenue target.

Mr Roy: We have mentioned in previous testimony, in terms of the deep dive, that we used six criteria. Some of them were related to attractiveness of the forward pipeline and the ability to be able to pay remuneration. It is clear that Land and Water was one of the business units that was struggling with achieving its operating budget that it needed to achieve over the course of the year. I am sure that is what Dr Hardisty was referring to.

...

Senator KIM CARR: So your advice to us is that plenty of opportunity was given to find alternative sources of income—is that the proposition?

Mr Roy: Alternative markets that they could deliver their science into that had an impact.

Senator KIM CARR: You are using this term 'markets'; you are using this term 'customers': these are not terms that we have traditionally used for the CSIRO. So what are these 'markets' that you are referring to?

Mr Roy: Let me provide an example then, Senator. It would be in the order of 12 months ago that we provided some additional funding for Land and Water, under Dr Paul Hardisty's leadership, to try to expand some of their work into India. We saw that as an opportunity to grow the impact of Land and Water as the CSIRO business. We invested some money to try to grow them into what I will call a new market—that is, a new geographic market—as a way to substitute for what were some of the clear declines in some of their more traditional markets.

Senator KIM CARR: I see, so what you mean is that alternative work can be found for the division. Is that what you mean?

Mr Roy: Only if it is productive.

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TOPIC: Process to inform Board

REFERENCE: Written Question Taken on Notice

QUESTION 2:

You advised that the Board was informed of the impending announcement on 2 February via a circulation of papers.

- a. Was the process considered to be “consideration out of session by circular resolution” (p. 5 of 9 of *Board Governance Document*)?
- b. If so, why was the standard protocol of allowing three days for consideration not followed? Who made that decision and did all Board members agree to the process?

ANSWER

- (a) No. The Chief Executive’s communication with Board members on 2 February 2016 was not seeking approval of a resolution but rather was seeking the support of Board members for the Chief Executive to send a communication to CSIRO staff in relation to the preliminary investment directions coming out from the investment (deep dive) process, in order that the staff would hear about these matters from the Chief Executive rather than through the media. Preliminary investment directions had been discussed with the Board at their formal Board meeting on 8 December 2015. An update regarding the changes, provided in summary form, was attached the 2 February 2016 email to Board members as was the draft all-staff message. However, that message to Board members was not seeking approval for the changes.
- (b) Had the message been seeking approval for the changes, a circular resolution process including three day time for response would have been applicable. However the message of 2 February was not seeking consideration or approval of any resolution and therefore did not require the circular resolution procedure to be invoked. In any case, responses from Board members were received on 3 February 2016.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: First draft all-staff email

REFERENCE: Written Question Taken on Notice

QUESTION 4:

Please provide a copy of the first draft of the all-staff email that went to the Board and any covering email.

ANSWER

From: Marshall, Larry (Executive, Campbell)

Sent: Tuesday, 2 February 2016 6:21 PM

To: *Email addresses are redacted here* – recipients were Board members David Thodey, Edwina Cornish, Hutch Ranck, Peter Riddles, Shirley Intveld, Brian Watson].

Subject: CSIRO changes - CONFIDENTIAL

Dear Board members,

We completed the deep dives into each Business Unit late last year, and have worked through the holidays and into the new year on actions required. Given the risk and history of leaks and lobbying, and with Estimates next week, it's very, very likely that senior stakeholders already have the details of what management is thinking - but the first staff members will hear of this is during public questioning or in the news.

One of the deep dive outcomes was the need to change staffing profiles, removing blockers and making room for champions of change to lead the new strategy – in aggregate headcount we will largely be unchanged over a 2 year time-period, BUT in the process of letting some people go and hiring new ones, so there will be a dip in most areas followed by recovery. To put it in perspective, our 5 year average turnover of is 220/y and so far the numbers are projected to be 300 over 2 years – i.e. BAU.

Environment (O&A and L&W) will be the hardest hit area with reduced funding and large culture shifts needed – particularly as traditional government funding is withdrawn. These changes are politically sensitive, and I don't underestimate the challenges, but firmly believe we have to change our history and culture. This will be of order of 100 out and only 35 refresh, in each, although some of the proposed new investments in environment are in other BUs like Data61 and Energy. There will be a lot of politics around this but it's simply repositioning from working on proving the existence of climate change to figuring out what to do about it – not surprisingly the people best at measuring are rarely the best at mitigating.

Net-Net, these changes will see our staffing levels increase slightly over the next 18 months, but there will be a dip of around 200/y as we make these shifts.

Ordinarily I would have worked these changes through the Board at our next Board meeting - but given the leak risk we felt time was critical and so have focused on working just with our Chairman

who has in turn had me work with our Minister. I know you don't normally get into the operations two levels below me but given the political element, I wanted to flag this and get your perspectives and advice.

A question I have been contacted about is the proposed merging of AG and F&N into one group. This proposed merging is intended to bring more end user market focus to AG – its included in the proposed attachment for completeness but if you consider it required, the Board may choose to defer that particular decision for a broader consultation phase.

I really want to shift our comms stance back onto the front foot, and so get out ahead of this news and rumours with an active statement before Estimates. So I need your support to make a statement to all staff, and then a media statement in the hope of setting our own battlefield and terms of engagement, proactively. I've attached a working draft of this – when you read it, bear in mind that an all staff is like putting it in the hands of the press; but I really believe we need to change our historical approach and get out in front of this.

Thanks for your support.

Regards

Larry

Dr Larry Marshall

Chief Executive

CSIRO

[E larry_marshall@csiro.au](mailto:larry_marshall@csiro.au) **T** +61 2 6276 6621

Canberra: Limestone Avenue, Campbell, ACT 2612 (all correspondence)

Sydney: 5 Julius Avenue, North Ryde, NSW 2113

www.csiro.au

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Attachment 1: Draft all staff email

Attachment 2: Summary of proposed changes

DRAFT MEMO TO ALL STAFF

Dear Colleagues,

As flagged in my email last week, I want to share with you some changes that the Business Unit leaders are working on with the Executive team and I, as part of our new 5 year strategy and in response to changes in global markets.

In a rapidly changing environment, we need to prepare so we can better predict what's coming so we don't just react - but rather, invest ahead of time in the right areas of science to help Australia get ahead. This year we've already seen China's economy slowing, the price of oil and other commodities dropping, 2015 'winning' the title of hottest year ever recorded, and Zika virus spreading and it's only the beginning of February. Change can be frightening, but instead we must embrace it and turn it to our advantage if we want to flourish. So following discussions with the Business Unit leadership teams and the Executive Team, here are some of the major areas where we will be re-focusing our investment:

Digital Technology and Data

Digital technology will disrupt every Australian industry and each part of our business must reinvent itself to help Australia respond to this global challenge. Many of our new investments will be channelled through our existing business units, in collaboration with Data61. Big data is a clear priority for us, for industry and for the Government. This includes developing a national platform for the collection and analysis of big environmental data sets.

Resource industry

We will apply big data approaches to finding the next generation of resources that will underpin the rapidly rising living standards in our region for decades to come. Together with industry and university partners, we will invest to make mining technologies much more selective, and therefore sustainable - by leaving the lower value ores in the ground, we will not only make mining more efficient but we will also reduce the impact of mining on our environment. Finally, we will accelerate the commercialisation of our ore sorting technology which not only significantly reduces costs but, also reduce the energy and chemicals used, making it more sustainable.

