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This document was created in response to a Freedom of Information request made to CSIRO.

FOI Number: FOI2016/20

Date: 21 March 2016

Request: All documents that Dr Alex Wonhas prepared for the “internal documenting unit” in order to comply with any Senate order for the production of documents made in 2016. Any other documents prepared by CSIRO staff that were delivered to CSIRO’s internal documenting unit in relation to any Senate Order for the production of documents made in 2016.

Document(s): Categories C & E

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## Anevski, Pam (C&G, Parkville)

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**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Tuesday, 22 December 2015 6:31 PM  
**To:** Wonhas, Alex (Executive, North Ryde)  
**Subject:** FW: OPEX and External Revenue position of O&A Research Programs for MYBR reporting  
**Attachments:** MYBR OPERATING PERFORMANCE SCENARIO FY15\_16 TO RPDS.xlsx; [REDACTED]  
s 22  
**Importance:** High

Alex:

Here's my latest BU internal financial report. I haven't had a chance to review it prior to our call s 47F [REDACTED]  
[REDACTED] As you can see I work with my RPDs as a team. I could probably meet our external targets by shifting secured funds from David Smith's program on Marine Resources and Fisheries - but that would present an unfair challenge to his team for the following fiscal year.

We have a number of fixed costs for ongoing collaborative agreements/projects with universities, BoM, etc. Thus, in the long run, I need to bring our labour budget under control and to re-profile our workforce to meet customer needs, as discussed during the Deep Dive.

Also, I just had a meeting for a couple of hours with Ken Fitzpatrick, Chair of the Australian Energy Resources Growth Centre discussing various issues, including what changes should be made to NOPSEMA's operating procedures that could streamline and improve regulatory approvals. He has asked me to serve on the Technical Advisory Committee for their new CEO.

s 22  
[REDACTED]

Have a Merry Christmas and a Happy New Year!

Ken

---

**From:** Wong, Tim (Finance, Kensington)  
**Sent:** Tuesday, 22 December 2015 11:48 AM  
**To:** Oke, Peter (O&A, Hobart) <Peter.Oke@csiro.au>; Cai, Wenju (O&A, Aspendale) <Wenju.Cai@csiro.au>; Steven, Andy (O&A, Dutton Park) <Andy.Steven@csiro.au>; Smith, David (O&A, Hobart) <David.C.Smith@csiro.au>; Underwood, Mark (O&A, Hobart) <Mark.Underwood@csiro.au>; Burns, Lisa (O&A, Hobart) <Lisa.Burns@csiro.au>  
**Cc:** Ormandy, Phillipa (C&G, Hobart) <Phillipa.Ormandy@csiro.au>; Schiller, Andreas (O&A, Hobart) <Andreas.Schiller@csiro.au>; Lee, Ken (O&A, Kensington) <Ken.Lee@csiro.au>; Lau, Bonnie (Finance, Kensington) <Bonnie.Lau@csiro.au>  
**Subject:** OPEX and External Revenue position of O&A Research Programs for MYBR reporting  
**Importance:** High

**Dear Research Program Directors and ROM**

This is following the requests made by RPDs during the Nov BuET(21/12/15) requiring key information regarding their OPEX/EXTERNAL REVENUE figures projected by Finance so as to determine their MYBR position. There will be 2 parts to this email with the former relating to its purpose and the latter, its requirements.

**Part 1 - Purpose**

This email serves to provide you a projected year-end position for External Revenue and OPEX for your respective programs in the lead up to the MYBR. They are based on 4 potential landing positions (Best, Worst, Average or your manual input). You are requested to work together as a team to come up with a combined Program's position which will determine O&A's MYBR BU revised positions.

For this approach to be valid it is assumed that O&A will NOT EXCEED its Salary/Labour budget parameter by year-end. Finance/HR are endeavouring to keep this input cost under control. To further this cause, RPDs are requested to work with HR/Finance when it comes to recruitment and potential additions to labour spending.

Please review the attachment now – I presume the labelled columns are self-explanatory.

## Part 2 - Requirements

### The basic premise

- Total **O&A OPEX** = \$21.04M less Corporate Savings of (\$0.6M) = **\$20.44M (refer revised opex target)**
- Total **O&A Externals** = \$42.269M+CAPEX of \$0.372M = \$42.64M plus Target Increase of \$1M = **\$43.64M (ref revised external target)**
- No changes to year-end labour budget outcomes

### Scenario

- Best, worst and average are Finance's best-guess positions for each of your respective programs which will result in 3 different operating positions for O&A when consolidated.
- The calculations currently suggest O&A will finish the financial year with an operating deficit ranging from **~\$2.5M to \$4M. (Refer to spreadsheet for details)**
- **The Deficit will potentially worsen should the research programs overspend their labour budget**

### What do I need from Program Directors & ROM (for Support relating to OPEX) by 5/1/16 or earlier?

- **Complete the spreadsheet and return to me either before Christmas OR latest 5/1/16.**
- To complete your spreadsheet you must
  - decide which OPEX and EXT REVENUE position are you able to achieve (Best, Worst, Average, manual input) for your respective programs relative to your Original targets
- **Note that any choice(s) you make not as a group will likely result the BU to end the financial year far worst off than already projected.**
- RPDs are advised to get together with their PMSOs to identify their likely OPEX and EXT REVENUE position.

Thank you and apologies again for the long email/short turnaround time. Should you have any queries, please feel free to contact me.

Kind regards

Tim

**PROJECTED YEAR-END OPEX AND EXTERNAL REVENUE**

Original Targets (\$M)			
OPEX	(Original TARGET)	OCE & FCF	CDF
RP1	2.26	0.02	0.06
RP2	2.70	0.02	0.06
RP3	4.30	0.48	0.06
RP4	5.06	0.03	0.06
RP5	3.20	-	0.06
CDF			0.70
Support	1.97	-	-
	19.49	0.55	1.00

Original Targets (\$M)			
EXTERNAL REVENUE	(Original TARGET)	EXTERNALLY FUNDED CAPEX	CDF
RP1	7.5	0.372	-
RP2	7.5	-	-
RP3	9.969	-	-
RP4	10.8	-	-
RP5	6.5	-	-
	42.269	0.372	-

Manual Input --> for manual input of figures

The anticipated DEFICIT position for O&A by year-end

FOR MYBR REPORTING

Corporate Revisions			Projections proposed by Finance (\$M)			
TOTAL	Corporate Savings (\$0.6M)	REVISED OPEX TARGET	Est EOFY Outcome (BEST)	Est EOFY Outcome (WORST)	Est EOFY Outcome (AVERAGE)	Est EOFY Outcome (MANUAL)
2.34	-0.1	2.24	2.00	2.24	2.12	
2.78	-0.1	2.68	2.40	2.68	2.54	
4.84	-0.1	4.74	4.34	4.54	4.44	
5.15	-0.1	5.05	7.25	7.55	7.40	
3.26	-0.1	3.16	2.96	3.06	3.01	
0.70		0.70	0.40	0.50	0.45	
1.97	-0.1	1.87	1.87	2.47	2.17	
21.04	(0.60)	20.44	21.22	23.04	22.13	

Corporate Revisions			Projections proposed by Finance (\$M)			
TOTAL	INCREASED TARGET +\$1M	REVISED EXTERNAL TARGET	Est EOFY Outcome (BEST)	Est EOFY Outcome (WORST)	Est EOFY Outcome (AVERAGE)	Est EOFY Outcome (MANUAL)
7.87	0.2	8.07	7.37	7.17	7.27	
7.50	0.2	7.70	6.00	5.70	5.85	
9.97	0.2	10.17	7.97	7.47	7.72	
10.80	0.2	11.00	13.50	13.30	13.40	
6.50	0.2	6.70	7.10	7.00	7.05	
42.64	1.00	43.64	41.94	40.64	41.29	

ANTICIPATED BU OPERATING POSITION (DEFICIT)

	Best case	Worst case	AVERAGE	MANUAL
(\$M)	2.48	5.60	4.04	23.20

MYBR EOPV VARIANCES RELATIVE TO REVISED  
TARGET

Formula-driven

Best case	Worst case	AVERAGE	MANUAL
0.24	-	0.12	2.24
0.28	-	0.14	2.68
0.40	0.20	0.30	4.74
(2.20)	(2.50)	(2.35)	5.05
0.20	0.10	0.15	3.16
0.30	0.20	0.25	0.70
-	(0.60)	(0.30)	1.87
<b>(0.78)</b>	<b>(2.60)</b>	<b>(1.69)</b>	<b>20.44</b>

MYBR EOPV VARIANCES RELATIVE TO REVISED  
TARGET

Formula-driven

Best case	Worst case	AVERAGE	MANUAL
(0.70)	(0.90)	(0.80)	(8.07)
(1.70)	(2.00)	(1.85)	(7.70)
(2.20)	(2.70)	(2.45)	(10.17)
2.50	2.30	2.40	(11.00)
0.40	0.30	0.35	(6.70)
<b>(1.70)</b>	<b>(3.00)</b>	<b>(2.35)</b>	<b>(43.64)</b>
<b>(2.48)</b>	<b>(5.60)</b>	<b>(4.04)</b>	<b>(23.20)</b>

**Anevski, Pam (C&G, Parkville)**

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**From:** Wonhas, Alex (Executive, North Ryde)  
**Sent:** Thursday, 14 January 2016 11:21 AM  
**To:** Lee, Ken (O&A, Kensington)  
**Cc:** Nile, Therese (Executive, North Ryde)  
**Subject:** Deep Dive  
**Attachments:** 160114 O&A.docx

Hi Ken,

Further to our discussion yesterday, Craig and Hazel are comfortable with the approach we discussed yesterday, see attached document summarising the key points (I will send the pwd separately). Please let me know if I missed anything. Therese will try to schedule a meeting of the team we agreed either today or tomorrow so that we can brief them. Please don't hesitate to call me anytime to discuss. I'll draft and share an agenda for that discussion hopefully soon...

Cheers  
Alex

# Validating Deep Dive Decisions

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## Required outcomes

For the Jan ET meeting, we will require

- Redundancy numbers, costs, areas, locations and rationale
- Impact on future external revenues
- Impact on this years financial result - externals and operating result

## Oceans and Atmosphere

- **Scope of changes:** Implementation of the ET Deep Dive decision would comprise
  - Reduction of ~35 FTE as per the plan by the management team to re-invest in O&A growth areas
  - Further reduction of ~65 FTE with transfer of associated appropriation to growth areas in CSIRO outside of O&A will most likely be achieved by reducing effort in climate change and other less industry focused areas. The precise areas need to be firmed up over the coming 2 weeks.
- **Phasing:** The preferred phasing of the changes would be to do implement them as quickly as possible. However the business does not have capability to fund the associated redundancies. Constraints on the phasing need to be confirmed
- **Validation team:** The proposed team to validate the impact for the Jan ET meeting would consist of
  - Ken Lee (Director)
  - Andreas Schiller (Deputy Director)
  - Lyndelle Broadfoot (HR)
  - Jeff McCulloch (Group Finance)
  - Tim Wong (Finance for analytic support)
  - Philpa Ormandy (BD – for a market perspective. This will also require me to provide a heads-up to Rob Lorimer, Philippa's manager)
- **Other notes**
  - The O&A review needs to be postponed
  - The organisation needs to provide the overarching rationale for the changes
  - Kimberley has asked Alex to give Gordon de Brouwer (Secretary Environment) a heads-up on the planned changes in the coming 2 weeks



## Anevski, Pam (C&G, Parkville)

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**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Friday, 15 January 2016 2:23 PM  
**To:** Wonhas, Alex (Executive, North Ryde)  
**Subject:** Project is on schedule  
**Attachments:** tele\_reply.docx

Ken

**Kenneth Lee**, Ph.D.  
Director  
Oceans and Atmosphere National Research Flagship  
CSIRO

**E:** ken.lee@csiro.au  
**T:** +61 8 6436 8629  
**M:** [REDACTED] s47F

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Alex:

Thanks for the follow up call. I think I have everything under control and on-track at this time. Jeff has offered to come up with a framework to provide us with some guidance for reporting on finance. Tim Wong is working on financial analysis on return of investment on various program groups. As discussed with Lyndelle my focus is on identifying areas for cut-backs rather than individuals. It's the only way we can justify redundancies.

Jeff is a bit concerned over the level of reductions for O&A as it will give us some financial challenges since corporate funds are limited. However, I understand the situation at the corporate level – this is not an easy decision – but it would be worse to hang on (death by a thousand cuts) and not make changes for positive growth in the long term.

I think it is important to identify who is redundant right at the start. Otherwise, all staff will be left wondering "Is it I?" – productivity of the whole BU will drop to zero. I've done this before. By not doing so, our top scientists will leave – as they are in demand; as well as Post-Docs who are looking for future opportunities within our organization.

Andreas, Phillipa and I will be getting together face-to-face next week to work on the file in Melbourne. I cancelled a planned meeting to Hobart – as there will be too many questions on what's going on – if I spent all of my time with just the two of them.

We can have a chat during our scheduled meeting next Monday. Right now, I think it is better for us to come up with something to show and discuss – before we schedule a meeting next week.

Ken

**Anevski, Pam (C&G, Parkville)**

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**From:** Wonhas, Alex (Executive, North Ryde)  
**Sent:** Monday, 18 January 2016 6:25 PM  
**To:** Lee, Ken (O&A, Kensington)  
**Subject:** Templates

Hi Ken,

I followed up with Jeff and Lyndelle regarding templates. There are only two things you need:

- An update to O&A's mid year budget review template (MYBR) as a result of the changes
- Completion of an HR spreadsheet detailing the impacts. Lyndelle has sent this to your personal email I hope that helps. Good luck for the discussions tomorrow.