Agriculture

Following our seminal work published in Nature around Australia's National Outlook, we believe there is great value Australia can derive from increasing agricultural productivity. Now we must walk that path and apply our science to deliver these productivity improvements – in a resource constrained world and with a changing environment, Australia needs new techniques and technologies for precision agriculture. Our digital agriculture investment will also help farming communities respond to climate change. The development plan for Northern Australia opens many questions around the sustainability of agriculture, that we must answer to ensure the development is done responsibly and does not damage our soils and water.

Health

The economic efficiency of health systems, including the way information is used to target health services for maximum benefit at least cost, is a focus of our investment in health and biosecurity, recognising the transformational and disruptive nature of digital technologies and data analytics in health. If we can develop the right science to keep our people healthier and develop better technologies to mitigate disease, this will be a very important area for us. Health data analytics will be a major platform of this area and will be a focus of the new Health Director, currently in the final stages of recruitment.

Blue Economy

We will grow our capability to prepare for and respond to the increasing number of extreme weather events we are expecting in future. We will also increase our ability to understand the cumulative impacts of Blue Economy developments such as new fisheries and resource projects to minimise any adverse impacts and provide communities with trusted information about those projects. And we will improve our monitoring and decision making systems to ensure the quality and sustainability of our marine ecosystems, including the Great Barrier Reef, is maintained.

Energy Solutions

CSIRO will build on its long-standing track record of developing both renewable and low emissions fossil fuel energy technologies. With the help of CSIRO's new Innovation Fund, we can accelerate the uptake of these much-needed technologies. The listing of BuildingIQ on the ASX in December has demonstrated how CSIRO technology can not only help commercial buildings reduce their energy consumption by 10-30% but also create a new business from scratch. We have already started our efforts to repeat this success for residential buildings by integrating solar, batteries and grid management technologies in a way that reduces consumer bills and allows us to increase the share of renewables in our energy system. As our National Outlook has shown, approaches like this will also help us in the long run increase the productivity of our electricity grids, the single most important lever to improve the affordability of energy by 30%.

Large Scale Water Systems

CSIRO's water work in Australia has set a global benchmark for how to manage this vital resource. Now is the time to step-up our engagement with other nations to help them improve their water security. This is an area where we can make a unique and important contribution to the wellbeing, stability and prosperity in our region.

NISA

In addition to the focal research areas outlined above, there are other project areas on which we need to focus in order to deliver our strategy. One of these is our role under the government's Innovation and Science Agenda and associated funding to stand up the Innovation Fund and to extending ON, our deep-tech Accelerator program, to partners – through these activities, we will build collaboration across the innovation system and increase the innovation and entrepreneurial capability across CSIRO and developing a deeper customer-focused practice. The SKA is another such project. In fact, it's the biggest science project in the world – and move over Google, this is the BIGGEST data !

Food and Nutrition Realignment

Food and Nutrition actually serves three markets - which is unnecessarily challenging. Martin Cole and with John Manners are investigating with their leadership teams, the idea of moving our Food activities into Agriculture, which would bring our pre- and post-farm gate strategies together to complete the value-chain for Australia's food and agribusiness economic growth. Food and Agribusiness business sector has been recognised as one of Australia's high-potential growth opportunities, which is why there is a Food and Agribusiness Industry Growth Centre. Our important nutritional work would move to our new Health business. This would complete the alignment of all our science to market verticals.

I know there is a lot that we want to do, and with finite resources, we must pick and choose where to prioritise. This means as we focus on new areas we must reduce other areas.

Changes to Team CSIRO

What does this all mean? Overall, our headcount will be unchanged over a 2 year period. Our people are innovative and many can reinvent themselves, but we will also need new people with new skills to help us navigate this new future and as our business unit leaders work through the process of realigning their teams for the new strategy its inevitable that there will be job losses. The the numbers that are emerging from the planning are a figure of up to 300 people over 2 years - to put this into perspective, on average we lose 220 people per year (5y av.). Hearing about job losses is never good news and I can assure you this will be managed in the most respectful and open manner possible.

I and the Executive Team have been working with EMC and you should expect to hear from your Business Unit Director shortly to discuss the details and implications of these decisions for your area of activity, and to air any questions or concerns you have.

As you absorb this message, I hope you appreciate the intent of treating everyone in CSIRO as a trusted insider, and sharing the news with staff first. Please direct any external enquiries to your Business Unit Leader, or to your closest Comms colleague.

It's personally a tough message for me to share, as I joined CSIRO with a growth objective – which is one which I don't resile from. However I also know that we need to evolve our capability to meet global market changes in order to deliver on our mission for Australia.

Thanks for your support in this.

Larry.

CSIRO Changes – Summary

- The new CSIRO Strategy 2020 “Australia’s Innovation Catalyst” released in July 2015 was designed to enable CSIRO to respond to the big issues of transitions in the Australian economy, accelerating global change, increasing integration and interdependence of human and environmental systems, and responding to Australia’s innovation challenge through building collaboration (both within the publically funded research sector and in particular at the research-market interface). The strategy emphasises a response to the digital disruption that will occur across value chains particularly impacting our traditional industries such as minerals, mining and agriculture.
- CSIRO will always reprioritise its capabilities towards where its capabilities can best support Australia’s emerging needs and market demand.
- CSIRO has just completed an annual process through which the organisation checks and adjusts the alignment of its research investment against its strategy, government priorities and responds to shifts in market demand for CSIRO’s research services and emerging new opportunities. This is the first investment cycle to be informed by the new 2020 Strategy and has led to a number of shifts in the relative focus of its investment but with no overall decrease in the allocation of its funding to research and innovation.
- Both the Strategy and these consequential investment decisions continue CSIRO’s strong alignment with the government’s nine cross-disciplinary Science and Research Priorities across food, soil and water, transport, cybersecurity, energy, resources, advanced manufacturing, environmental change and health (80% of CSIRO’s research investment), and are in direct support of the intent of the recently announced National Innovation and Science Agenda, or the infrastructure that supports the execution of this work.
 - In terms of contribution to the scientific disciplines relevant to the government’s industry priority areas (articulated through the growth centres), CSIRO is the largest Australian provider of research for the Food & Agribusiness, Mining Equipment, Technology & Services, and Oil & Gas sectors. It is the fourth largest provider for the (broad) Advanced Manufacturing sector. CSIRO will also be strongly aligned with the recently announced new Cybersecurity Growth Centre through its investment in Data61.
 - To better improve CSIRO’s accessibility to the food industry, CSIRO will integrate its food activities into agriculture (to become Agriculture & Food), which will bring our pre-farm gate and post-farm gate strategies together to complete the value-chain for Australia’s food and agribusiness economic growth. This recognises that the Food and Agribusiness business sector is one of Australia’s high potential growth opportunities, and will make their interactions with CSIRO more seamless.