Cheers  
Alex

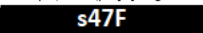
## Anevski, Pam (C&G, Parkville)

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**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Friday, 22 January 2016 2:31 PM  
**To:** Wonhas, Alex (Executive, North Ryde)  
**Subject:** Organizational charts  
**Attachments:** RP5\_Oct\_15\_v2\_Lee.docx; RP4\_Oct\_15\_v1\_Lee.docx; RP3\_Oct\_15\_v1\_Lee.docx; RP2\_Oct\_15\_v1\_Lee.docx; RP1\_Oct\_15\_v1\_Lee.docx

Ken

**Kenneth Lee**, Ph.D.  
Director  
Oceans and Atmosphere National Research Flagship  
CSIRO

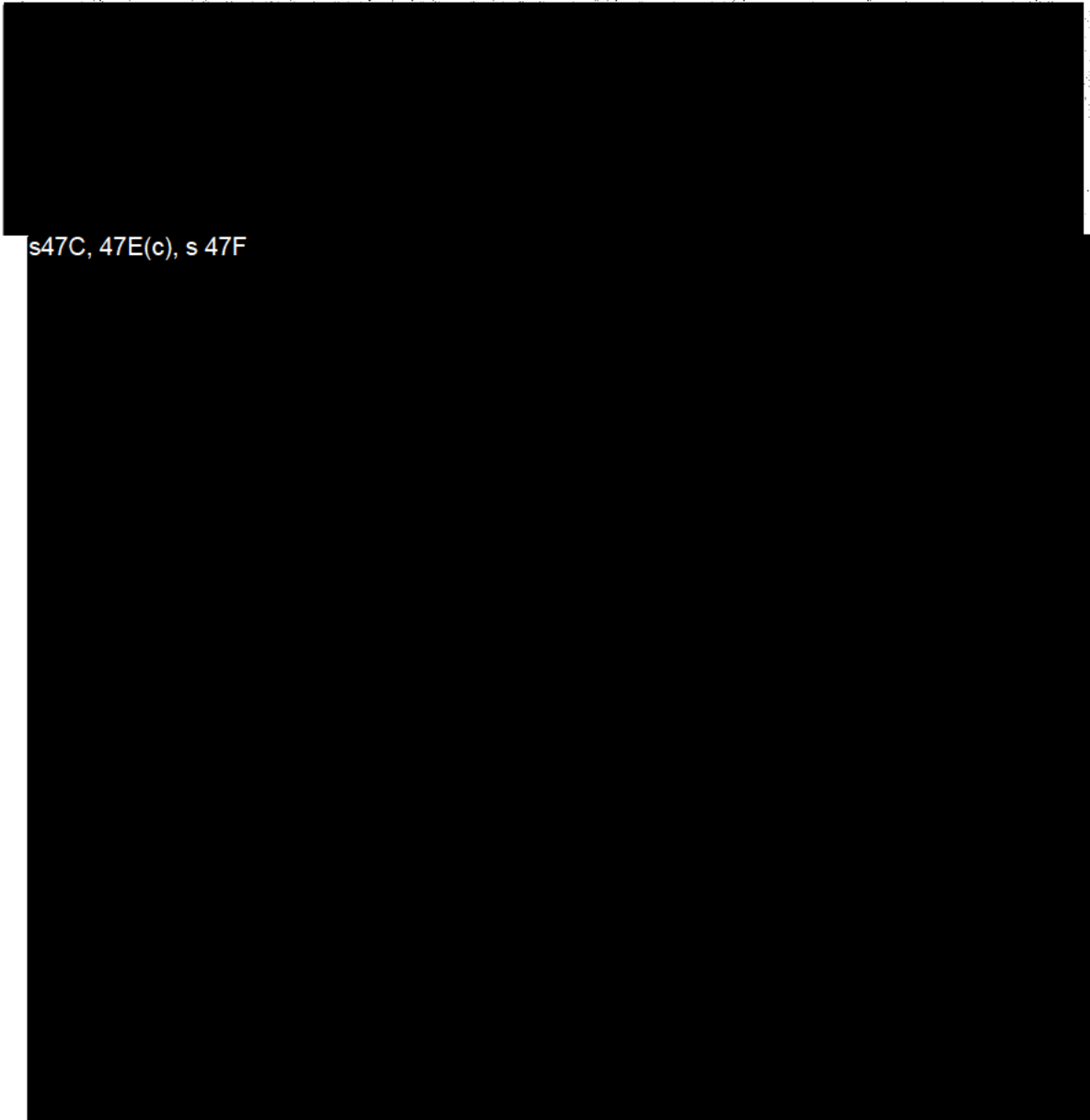
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## Engineering and Technology



s47C, 47E(c), s 47F

F = Fellow

Hob = Hobart

LH = Lucas Heights

BM = Black Mountain

Flt = Floreat

TL = Team Leader

ESP = EcoSciences Precinct

QBP = QLD BioSciences Precinct

V = Visiting Scientist

VS = Vacation Scholar

S = Student

HF = Honorary Fellow

Cas = Casual

App = Apprentice

Cont = Contractor

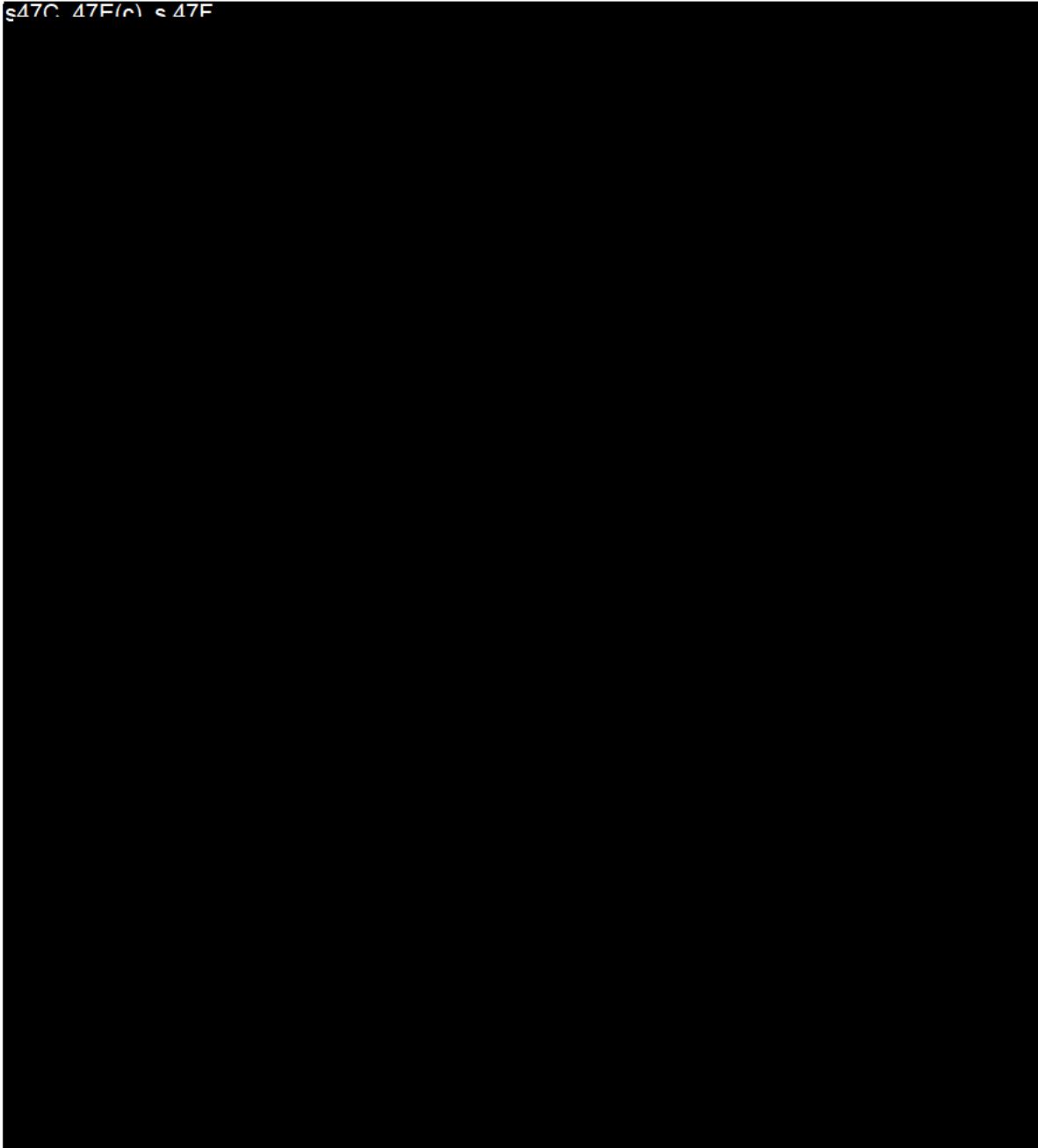


\*redundancies to make up for the difference to 100 will come from RP3 and RP4 within the re-profiling exercise for BU growth in innovation, impact and industrial activities

# Marine Resources & Industries

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

s47C, 47F(c) s 47F



- [REDACTED] Asp = Aspendale
- [REDACTED] Can = Canberra
- [REDACTED] TL = Team Leader
- [REDACTED] QBP = QLD BioSciences Precinct
- [REDACTED] V = Visiting Scientist
- [REDACTED] VS = Vacation Scholar
- [REDACTED] HF = Honorary Fellow
- [REDACTED] VF = Volunteer Fellow



## Coastal Development & Management

s47F, s47E(c), s47C

F = Fellow

Ft = Florest

V = Visiting Scientist

Hbt = Hobart

TL = Team Leader

VS = Vacation Scholar

LH = Lucas Heights

ESP = EcoSciences Precinct

S = Student

BM = Black Mountain

QBP = QLD BioSciences Precinct

HF = Honorary Fellow



# Earth System Assessment



s47C, 47E(c), s 47F



Asp = Aspendale

B = BoM (Collins St, Melb)