- Our investment prioritisation, within the resourcing envelope that is available to CSIRO, will help our world-class science and research efforts to reflect the needs of industry, the national economy and the community, and create enduring value for Australia.
- CSIRO will continue to undertake research in all of the nine National Research Priority areas but with some shifts across the individual priority, most notably with the largest reduction in impact in relation to Priority 8, Challenge 1 (P8C1) “Improved accuracy and precision in predicting and measuring the impact of environmental changes caused by climate and local factors.”
- CSIRO will continue to spend approximately \$83m p.a. on understanding, mitigating and adapting to climate change, not including our broader research in support of Australian primary industries. (This is a reduction of \$17m from 2014/15, in part attributable to the conclusion of non-recurring contracts from the Department of Environment).
- CSIRO has worked closely with government and industry on a range of projects from measurement and modelling of climate at [both hemisphere and national levels], as well as mitigation and adaption.
- CSIRO’s excellent climate science has provided trusted guidance on these complex issues, that has informed government, industry and the Australian and global community. This has included the State of the Climate report series that was published by CSIRO in collaboration with the Bureau of Meteorology – the next of these Reports is currently in development.
- The world is now focussing - as we know from the outcome of the very successful Paris Conference - on how we can take action to reduce emissions and adapt to climate change.
- And so it is not surprising that CSIRO has decided, as part of its management review of research priorities, to utilise this strong background knowledge to focus on practical issues of adaptation and mitigation.
 - Examples of ongoing work in mitigation work in the area of Energy Solutions is below – this area will also receive an increase in investment.
 - Examples of ongoing work in climate science is provided below under Blue Economy.
- This also means, for example, new crop varieties that support sustainable agriculture and food development; developing and refining tools to assess, monitor and redress environmental risks associated with agricultural practices, resulting in efficient use of water and fertilisers.
- In addition, CSIRO will be preparing a low emissions technology roadmap to identify the optimal mix of energy technologies to meet Australia’s 2030 emissions reduction target at least cost, with a particular focus on

technologies where Australia can become a major part of a global supply chain.

- CSIRO continues to invest in other areas of national importance not specifically defined under the National Research Priorities, but of future economic importance through improved productivity and competitiveness of Australian industry such as digital research.
- **CSIRO is re-focusing its investment** to those areas, where we believe we can create the biggest benefits (e.g. jobs and prosperity) for our nation. The change in our research portfolio investments will be see an increased focus and investment in the following areas, which are well aligned with the national science priorities (referenced in brackets):
 - **Digital Technology and Data** - Digital technology will disrupt every Australian industry and each part of our business must reinvent itself to help Australia respond to this global growth opportunity. Many of our new investments are channelled through our existing business units into collaboration with Data61. Big data is a clear priority for us, for industry and for the Government. This includes developing a national platform for the collection and analysis of big environmental data sets (P2C1).
 - **Health** (P9) - Economic efficiency of health systems, including the way information is used to target health services for maximum benefit at least cost, is a focus of our investment in health and biosecurity, recognising the transformational and disruptive nature of digital technologies and data analytics in health. This is a major growth area if we can develop the right science to keep our people healthier and develop better technologies to mitigate disease. Health data analytics will be a major platform of this area and will be a focus.
 - **Resource industry** (P6 and fully aligned with METS ignited) - One of Australia's long-standing competitive advantages has been and will be our world-class resource industry. As the industry is currently at the bottom of an acknowledged business cycle, it is the right time to step-up our efforts of working with the industry to improve its productivity and sustainability. We will apply big data approaches to finding the next generation of resources that will underpin the rapidly rising living standards in our region for decades to come (P6C1). Together with industry and university partners, we will invest to make mining technologies much more selective. By leaving the lower value ores in the ground, we will not only make mining more efficient but we will also reduce the impact of mining on our environment (P6C4). Finally, we will accelerate the commercialisation of our ore sorting technology. By increasing the grade of ores that are being processed, we will not only significantly reduce costs but, equally important, we will also reduce the amount of energy and chemicals used in the process (P6C4).
 - **Agriculture** (P1) - This includes understanding and finding new techniques and technologies for precision agriculture in a resource

constrained world. Our digital agriculture investment will also help farming communities respond to climate change. Following our seminal work published in Nature around Australia's National Outlook, we believe there is great value Australia can derive from increasing agricultural productivity. Now we must walk that path and apply our science to deliver these productivity improvements. The development plan for Northern Australia opens many questions around the sustainability of agriculture that we must answer to ensure the development is done responsibly and does not damage our soils and water.

- **Blue Economy** - We will grow our capability to prepare for and respond to, the increasing number of extreme weather events we are expecting in future (P8C3). We will also increase our ability to understand the cumulative impacts of Blue Economy developments such as new fisheries and resource projects to minimise their impacts and provide communities with trusted information about those projects (P6C2). And we will improve our monitoring and decision making systems to ensure the quality and sustainability of our marine ecosystems, including the Great Barrier Reef (P2C2,3).
- **Energy Solutions** (P5) - CSIRO will build on its long-standing track record of developing renewable as well as low emissions fossil fuel energy technologies (P5C1). With the help of CSIRO's new venture fund, we hope that we can accelerate the commercialisation and uptake of these much-needed technologies. The listing of BuildingIQ on the ASX in December has demonstrated how CSIRO technology can not only help commercial buildings reduce their energy consumption by 10-30% but also create a new business from scratch (now valued at about \$80m). We have already started our efforts to repeat this success for residential buildings by integrating solar, batteries and grid management technologies in a way that reduces consumer bills and allows us to increase the share of renewables in our energy system (P5C2). As our National Outlook has shown, approaches like this will also help us in the long run increase the productivity of our electricity grids, the single most important lever to improve the affordability of energy by 30% (P5C3). Specifically, CSIRO will continue to work closely on the National Energy Productivity Plan. CSIRO will also produce a low emissions technology roadmap to identify energy R&D opportunities that could help to mitigate the impacts of climate change and also create business opportunities in global supply chains.

Responses to other specific issues raised

- **Doubling of renewable energy investment** - While CSIRO is trying as best as it can to support government commitments, e.g. a doubling of the investment in renewable energy R&D, CSIRO does not have the capacity to do this on its own. It will also require investment by other participants in the system.

- **Impact on urban work** - While CSIRO is reducing some of its urban work, we will maintain those areas of the urban work where we believe we can make a significant impact to the nation, e.g. in transport and logistics planning as well as energy efficiency for the built environment, including via our continued support of regulatory tools such as Accurate, as well as the creation of new technologies which includes BuildingIQ and Habidapt. This decision has been taken recognising that there is capacity within industry, as well as state and local governments, to undertake some of the work in which CSIRO has been investing.
- These changes will not impact the CSIRO's recent commitments to support the development of Northern Australia, for example through its transport logistics capability in the "*Liveable, Sustainable and Resilient Cities*" program. This capability (e.g. TRANSIT) is unique to CSIRO and will be maintained. Furthermore, work in relation to improving the energy efficiency of the built environment will be maintained. CSIRO will also be investing in building a national platform for the application of environmental big data sets and sensor networks, and in deploying our world leading water management capability to improve water security in our region.
- **GBR and water quality** - We will continue to support this work at current if not increased levels.
- **Northern Australia** - s47C
 [REDACTED] While there will be short term impacts from the transition of locations and shifts in capabilities, we expect that in 2-3 years' time we will have a greater number of staff working across Northern Australia compared to today. We expect that this new complement of staff will be better aligned with the current government agenda in Northern Australia.
 s47C
 [REDACTED]
- **Hobart staff impacts** - s47C
 [REDACTED]
- **Geelong/Werribee** - s47C
 [REDACTED]

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Subsequent drafts of all-staff email

REFERENCE: Written Question Taken on Notice

QUESTION 5:

Please provide copies of all subsequent drafts of the all-staff email that were circulated to the Board.

ANSWER

The only draft of the all-staff email that the Board members received was that as at 2 February 2015 (see answer to Written Question Taken on Notice No 4).

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AGENCY/DEPARTMENT: CSIRO

TOPIC: All-staff email editors

REFERENCE: Written Question Taken on Notice

QUESTION 6:

Dr Marshall has stated that the all-staff email had about 17 different editors. Please provide a list of the people who commented on or made changes to the email, including their position in the organisation.

ANSWER

Refer to QoN AI-157 from CSIRO's appearance at Senate Estimates in February.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Dr Marshall's draft email of 3 February

REFERENCE: Written Question Taken on Notice

QUESTION 7:

Please provide a copy of the draft email that immediately preceded the “long rewrite” by Dr Marshall on the night of 3 February.

ANSWER

A copy of the draft email of 3 February is attached

DRAFT MEMO TO ALL STAFF

Dear Colleagues,

As flagged in my email last week, I want to share with you some planning that the Executive Team and Business Unit leaders are working on as part of our new 5 year strategy and in response to changes in global markets.

Strategy 2020 is about CSIRO being a catalyst for change through innovation. Our Nation needs us to create the science and innovation that will be required for an uncertain future. This year we've already seen China's economy slowing, the price of oil and other commodities dropping, 2015 'winning' the title of hottest year ever recorded, and Zika virus spreading and it's only the beginning of February. In a rapidly changing environment, we need to prepare so we can better predict what's coming and we don't just react - but rather, to invest ahead of time in the highest priority areas of science. We must embrace change and turn it to our advantage if we want to flourish. So following discussions with the Business Unit leadership teams and the Executive Team, here are some of the major areas where we will be re-focusing our investment:

Digital Technology and Data

Digital technology will disrupt every Australian industry and each part of our business must reinvent itself to help Australia respond to this global challenge. Many of our new investments will be channelled through our existing business units, in collaboration with Data61. Big data is a clear priority for us, for industry and for the Government. This includes contributing to the development of a national platform for the collection and analysis of big environmental data sets in close collaboration with our partners.

Resource industry

We will use big data to find the next generation of resources that will underpin the rapidly rising living standards in our region for decades to come. Together with industry and university partners, we will invest to make mining technologies much more selective, and therefore sustainable - by leaving the lower value ores in the ground, we will not only make mining more efficient but we will also reduce the impact of mining on our environment. Finally, we will accelerate the commercialisation of our ore sorting technology which not only significantly reduces costs but, also reduce the energy and chemicals used, making it more sustainable.

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Health

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In addition to the focal research areas outlined above, there are other project areas on which we need to focus in order to deliver our strategy. One of these is our role under the government's Innovation and Science Agenda and associated funding to stand up the Innovation Fund and to extending ON, our deep-tech Accelerator program, to partners – through these activities, we will build collaboration across the innovation system and increase the innovation and entrepreneurial capability across CSIRO and developing a deeper customer-focused practice. The SKA is another such project. In fact, it's the biggest science project in the world – and move over Google, this is the BIGGEST data !

Food and Nutrition Realignment

Food and Nutrition actually serves three markets - which is unnecessarily challenging. Martin Cole and with John Manners are investigating with their leadership teams, the idea of moving our Food and Bioproduct activities into Agriculture, which would bring our pre- and post-farm gate strategies together to complete the value-chain for Australia's food and agribusiness economic growth. Food and Agribusiness business sector has been recognised as one of Australia's high-potential growth opportunities, which is why there is a Food and Agribusiness Industry Growth Centre. Our important nutritional work would move to our new Health business. This would complete the alignment of all our science to market verticals.

I know there is a lot that we want to do, and with finite resources, we must pick and choose where to prioritise. This means as we focus on new areas we must reduce other areas.

Changes to Team CSIRO

Your business unit leader will be in contact with you soon regarding the specific impacts for your business unit.

I am mindful that CSIRO has had significant changes over recent years and to put this planned transition into perspective, on average 220 people per year (5y av.) leave CSIRO through a redundancy. The smaller number does not make it any easier, but this will be managed in the most respectful and open manner possible. Additionally to the above, we will be integrating Data61 into CSIRO in the middle of this year and

for that integration, we can now say that the impact upon staff numbers will be significantly lower than was anticipated up until several months ago.

I and the Executive Team have been working with EMC and you should expect to hear from your Business Unit Director shortly to discuss the details and implications of these decisions for your area of activity, and to air any questions or concerns you have.

As you absorb this message, I hope you appreciate the intent of treating everyone in CSIRO as a trusted insider, and sharing the news **with staff immediately as we work through the detail in real time**. Please direct any external enquiries to your Business Unit Leader, or to your closest Comms colleague.

It's personally a tough message for me to share, as I joined CSIRO with a growth objective – which is one which I don't resile from. However I also know that we need to evolve our capability to meet global market changes in order to deliver on our mission for Australia.

Thanks for your support in this.

Larry.

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The Senate
Select Committee into the Scrutiny of Government Budget Measures
ANSWERS TO QUESTIONS TAKEN ON NOTICE
Canberra Public Hearing
7 April 2016

AGENCY/DEPARTMENT: CSIRO

TOPIC: Dr Marshall's draft email of 4 February

REFERENCE: Written Question Taken on Notice

QUESTION 8:

Did the Minister or his office see a draft of Dr Marshall's email of 4 February? If so, was any feedback received?

ANSWER

Refer to QoN AI-157 from CSIRO's appearance at Senate Estimates in February.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Media release

REFERENCE: Written Question Taken on Notice

QUESTION 9:

Dr Marshall referred to the announcement / all-staff email being brought forward due to being “gazumped by the media release the next morning” (p. 23). Which media release is Dr Marshall referring to and who released the information from CSIRO?

ANSWER

CSIRO was planning for Dr Marshall to send his email message to all staff of 4 February 2016 in the middle of the day or early afternoon, daylight saving time in the eastern states. This timing was planned so that the email was issued at the start of working hours in Western Australia. However, early on the morning of the 4 February 2016, Fairfax carried a report that included staff impacts from the planned announcement. It was that media report, pre-emptive of the message from Dr Marshall to CSIRO staff, that Dr Marshall was referring to. CSIRO is not aware of how provided Fairfax with that information although by its nature it appears to have been from a source in CSIRO.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Ministerial briefs 8 February and 24 February

REFERENCE: Written Question Taken on Notice

QUESTION 10:

At Estimates, Ms Bennett noted that Minister Pyne had been briefed again on 8 February (p. 62) and evidence presented on 7 April indicated that the Minister was also briefed on 24 February. Can you provide a copy of these briefs to the Committee?

ANSWER

Briefs provided to Minister Pyne on 9 February 2016 and 24 February 2016 are attached.