Hbt = Hobart

Yar = Black Mountain

Ft = Floreat

ESP = EcoSciences  
Precinct

LH = Lucas Heights

TL = Team Leader

V = Visiting Scientist

VS = Vacation Scholar

S = Student

HF = Honorary Fellow

Vol = Voluntary Fellow

PRF = Post Retirement Fellow

*Italics* = Non CSOF

Int = Internship

ICS = Indigenous Cadet Scheme

R = Retired Fellow

LWOP = Leave Without Pay

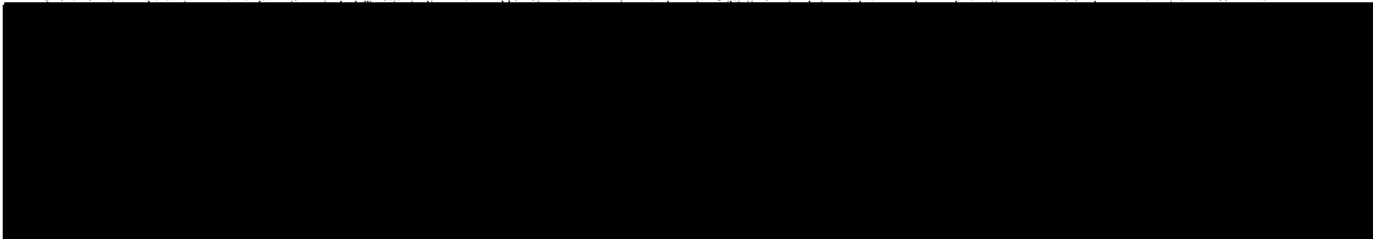




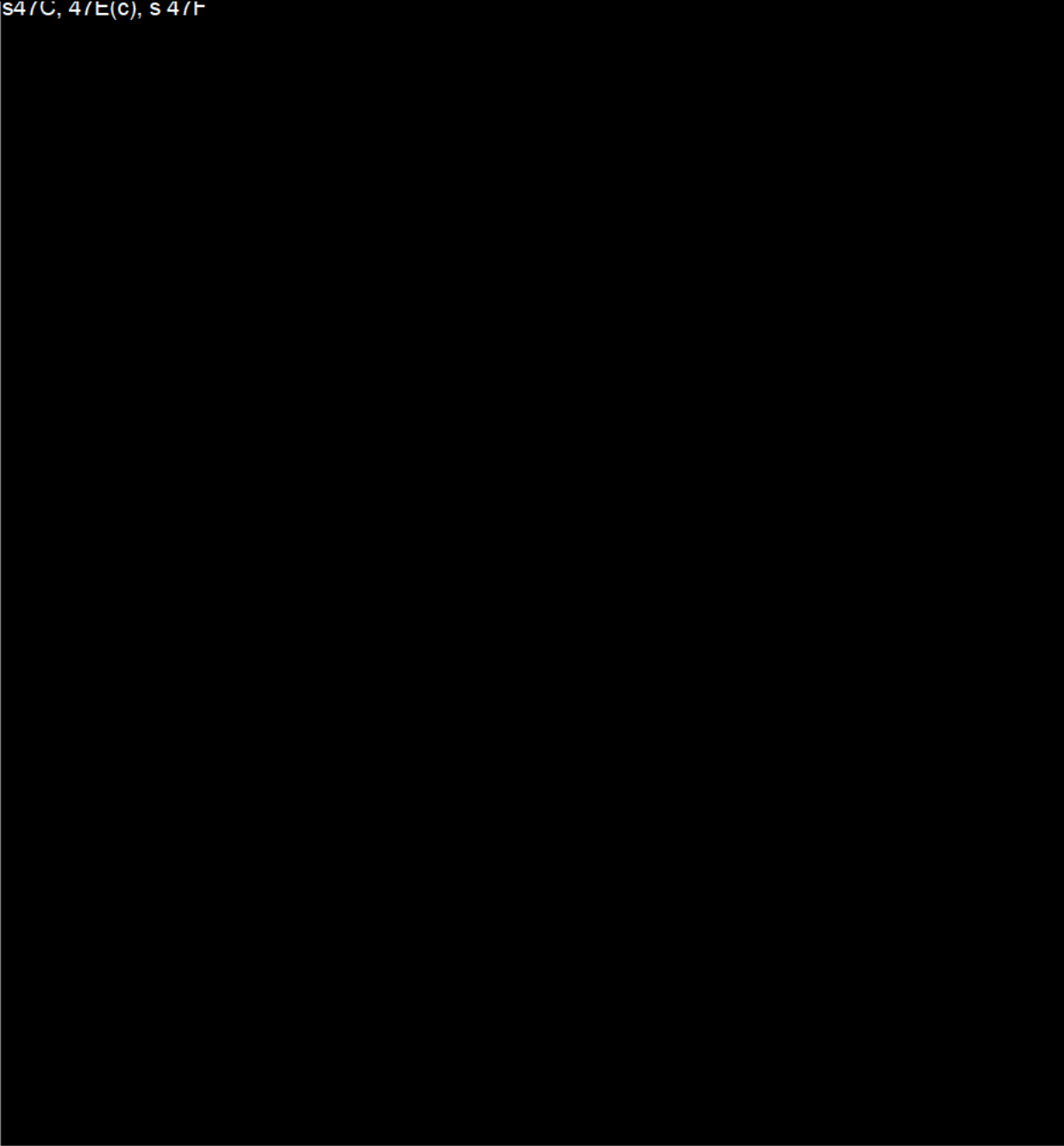
Redundancies

\*\* Remaining staff enable the retention of ACE CRC, BlueLink, IMOS/Moorings/ARGO program, SAR commitments, etc.

# Ocean & Climate Dynamics Program



S4/C, 4/E(C), S4/F



C = CSIRO

Hbt = Hobart

Asp = Aspendale

D = Docklands

Flt = Floreat

TL = Team Leader

Aff = Affiliate

Int = Internship

V = Visiting Scientist

VS = Vacation Scholar

S = Student

HF = Honorary Fellow

Vol = Voluntary Fellow

PRF = Post Retirement Fellow

*Italics* = Non CSOF

## Anevski, Pam (C&G, Parkville)

---

**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Tuesday, 26 January 2016 6:54 PM  
**To:** 'kenleecsiro@gmail.com'  
**Subject:** FW: OA Deep Dive Analysis 210116.pptx

**From:** Alex Wonhas [mailto:wonhas@cantab.net]  
**Sent:** Tuesday, 26 January 2016 7:34 AM  
**To:** McCulloch, Jeff (Finance, Kensington) <Jeffrey.Mcculloch@csiro.au>  
**Cc:** Lee, Ken (O&A, Kensington) <Ken.Lee@csiro.au>; Wong, Tim (Finance, Kensington) <Timothy.Wong@csiro.au>  
**Subject:** Re: OA Deep Dive Analysis 210116.pptx

Hi Jeff, Ken et al.,

Thanks very much for this analysis of impacts on O&A. I have two questions for clarification please:  
- Is it correct that impacted staff have a higher (86%) deployment rate than non impacted (69%)? How would have this picture changed in July 2016 post ACCSP?  
- How much of the \$7m forecast revenue loss would have been lost anyway due to the end of the climate change science program in June 2016?

Cheers  
Alex

On 25 Jan 2016, at 8:47 PM, <Jeffrey.Mcculloch@csiro.au> <Jeffrey.Mcculloch@csiro.au> wrote:

Hi Ken

Attached is my summation of the work completed over the last week.  
I couldn't password protect so please save this locally and delete from email.

There are obviously lots of qualifications on the \$ estimates.  
We need to make this clear at ET as too many times the rough estimates become hard coded!

Some of the tables may take some explaining...once you understand the headings it's straight forward.

The text above the tables tries to explain the data.

I'm happy to talk you through it at any time. Please call my mobile **s 47F**

Best regards  
Jeff

### Jeff McCulloch

Executive Manager Finance  
Energy & Minerals and Environment Sectors  
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*Please consider the environment before printing this email.*

<OA Deep Dive Analysis 210116.pptx>

**Anevski, Pam (C&G, Parkville)**

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**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Wednesday, 27 January 2016 10:48 AM  
**To:** Wonhas, Alex (Executive, North Ryde)  
**Subject:** RE: Corrected O&A External revenue forecasts

Alex:

Unfortunately, the numbers reported by the various research groups do not fully reflect the overall picture of the BU. Internally, we have been having a hard look at the level of confidence within the reported future pipeline funding.

Ken

---

**From:** Wonhas, Alex (Executive, North Ryde)  
**Sent:** Wednesday, 27 January 2016 5:55 AM  
**To:** Lee, Ken (O&A, Kensington) <Ken.Lee@csiro.au>  
**Cc:** McCulloch, Jeff (Finance, Kensington) <Jeffrey.Mcculloch@csiro.au>  
**Subject:** Re: Corrected O&A External revenue forecasts

Thank you both for the very much for this useful analysis and explanation!

Cheers  
Alex

On 26 Jan 2016, at 11:31 PM, Lee, Ken (O&A, Kensington) <Ken.Lee@csiro.au> wrote:

FYI. Same password.

Ken

**Kenneth Lee, Ph.D.**  
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<Alex finance note O&A.docx>

<OA external revenue forecasts Data 22\_Jan\_2016\_PO.pptx>

**Anevski, Pam (C&G, Parkville)**

---

**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Thursday, 28 January 2016 11:37 AM  
**To:** Wonhas, Alex (Executive, North Ryde)  
**Subject:** Growth Areas O&A  
**Attachments:** Alex growth areas.docx

Same password.

Ken

**Kenneth Lee**, Ph.D.  
Director  
Oceans and Atmosphere National Research Flagship  
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T: +61 8 6436 8629

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Alex:

In response to your questions regarding our growth areas, as outlined in our Deep Dive with minor updates (-minus climate and + future science platforms):

#### **Integrated Assessments for the Blue Economy**

- Managing multiple uses, spatial planning, cumulative impacts and social license to operate – development of an innovative complex systems approach coupling socio-economic and biophysical factors

#### **Oceans and Atmospheric Intelligence (i.e. building on Bluelink and eReefs)**

- Continuous environmental (water quality) monitoring – including support to aquaculture
- Restoration ecology – including eco- and geo-engineering
- Autonomous marine platforms
- Data management and visualisation

#### **International Fisheries**

- Development of improved fisheries management strategies
- Genomics and remote sensing methods for fisheries

FYI. I will work on:

- 1) How we can try to cover some of the major NESP deliverables under our new program framework as discussed (e.g. NESP contracts to Cai and Coastal development group – with some redeployments; s 47F
- 2) Minimize impacts at Hobart - need to address loss of employment in TAS (a regional political issue).