Minister for Industry, Innovation and Science
CC

Min ID: MS16-000188
CSIRO Ref: C2016/688
9 February 2016

For Information

Subject CSIRO 2016 STRATEGIC RESEARCH PRIORITISATION OUTCOMES –
IMPLEMENTATION UPDATE

Urgency N/A

Recommendations That you: 1. note the information in this brief Signature: Christopher Pyne/...../2016		1. Noted / Please discuss	
Contact Officer:	Kimberley Shrives	CSIRO	Ph: (02) 6276 6682
Clearance Officer:	Hazel Bennett	CSIRO	Ph: (02) 6276 6633

Key Points:

- CSIRO briefed you on Monday, 1 February 2016 on the outcomes of the 2016 Strategic Research Prioritisation process (refer MS16-000188) and announced the outcomes of this process at a high level to staff on 4 February 2016. This has been followed by initial business unit briefings for those research areas most impacted by these changes – the last of which will occur on Wednesday, 10 February 2016.
- Following the announcement to staff, we are now in a position to conduct effective consultation with our staff and other stakeholders in relation to the implementation of these changes at a specific level. This consultation is both appropriate and required under the CSIRO Enterprise Agreement.
- This consultation will enable us to identify any unforeseen consequences and will entail detailed modelling of specific decisions in relation to impacts as well as staff input and identification of prospective or likely impacts for individual staff members including any wishes that they might now share. It is anticipated that this will occur over the coming weeks.
- In undertaking this consultation, we will also be exploring the feasibility of transferring some of the research CSIRO intends to exit to other research providers.
- The Chief Executive has released a public statement to correct inaccuracies reported in the media on these changes, including providing further information regarding the likely impacts in the climate space. CSIRO will continue to refute inaccurate reporting on this matter.
- CSIRO is continuing to refine its understanding of what areas will cease and getting greater articulation of the anticipated areas of growth.

Background:

- See Attachment A for updated high-level information regarding the changes.

Regulatory Implications: NO.

Consultation: No.

Attachments:

Attachment A: Background

ATTACHMENT A

BACKGROUND

Note that the number of positions listed are indicative at this stage and work is currently being undertaken to finalise the exact impact.

Business Unit	FTE Impact	Rationale / Additional Information
Agriculture	Loss: up to 30 redundancies across 2015/16 and 2016/17 Likely to be offset by hiring an equivalent number of early career researchers (exact numbers to be confirmed)	Agriculture will be existing some capability and growing in key emerging fields of agricultural science s47C
Astronomy & Space Science	No overall change anticipated	No significant change to this research program was proposed.
Data61	No direct change arising from CSIRO Deep dive; ongoing changes TBC associated with merger activity	Data61 will likely see an increase in staff arising from the decision to increase digital capability to support opportunities emerging in the digital economy across all segments of Australian industry including agriculture, health and mineral resources. The exact number of positions to be recruited are yet to be determined. Note: this change does not account for redundancies arising as a result of the merger with NICTA (currently estimated to be 84 positions). Further redundancies are also anticipated in Data61 as Data61 repurposes its capability profile in order to ensure that it has appropriate technical capabilities for those required specific research areas – these numbers are yet to be confirmed. Location impact: TBC – metropolitan locations
Energy	No overall change anticipated	No significant change to this research program was proposed.
Food and Nutrition	Abolish Business Unit, transfer most research activities to other business units – potential for up to 26 redundancies across 2015/16 and 2016/17.	<u>Impacted area:</u> the majority of this team will be transferred to the Agriculture and Health & Biosecurity business units, with a small number potentially moving to Manufacturing. <u>Why:</u> The markets served by this Business unit are more sensibly aligned with other CSIRO business Units and so transferring relevant activities to those business units will provide greater efficiency and impact in interacting with customers and stakeholders. s47C

Business Unit	FTE Impact	Rationale / Additional Information
		<p><u>What won't be impacted:</u> CSIRO remains committed to supporting the food industry, including through partnership with the industry growth centres.</p>
<p>Health and Biosecurity</p>	<p>Loss: up to ^{s47C} 11 redundancies across 2015/16 and 2016/17, likely to be offset by hiring an equivalent number of capability in areas of continued growth</p>	<p><u>Impacted Area:</u> Realignment of programs and management roles in response to growth of health business as well as realignment of operations ^{s47C}</p> <p>The <i>Emerging and Infectious Diseases</i> Program is aligning cost to budget. <i>Diagnostics</i> and <i>Microbiological security</i> capabilities will restructure to consolidate around required capability.</p> <p><u>Why:</u> These are local capability changes in response to meeting existing and anticipated business needs.</p> <p>^{s47C}</p> <p><u>What won't be impacted:</u> We are growing our Biosecurity and Health business with the transfer of significant capability in nutrition and health to build critical mass. We will continue to grow our eHealth business and deliver on our biosecurity, surveillance and response activity, maintaining the right capability to ensure delivery of vital service to the nation through our commitment to Australia's biosecurity. These are minor changes to staffing arrangements and the emerging business needs over the course of a normal year.</p>
<p>Land and Water</p>	<p>Loss: up to 100 redundancies (indicatively 75 in 2015/16, 25 in 2016/17) likely to be offset in part by ^{s47C} 50 potential new positions</p>	<p><u>Impacted area:</u> Changes will be concentrated in the: “<i>Liveable, Sustainable and Resilient Cities</i>” program, the “<i>Biodiversity Ecosystems Knowledge and Services</i>” program, and the “<i>Adaptive Social and Economic Systems</i>” program (exact breakdown being determined).</p> <p><u>Why:</u> CSIRO recognises that these areas have either been struggling to achieve sufficient industry support or are relatively mature areas of science. CSIRO believes that some of these areas of science can be better delivered by the university sector.</p> <p>^{s47C}</p> <p><u>What won't be impacted:</u> These changes will not impact the CSIRO's recent commitments to support the development of Northern Australia, for example through its transport logistics capability in the “<i>Liveable, Sustainable and Resilient Cities</i>” program. This capability (e.g. TRANSIT) is unique to CSIRO and will be maintained. Furthermore, work in relation to improving the energy efficiency of the built environment will be maintained. CSIRO will also be investing in building a national platform for the application of environmental big data sets and sensor networks, and in</p>

Business Unit	FTE Impact	Rationale / Additional Information
		deploying our world leading water management capability to improve water security in our region.
Manufacturing	Loss: up to 41 redundancies across 2015/16 and 2016/17 (note 6 of these are planned redundancies yet to be executed)	<p><u>Impacted area:</u> Major changes are to be concentrated in the: “<i>Advanced Fibres and Chemical Industries</i>” program and the “<i>Biomedical Manufacturing</i>” program, with minor changes in the “<i>High Performance Metal Industries</i>” program and the “<i>Industrial Innovation</i>” program.</p> <p><u>Why:</u> Consolidation of polymer composite capabilities at Waurin Ponds in Geelong to create critical mass in support of the chemicals and fibre industries. Consolidation of our biology capability at Clayton in support of the medical technologies and pharmaceuticals industries.</p> <p>s47C [REDACTED]</p> <p><u>What won't be impacted:</u> These changes will not impact our work delivering innovative solutions to the biomedical, chemical and fibre, and advanced manufacturing sectors for Australia.</p>
Minerals	Loss: up to 40 redundancies across 2015/16 and 2016/17, likely to be offset by hiring an equivalent number of capability in areas of continued growth	<p>Some reductions anticipated largely focused in the mineral processing area. However overall activity will grow due to the expansion in areas that will enhance the productivity of the resources sector.</p> <p>s47C [REDACTED]</p>
Oceans and Atmosphere	Loss: up to 100 redundancies across 2015/16 and 2016/17, likely to be offset in part by s4 35 potential new positions	<p><u>Impact area(s):</u> This change is likely to be concentrated in two research programs “Oceans and Climate Dynamics” and “Earth Systems Assessment”.</p> <p><u>Why:</u> O&A will reduce its focus on climate research to focus on areas more closely linked to innovation and the growth of Australia's industrial sector. Over the past few years CSIRO through O&A and its predecessors together with international partners in the scientific community have proven that climate change is real which has been documented by the CSIRO participation and authorship in the IPCC series of reports. This work was largely funded by government programs that have now concluded (ACCSP, PACCSAP), and ongoing funding for this work is now provided at a reduced level within the NESP program. CSIRO believes there are nowadays others within the Australian research community such as the academic sector, better placed to continue the majority of this fundamental research. CSIRO will refocus its efforts on working more closely with its Industry partners on shorter term impacts and applied adaptation strategies</p>

Business Unit	FTE Impact	Rationale / Additional Information
		<p data-bbox="715 138 1452 212">s47C [REDACTED]</p> <p data-bbox="715 246 1473 504"><u>What won't be impacted:</u> CSIRO is involved in five out of the six NESP hubs, and currently leads the Earth Systems and Climate Change Hub. CSIRO will work closely with its partners to ensure it minimises the impacts of the above changes. CSIRO aims to continue to fulfil its NESP contractual obligations and is currently reviewing a way to achieve this</p> <p data-bbox="715 537 1473 974">CSIRO will also be investing in research that will: enhance our understanding of cumulative impacts of Blue Economy developments (eg fisheries and resource projects) and onshore resource projects (eg mines and coal seam gas) to minimise their impacts and inform their social license to operate; and, explore the feasibility, potential, risks and costs of climate interventions (also known as geo-engineering). Investment will also be made in building autonomous marine platforms to make a step change in our understanding of the oceans and developing improved fisheries management strategies for the global market.</p> <p data-bbox="715 1008 1452 1220">CSIRO will also continue our contribution to the international Argo floats program which provides thousands of datapoints for temperature and salinity of our oceans; and will be investing more in autonomous vehicles, using innovation to collect more data than ever before.</p>

Minister for Industry, Innovation and Science

Min ID: MS16-000460

CSIRO Ref: C2016/1243

24 February 2016

For Information

Subject CSIRO 2016 STRATEGIC RESEARCH PRIORITISATION OUTCOMES –
IMPLEMENTATION UPDATE 2 (OCEANS & ATMOSPHERE, LAND & WATER)

Urgency N/A

Recommendations That you: 1. note the information in this brief Signature: Christopher Pyne/...../2016		1. Noted / Please discuss	
Contact Officer:	Kimberley Shrides	CSIRO	Ph: (02) 6276 6682
Clearance Officer:	Hazel Bennett	CSIRO	Ph: (02) 6276 6633

Key Points:

- CSIRO last updated you on Monday, 9 February 2016 on the implementation of the 2016 Strategic Research Prioritisation process (refer **MS16-000268**). This update brief is focused on the two business units most heavily impacted by these changes, the Oceans and Atmosphere and the Land and Water business units.
- As previously advised, each of these business units anticipate exiting up to 100 staff over the coming months, with this reduction partially offset by the recruitment of a total of 85 staff across these two business units over the coming two years.
- Reductions in staffing in these business units will most impact on climate measuring and modelling, resilient cities, biodiversity and social and economic research.
- The proposed reductions in climate research have already attracted significant criticism from the international science community and some media outlets.
- The precise detail of impacts on groups, teams and individual staff are currently being worked through and should be clearer by mid-March 2016, with individuals notified of potential redundancy in early April 2016. A detailed timeline for implementation of changes in the Oceans and Atmosphere and Land and Water business units is attached (Attachment A).

s47C

Background: Refer to Attachment A.

Regulatory Implications: NO.

Consultation: YES. CSIRO is in ongoing discussion with partners including the Department of the Environment and the Bureau of Meteorology in particular, in relation to implementing these changes.

Attachments:

Attachment A: Background and timeline

ATTACHMENT A - BACKGROUND AND TIMELINE

Background

- CSIRO's Strategy 2020 has a clear vision to make CSIRO Australia's innovation catalyst to help deliver on the Government's desire to use innovation to drive growth, productivity, export and jobs.
- As part of the process of implementing the new 5 year strategy, CSIRO undertook a series of science investment processes including deeper engagements with each business unit – or “deep dives” at the end of 2015. The objectives were to understand any significant or imminent market shifts and their impact on Australia, determine what science investments would best prepare Australia for these shifts, and identify where to position Australian innovation to take advantage of these shifts.
- These deep dives were extremely valuable. Business units were asked to scope major growth ideas, as well as to truly respond to any changes evident in the marketplace, the CSIRO strategy and other external factors.
- Investment decisions arising from the deep dive will see an increase in digital capability within CSIRO, to support research that will position Australian industry to harness the growing digital economy, including in industries such as agriculture and health.
- As a result of resources stretch and to increase alignment with CSIRO's new role as an innovation catalyst agency in support of industrial growth, CSIRO will be decreasing its investment in some areas of environmental research.
- CSIRO will also increase investment in traditional industries, such as minerals and mining, in order to make them more profitable and sustainable through bringing innovative technology to market.
- This represents a refresh and redirection of capability in CSIRO, not a cut to staffing levels. Although CSIRO has announced that there will be up to 350 redundancies over the next two years, the organisation is also planning to appoint new staff so that by the end of this process there will be no significant change in CSIRO's total staffing levels.
- Impacted staff will be fully supported in full accordance of the CSIRO Enterprise Bargaining Agreement.

Timeline – Activities to date and anticipated future activities for the Land and Water (L&W) and the Oceans and Atmosphere (O&A) business units

Date	Activity
4 February 2016	After Chief Executive all staff message, O&A and L&W business unit leaders emailed all staff in the business unit outlining the magnitude of change and the areas of impact.
4 February 2016	O&A and L&W business units progress drafting business unit case for restructuring, identifying impacted teams and groups and the magnitude of impacts. Stakeholder engagement commences with key partners and clients.
4 February 2016	CSIRO-wide briefing to CSIRO Staff Association (CPSU).
5-9 February 2016	O&A and L&W business unit leaders hold all staff video conference talks outlining the proposed magnitude of change, likely areas of impact and responding to staff questions. Staff reminded of Human Resources (HR) and Employee Assistance Program (EAP) support and of voluntary redundancy substitution provisions available.
9 February 2016	External engagement process commences – meetings scheduled with BoM, Department of Environment and National Environmental Science Programme (NESP) contacts.
18 February 2016	O&A and L&W business unit leaders send all staff email update on progress, outlining timeframes and process.