**Anevski, Pam (C&G, Parkville)**

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**From:** Wonhas, Alex (Executive, North Ryde)  
**Sent:** Thursday, 28 January 2016 4:58 PM  
**To:** Lee, Ken (O&A, Kensington)  
**Subject:** Alex growth areas  
**Attachments:** Alex growth areas.docx; ATT00001.txt

Hi Ken,

Thank you very much for those growth areas. I've trimmed your list a bit and also tried to make the language a little bit less technical and more intuitive in terms of the potential impact this could achieve. Can you please check my refinements and possibly even add a tangible example where possible and refine the example GBR that I have inserted.

This will be helpful in the communication we're preparing for Larry.

Cheers

Alex

Enhance our understanding of cumulative impacts of developments within the Blue Economy, eg fisheries and resource projects, to minimise their impacts and inform their social licence to operate

Explore the feasibility, risks and costs of climate interventions (also known as geo-engineering)

Build autonomous marine platforms to make a step change in our understanding of the oceans

Develop improved fisheries management strategies for the global market

Grow our genomics and remote sensing methods for fisheries

Grow our capability to restore marine ecosystems, eg the Great Barrier Reef



**Anevski, Pam (C&G, Parkville)**

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**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Thursday, 28 January 2016 5:40 PM  
**To:** Wonhas, Alex (Executive, North Ryde)  
**Subject:** RE: Alex growth areas  
**Attachments:** Alex growth areas\_KL.docx

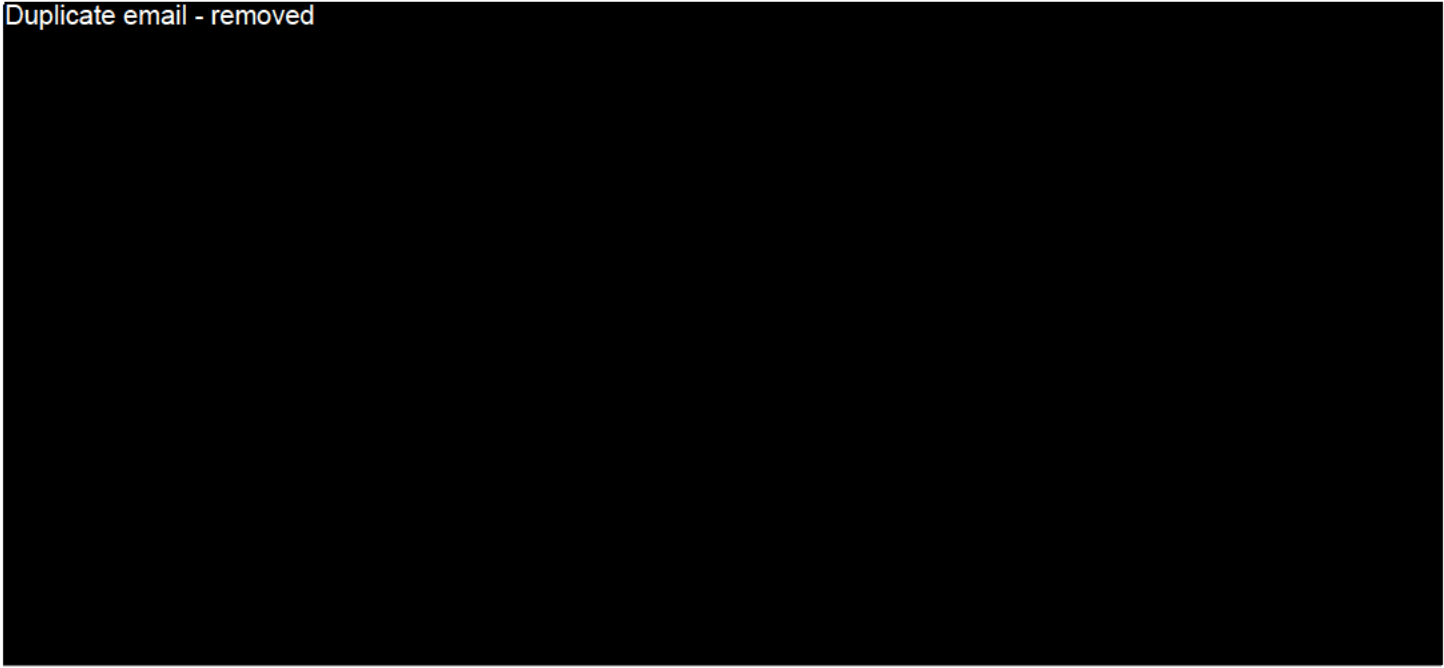
Trust this is acceptable.

Pls keep me informed of Larry's message so I can prepare myself.

Thanks,

Ken

Duplicate email - removed



Enhance our understanding of cumulative impacts of developments within the Blue Economy, eg fisheries and resource projects, to minimise their impacts and inform their social licence to operate

Develop improved fisheries management strategies for the global market

Grow our genomics and remote sensing methods for habitat and fisheries management and protection of the ~~LK(FK1)~~ fisheries

Develop improved monitoring and decision making systems to ensure the quality and sustainability of our ~~marine~~ ~~LK(FK2)~~ ~~Grow our capability to restore~~ marine ecosystems, eg the Great Barrier Reef

Develop and validate ecosystem restoration strategies ~~LK(FK3)~~

Explore the feasibility, risks and costs of climate interventions (also known as geo-engineering)

Build autonomous marine platforms to make a step change in our understanding of the oceans

**Anevski, Pam (C&G, Parkville)**

---

**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Thursday, 28 January 2016 6:39 PM  
**To:** Wonhas, Alex (Executive, North Ryde)  
**Subject:** RE: Alex growth areas

Yes...rather than including the Great Barrier Reef and other coastal areas. (It's really applying the lessons learned from our e-reefs and Bluelink work to all of our surrounding waters)

Ken

---

**From:** Wonhas, Alex (Executive, North Ryde)  
**Sent:** Thursday, 28 January 2016 2:46 PM  
**To:** Lee, Ken (O&A, Kensington) <Ken.Lee@csiro.au>  
**Subject:** Re: Alex growth areas

Hi Ken,

Great edits. One final question, could we say:


Develop improved monitoring and decision making systems to ensure the quality and sustainability of our marine ecosystems including the **great barrier reef**

It might make it more tangible for people if we mention the reef but if that focus is causing you problems, then let's drop it.