Date	Activity
22 February 2016	Draft business unit case for restructuring (including proposed detail of impacted groups, teams and in some cases locations) provided. Scheduled meetings with CPSU around changes across business units. Feedback on business unit cases and implementation plans commences.
29 February 2016	L&W business unit case for restructuring and implementation plan submitted to CSIRO Executive for approval. Development of appropriate workplace Psychosocial Risk Assessments or individual Health Risk Assessments.
7 March 2016	O&A business unit case for restructuring and implementation plan submitted to CSIRO Executive for approval. Development of appropriate Workplace Psychosocial Risk Assessments or individual Health Risk Assessments.
14 March 2016	Contingent on resolution of Industrial Dispute with CPSU: L&W and O&A meeting separately with CPSU and site meetings with impacted staff commence as step 1 in implementation. Email to impacted research programs/sites.
15 March 2016	L&W and O&A phone calls and emails with key stakeholders
From 14 March 2016	Review registration for voluntary redundancy substitution and consider substitution opportunities, undertake processes with impacted groups where a group assessment is required.
From 4 April 2016	Individual staff issued with initial advice of potential redundancy.
Early April – Early June 2016	Redeployment of impacted staff and consideration of additional mitigations for impacted staff. Business units commence restructuring of capability groupings for remaining staff as required
17 June 2016	First cessations possible.
1 July 2016	Any transfers of groups or teams between business units completed.
From July 2016	Planning and initial recruitment for reshaping through new hires.
30 November 2016	Redundancy program completed and staff exited.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Any subsequent briefs provided to Minister or PM

REFERENCE: Written Question Taken on Notice

QUESTION 11:

How many subsequent briefs have been requested and provided to the Minister and/or Prime Minister?

ANSWER

No subsequent briefs on this matter have been requested by any Minister. CSIRO has worked with the Department of Industry Innovation and Science to update the relevant Question Time Brief a number of times so that it could be provided to Minister Pyne's Office.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Meetings with Minister

REFERENCE: Written Question Taken on Notice

QUESTION 12:

How many meetings has Dr Marshall had with the Minister since the announcement, and on what dates?

ANSWER

Dr Marshall did not have any formal meetings but communicated by phone with Minister Pyne on 12 and 23 February 2016 and 12 March 2016 and with either the Chief of Staff or Minister on March 30.

Dr Marshall also met with Assistant Minister Andrews on 9 February 2016 and 23 February 2016 and with Assistant Minister Roy on 23 February 2016.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: HR staff resignations

REFERENCE: Written Question Taken on Notice

QUESTION 13:

Mr Wonhas submitted a “clarification” letter after the last hearing advising the Committee that he was wrong when he said that the resignation of a human resources manager in O&A would take effect the following week. However, he did not actually say when the resignation would take effect.

- a. Please clarify when this resignation took effect or will take effect?
- b. How many HR staff have resigned from CSIRO since 4 February?
- c. What reasons have been given for these resignations? Have exit interviews been held with any of these staff?
- d. Have exit interviews been held with any of these staff?
- e. Does O&A currently have four HR staff deployed?

ANSWER

- a. The person ceased on the 18th of March 2016. It was not a resignation.
- b. Two
- c. One officer for personal reasons and one officer sought longer term employment as they were on a term contract.
- d. One exit interview was undertaken
- e. Yes

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AGENCY/DEPARTMENT: CSIRO

TOPIC: PhD and post-docs supervisors.

REFERENCE: Written Question Taken on Notice

QUESTION 14:

Tony Worby from the ACE CRC told the Committee he has 12 post-docs who have supervisors at CSIRO, and they are asking if they still have a supervisor. How are you going about ensuring that all PhD students and post-docs still have supervisors?

ANSWER

CSIRO hosts many postgraduate students and post-doctoral fellows, and as outlined in the CSIRO Chairman's public statement of February 2014 we will work hard to make sure that students and fellows will continue to have supervision.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: ACE CRC contract

REFERENCE: Written Question Taken on Notice

QUESTION 15:

Tony Worby also said that the ACE CRC was told Dr Lee is “doing our best to protect this contract” between the two organisations. What is CSIRO doing to protect this contract?

ANSWER

CSIRO has confirmed that it will honour its contractual obligations to the ACE CRC.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Alex Wonhas email 15 February

REFERENCE: Written Question Taken on Notice

QUESTION 16:

The OPD response contains an email from Alex Wonhas dated 15 February that sets out a proposed timeline for determining CSIRO key capabilities and managing external consultation. Can you explain why this information was not gathered prior to the announcement, rather than 11 days later?

ANSWER

The reasons for the timing of Dr Marshall's announcement to staff and timing of consultation with collaborative partners in the climate science field were subjects that were covered in the February Estimates (Economics Committee) Hearing, see pages 58 and 63 and in the Hobart hearing of this Committee on 8th March, see pages 38- 39 and 52-53.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Alex Wonhas email 6 February

REFERENCE: Written Question Taken on Notice

QUESTION 17:

In the email trail of 6 February, Alex Wonhas confirms that “no one is prepared to pay for it” in relation to transitioning capability to other organisations. What is CSIRO’s current view about the potential to transition its public good climate research to other bodies?

ANSWER

CSIRO’s position remains that it will continue to do public good research, including in climate science. Whilst CSIRO has been in discussion with other parties (see answer to Question 22), no decisions have been made as yet.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Alex Wonhas email 6 February re contracts.

REFERENCE: Written Question Taken on Notice

QUESTION 18:

The same email says there will be a “reduction to the minimum contractual requirements”. What does this mean? Will contracts be broken? If so, which ones?

ANSWER

The correct interpretation of the email is as follows. CSIRO is committed to meeting its contractual obligations. Whilst CSIRO will fully deliver the obligations under the contract, it will pull back from conducting discretionary, additional work above and beyond that specified in the contract. No contracts will be “broken”, however given this change in context CSIRO will discuss these matters with the other parties and if, consequentially, there is a need for a contract variation for any component of CSIRO’s work (whether from the perspective of the other contracting party or from CSIRO) then CSIRO will work with the parties to identify a mutually agreeable variation to the contract.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Outsourcing Oceans & Atmosphere

REFERENCE: Written Question Taken on Notice

QUESTION 19:

Is CSIRO still exploring the possibility of the Oceans & Atmosphere division outsourcing the provision of climate modelling to the UK Met Office?

- a. If so, has there been a cost/benefit analysis of this outsourcing plan?
- b. Will the nation get value for money by funding British scientists?
- c. How does CSIRO respond to the proposition put by climate scientists at previous hearings that the UK Met Office is not in a position to undertake the required work on Australian, Pacific and Southern Ocean conditions?

ANSWER

There are no plans by CSIRO to outsource the provision of climate modelling to another country. CSIRO is involved in ongoing discussions with a number of partners and collaborators, including the UK Met Office, about creating synergies climate science.

- a. b. and c. Not applicable, see above.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: BoM in-kind commitment to Cape Grim

REFERENCE: Written Question Taken on Notice

QUESTION 20:

The OPD includes iterations of the Cape Grim project proposal for 2015-16. These documents show that the Bureau of Meteorology makes a \$2.2 million in-kind commitment to Cape Grim, in addition to around \$450,000 of direct co-investment. Are in-kind contributions taken into account in any way in terms of considering the level of external co-investment in projects?