I'll share Larry's draft message as soon as I see a version...

Cheers  
Alex

Duplicate email removed



<b>Oceans and Atmosphere</b>	<b>Loss of up to</b> s47C <b>staff</b>	<b>Impact area(s):</b> 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
		s47C
		<b>Why:</b> Given the diminishing funds available for climate science research, 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
		s47C
		<b>Location impact:</b> largest site impacts from these changes will be in Yarralumia, Aspendale and Hobart s47C
		<b>What will be the impact on CSIRO's contribution to the National Environment Science Program (NESP)?</b>

		<p><i>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 in the ESCC hub to ensure it minimises the impacts of its reduced involvement.</i></p>
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s47C



## Anevski, Pam (C&G, Parkville)

---

**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Friday, 29 January 2016 6:17 PM  
**To:** Wonhas, Alex (Executive, North Ryde)  
**Subject:** Analysis from Andreas FYI.  
**Attachments:** Schiller note.docx

Ken

**Kenneth Lee, Ph.D.**  
Director  
Oceans and Atmosphere  
CSIRO

E: ken.lee@csiro.au  
T: +61 8 6436 8629  
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Kensington, WA, 6151, Australia

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Andy Schiller

Jan 28 (1 day ago)

[REDACTED]

All,

[REDACTED]  
[REDACTED]  
[REDACTED]

As mentioned at our telecon today the purpose of this email is to provide you all, but especially Ken, with some further analysis of our capability in the NESP and IMOS domains.

Mapping of staff listed in IMOS projects to teams in RP1 and RP2 tells us that there are currently 6 (RP1) plus 1 (RP2) teams who provide staff to IMOS. Of these 7 teams 2 are on the redundancy list but affected IMOS staff only have very small percentages (order 0.1 FTE) in IMOS **s 47F, 47E(c)** [REDACTED]. So there won't be a problem in delivering IMOS if we implement our redundancy plan (as per our design to keep IMOS alive).

Mapping of staff listed in NESP projects to teams in RP1 and RP2 tells us that there are currently 9 (RP1) plus 8 (RP2) teams who provide staff to NESP. Of these 17 teams 13 are on the redundancy list. The remaining 4 teams who could still contribute to NESP are:

- (1) Coastal Sea Level Extremes and Waves [REDACTED]
- (2) Southern Ocean [REDACTED] - also ACE CRC team
- (3) Broad-scale Observations and Dynamics [REDACTED]
- (4) Ocean Reanalysis [REDACTED] Note: this team only provides some programming support to NESP/ACCESS but no science.

There are five teams we want to retain who currently have no involvement in NESP but could be (to a very limited extent) be redirected to support some aspects of NESP:

- (1) Indo-Pacific Dynamics [REDACTED] - Note: the only one of the five teams which could contribute to the existing scientific scope of NESP.
- (2) Ocean Carbon Observations [REDACTED] - This team is heavily involved in IMOS, mostly observational & technical capability.
- (3) Ocean Remote Sensing [REDACTED] very little scope to assist NESP as the team focuses on short-term coastal and ocean now/forecasting.

(4) Aerosols [REDACTED] aerosols are currently not in scope for NESP hub. This is also an observational team (as opposed to the ACCESS modelling team dealing with aerosols) ==> different skill set.

(5) Air quality [REDACTED]): not in scope for NESP hub. Team focuses on shorter time scales.

My two cents worth in case Ken needs to quickly draw on some information in further conversations with Alex and Co.

Best,

Andreas



**Anevski, Pam (C&G, Parkville)**

**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Monday, 1 February 2016 6:27 PM  
**To:** Wonhas, Alex (Executive, North Ryde)  
**Subject:** RE: External revenue validation

**Flag Status:** Flagged

Alex:

No, I agree that the revenue line is not realistic at this point in time. The numbers provided were our original estimate from the Deep Dive exercise. We are target for this year's budget. The down years are dependent on the route we will take with NESP, etc.

It's important to note that our portion of the \$5M under the NESP Climate program will vary from year to year based on the priorities set by Environment each November. At best it will only be 1/3 of the allocation for CSIRO. It's our teams view that use of appropriation funding and scientific expertise to support the NESP Climate Program will also reduce our rate of growth in other areas within the BU with closer links to our new strategic focus on industry and innovation.

I'll have a more detailed analysis for you late tomorrow morning.

Both HR and Communications have contacted me today regarding Larry's announcement. Staff will be expecting me to follow up with some details to address their concerns.

Ken

**From:** Wonhas, Alex (Executive, North Ryde)  
**Sent:** Monday, 1 February 2016 9:19 AM  
**To:** Lee, Ken (O&A, Kensington) <Ken.Lee@csiro.au>  
**Cc:** McCulloch, Jeff (Finance, Kensington) <Jeffrey.McCulloch@csiro.au>; Wong, Tim (Finance, Kensington) <Timothy.Wong@csiro.au>  
**Subject:** External revenue validation

Hi Ken,

I hope you had a good weekend despite the current turmoil!

CSIRO is now working on its forward budgets. Attached is what I have seen for O&A. I am concerned that what is currently in the system as your revenue line is not realistic. I would have expected to see a dip in revenues, followed by a reasonable growth from that level once the changes have been bedded down. Could you please come up with your and your teams' view on this?

Cheers  
 Alex

4 Year Budget including Grant by Allocation				Budget Validation - Review of 2015/16 Actuals			
	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2018/19
Direct Operations	24,224	24,714	25,720	25,419			
External Revenue - CCS	22,554	26,447	48,671	30,504			
External Revenue - IP							
External Revenue - Other	209	271	711	293			
Total Revenue	46,987	51,432	75,102	56,216			
SG&E External Revenue	15,154	15,152	15,152	15,152			
Labour - Operating	45,603	50,882	50,842	51,827			
Labour - Support	19,893	20,336	20,336	20,336			
Total Labour	65,496	71,218	71,178	72,163			
Operating	19,893	20,336	20,336	20,336			
Total Expenses	85,392	91,554	91,514	92,499			
Target Operating Result	18,911	18,911	18,911	18,911			
Actual 2015/16 Operating Result	18,911	18,911	18,911	18,911			
Target Operating Result	18,911	18,911	18,911	18,911			
Actual 2015/16 Operating Result	18,911	18,911	18,911	18,911			

**From:** Wonhas, Alex (Executive, North Ryde)  
**Sent:** Monday, 1 February 2016 9:19 AM  
**To:** Lee, Ken (O&A, Kensington) <Ken.Lee@csiro.au>  
**Cc:** McCulloch, Jeff (Finance, Kensington) <Jeffrey.Mcculloch@csiro.au>; Wong, Tim (Finance, Kensington) <Timothy.Wong@csiro.au>  
**Subject:** External revenue validation