ANSWER

CSIRO accounts for direct in-kind co-investment by a collaborator or customer but not indirect investment. Direct in-kind co-investment includes where a collaborator contributes staff time or purchased consumables to a project with CSIRO.

While not accounted for in our project management documentation, indirect co-investments are recognised by CSIRO in our collaborative activities and some overarching relationship agreements. Indirect co-investment includes where a collaborator is making investments in staff time, equipment or consumables which are not directly related to a project with CSIRO.

CSIRO's understanding is that the \$2.2M in-kind annual cost for the Bureau of Metrology (BoM) to run and maintain the Cape Grim facility will be accrued by BoM regardless of whether CSIRO use the facility or not. Other research organisations also use the Cape Grim facility. While we recognise the importance of this investment by BoM it is not a direct co-investment in project with CSIRO. Hence we do not include this \$2.2M as an in-kind contribution to Cape Grim projects.

CSIRO intends to contribute the same direct contribution to Cape Grim in 2016-17 as in 2015-16.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Discussions with BoM regarding Cape Grim

REFERENCE: Written Question Taken on Notice

QUESTION 21:

Dr Wonhas previously advised in relation to Cape Grim that CSIRO had previously “explored alternative arrangements” with the Bureau of Meteorology “on a hypothetical basis” (Estimates Hansard, p. 63). When did these discussions take place?

ANSWER

Dr Alex Wonhas first approached the Bureau of Meteorology on the 19 January 2016 to discuss in broad terms the potential changes resulting from CSIRO’s strategic investment process. Dr Wonhas has been in regular contact with the Bureau since this time, by phone and email about once or twice a week, to discuss the changes in increasing specificity, including options related to Cape Grim.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Progress re discussions with BoM regarding Cape Grim

REFERENCE: Written Question Taken on Notice

QUESTION 22:

What discussions have taken place since those hearings? Has there been any progress?

ANSWER

There has been regular executive level contact between CSIRO and BoM, by phone and email about once or twice a week, to discuss potential changes. In addition, detailed discussions have taken place at meetings held on 2 March, 17 March, and 13 April 2016.

These discussions are ongoing, noting that no new source of funding has been identified to support this science either within BoM or CSIRO.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Discussions with Chief Scientist re Cape Grim

REFERENCE: Written Question Taken on Notice

QUESTION 23:

Have you discussed the future of Cape Grim or any other affected facility with the Chief Scientist or his office? Has the Chief Scientist's office offered any technical expertise in designing an alternative Cape Grim baseline monitoring plan?

ANSWER

On the 8 March 2016 the Chief Scientist, Alan Finkel, hosted a climate workshop which CSIRO representatives attended. Topics discussed included the future of Cape Grim. In addition, regular executive level discussions have occurred with the Chief Scientist on multiple topics, either by phone or email, on an approximately weekly basis since early February.

No, the Chief Scientist's office has not offered technical expertise with regards to an alternative Cape Grim baseline monitoring plan.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Dr Marshall's site visits

REFERENCE: Written Question Taken on Notice

QUESTION 24:

During Estimates, Dr Marshall admitted he had only been to 22 CSIRO sites, and that these did not include Aspendale. Has that now changed? How many sites has Dr Marshall visited since Senate Estimates? Where, what date and how long were each of those site visits?

ANSWER

Since Senates Estimates in February 2016:

Farewell event at Limestone Avenue – 29 February for 90 minutes

Meeting with Manufacturing leadership team, Clayton – 15 March for 90 minutes

Land and Water staff meeting, Black Mountain - 22 March for 90 minutes

Oceans and Atmosphere staff meeting, Yarralumla – 23 March for an hour

Meeting with Land and Water leadership team, Black Mountain – 22 March for an hour

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Urban system program

REFERENCE: Written Question Taken on Notice

QUESTION 25:

During the Senate Estimates hearing, Dr Wonhas said that one of the areas within the Land and Water Division where job cuts are planned is the “urban system program” (p. 73). Is this the program described on the website as “Resilient Cities of the 21st Century”, or a subset of that?

- a. Which parts of this so-called “business unit” will lose staff and why?
- b. Is one of the objectives of this business unit to help Australian cities adapt to climate change?
- c. How does cutting this program fit with the objective of focusing on adaptation when it comes to climate change research in CSIRO?
- d. CSIRO has done a lot of work on how much our cities contribute to GDP and productivity in the economy. Isn’t improving urban systems and networks critical to our future productivity?
- e. Is the problem for this program that it has no direct industry or government customer at this stage? If so, what effort was made to find partners before the decision was made to cut the program?

ANSWER

CSIRO has previously answered this as a Question on Notice from its appearance at the Inquiry into Australia’s Future in Research and Innovation by Joint Select Committee on Trade and Investment Growth on 3 March 2016. The answers have been published on the Committee's site at:

<http://www.aph.gov.au/DocumentStore.ashx?id=3df948f4-49bf-4697-b2ce-303bfb97163e&subId=409164>

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AGENCY/DEPARTMENT: CSIRO

TOPIC: Land and Water redundancies

REFERENCE: Written Question Taken on Notice

QUESTION 26:

The other programs affected in Land and Water were identified as the ecosystem program and the economic and social science program.

- a. Have there been any developments in relation to proposed redundancies in these areas?
Please provide details.

ANSWER

The CSIRO process is not as yet at a point where any decisions have been made that would respond to this question as asked.

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AGENCY/DEPARTMENT: CSIRO

TOPIC: CSIRO Financial Services Pty Ltd

REFERENCE: Written Question Taken on Notice

QUESTION 27:

CSIRO recently advertised for a Managing Director and Investment Managers for CSIRO Financial Services Pty Ltd.

- a. What was the cost of establishing CSIRO Financial Services Pty Ltd?
- b. How many people are being recruited for this entity?
- c. What is the salary cost of the entity expected to be, inclusive of superannuation, allowances and bonuses?
- d. What is the overall annual administrative cost of this entity expected to be?
- e. Who is covering the administrative cost of establishing and running CSIRO Financial Services Pty Ltd?
- f. If CSIRO is covering this cost, is this one of the drivers for the proposed reductions in jobs elsewhere in the organisation?
- g. How much of the anticipated \$200 million under management is intended to come from WLAN licensing revenue and how much from the private sector?

ANSWER

- a. The external legal fees for registering CSIRO Financial Services Pty Ltd was approximately \$700, which has been established as one part of the process of establishing the CSIRO Innovation Fund as well as for other purposes.
- b. This is the subject of current planning activities and remains to be determined. Current thinking is that the Innovation Fund will probably require four investment managers to evaluate investment proposals and to manage investments.
- c, d and e. These remain to be determined and are the subject of current planning activities.
- f. The establishment of CSIRO Financial Services Pty Ltd, which is one part of the process of establishing the CSIRO Innovation, is a CSIRO project.
- g. No.
- h. See <http://www.innovation.gov.au/page/csiro-innovation-fund>. It is anticipated that the \$200 million to be under management will comprise \$100 million of investment capital from government (\$70 million) and from CSIRO's WLAN licensing revenues and an estimated \$100 million investment capital from the private sector.