Hi Ken,

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Cheers  
Alex

A Year Budgeted Performance Statement				Budget Validation - Summary (Unit to complete)			
	2015	2016	2017	2018	2019	2020	2021
<b>Direct Appropriation</b>	26,342	26,724	18,730	27,418	28,180	29,274	29,280
<b>External Revenue - CCS</b>	40,551	49,247	51,835	54,996	48,169	42,147	41,551
<b>External Revenue - SP</b>	800	721	345	365	500	721	740
<b>Total Revenue</b>	67,693	76,692	70,910	82,779	86,849	72,142	71,571
<b>Total External Revenue</b>	41,351	49,968	52,180	55,361	48,669	42,868	42,291
<b>Labour - Operating</b>	48,429	50,092	50,862	51,032	49,129	50,092	49,247
<b>Labour - Other</b>	10,126	10,126	10,126	10,126	10,126	10,126	10,126
<b>Total Labour</b>	58,555	60,218	60,988	61,158	59,255	60,218	59,373
<b>Overhead</b>	18,892	18,936	18,936	18,936	18,843	18,436	18,228
<b>Total Expenses</b>	77,447	79,154	79,924	80,094	78,103	78,654	77,601
<b>Target Operating Result</b>	10,000	10,000	10,000	10,000	10,000	10,000	10,000
<b>Target Operating Result</b>	10,000	10,000	10,000	10,000	10,000	10,000	10,000
<b>Target Operating Result</b>	10,000	10,000	10,000	10,000	10,000	10,000	10,000

Alex:

In response to your question on our total external revenue in the down years:

JANUARY O&A DIVE RETURN	Option 1 - Alternative				Budget Validation - Sustainable Unit to complete			
4 Year Budget including Strategy Adjustments	2016/17	2017/18	2018/19	2019/20	2016/17	2017/18	2018/19	2019/20
Direct Appropriation	26,328	26,223	26,730	27,618	26,328	26,223	26,282	26,918
External Revenue - CCS	47,534	46,447	48,033	50,594	48,168	41,447	41,831	45,504
External Revenue - IP								
External Revenue - Other	783	721	741	765	859	721	741	765
Total Revenue	74,645	73,391	75,504	78,987	75,355	68,391	68,854	73,187
Total External Revenue	48,317	47,168	48,774	51,359	49,027	42,168	42,572	46,274
Labour - Ongoing	49,672	50,827	50,812	51,839	49,672	49,672	49,672	49,672
Redundancy Costs					19,000	1,000		
Total Labour	49,672	50,827	50,812	51,839	68,672	50,672	49,672	49,672
Operating	19,862	22,326	24,376	26,066	22,341	19,456	21,036	23,366
Total Expenses	69,534	73,153	75,188	77,905	90,013	69,128	70,708	73,038
Target Operating Result		854	948	854	14,342	156	948	854
Additional redundancy costs					19,000	1,000		
Target Operating Result		854	948	854	2,142	1,156	948	854

The illustration above only depicts Option 1 (the current plan of our committee)

- Key assumption driving Option 1 – the identified staff minimally impacted external revenue for FY16/17 but anticipate contagion to impact productivity. Hence the dip in FY16/17 by \$2M to \$39.2M. This will improve by \$2M in FY17/18 to \$41.2M and by \$2.9M to \$44.3M in FY18/19
- However the external revenue growth will not offset the cost levels. Excluding redundancies, the BU will track on a consecutive 3-year deficit path (NB. In FY16/17 excluding the \$1M redundancies, the deficit should be around \$1.146M as opposed to the illustrated \$2.146M.
- Based on current financial data without IMOS and NESP - RP1 and RP5 have very little within their pipeline for next year.

The problem and extensive caveat on Option 2 (retaining NESP consolidated into 16 FTEs)

- There is no surety that the level of work over the next 5 years in NESP will be consistent if the Dept of Environment varies the scope of work annually (NESP has to submit annual revised scope depending on the research flavour of the day). This means the 16 FTE will have inconsistent deployment and most likely not fully deployed.
- Assuming the identified 16 FTE are working on external projects, their role in NESP could potentially impact external revenue generation into the out years. Estimated impact 16FTE x \$120k\* = \$1.92M
- Note that originally NESP comprise of 72 fragmented staff with minimal deployment ranging from 10% to 30%.
- The issue:-
  - Retaining 16 FTE will either mean 16 staff OUTSIDE the initial identified 100, which would mean, you have to go back in and identify 16 to be removed
  - Or if 16 is from WITHIN, then we have to find another 16 FTE to ensure our redundancy quota is maintained.
  - 16 FTE = will cost us \$2.16M pa and assuming 23.4% of associated OPEX per FTE will imply total direct cost to be in the vicinity of \$2.7M. This assumes NESP takes up 100% of their time.

\* 350 FTE research staff in O&A contributing \$42M gives you an average of \$120K/FTE

## **Anevski, Pam (C&G, Parkville)**

---

**From:** Marshall, Larry (Executive, Campbell)  
**Sent:** Thursday, 4 February 2016 11:46 AM  
**To:** All Staff and Affiliates-DG  
**Subject:** News on growth areas and changes

Dear colleagues

We have seen a major change already this year with oil prices way down, other commodities were already low, China slowing growth, polar ice packs continuing to melt, major financial markets down, and our dollar losing value. How do we respond? More importantly, how can we better predict these changes so we aren't responding reactively but rather investing ahead of time in the right areas of science to help mitigate these changes? I've run companies through three recessions and 9/11 and recognise change can be frightening, but we must embrace it and turn it to our advantage if we want to flourish.

Few decisions are irreversible, but in Australia we worry a lot about failure and spend too much time analysing rather than doing. Startups work faster because they dare to try new things and measure in real time whether they are working, and they are not afraid to change or pivot to deliver the best outcome. We must not be paralysed by our past.

Indeed, just like a startup, our nation needs to re-invent itself (pivot) in order to navigate a new and uncertain future. Our nation needs us to create the science to enable the innovation for this profound reinvention. Commodities are the bedrock of our nation and we will always support that industry especially now in times of declining prices when innovation can fundamentally change the game. But just selling commodities is not the path to an innovation nation – we have to be smarter than that: can we develop science that turns a commodity into a unique product that sells for a premium? We need more from ore.

Personally, I have high hopes we can transmute commodity mineral sands into unique Titanium ink for 3D printing to create a new multi-billion dollar industry, or coal into a cleaner form of diesel fuel to reinvigorate a 43 billion dollar industry, or to improve yield and prevent waste, making mining more profitable and sustainable, or synthetic biology to engineer precisely the attributes we need for health or sustainability, or to breed new strains of food and agricultural products that are healthier, more sustainable and highly differentiated so that Australia can become a unique source of quality value-added products rather than just a food bowl.

Digital technology will disrupt every Australian industry and each part of our business must reinvent itself to help Australia respond to this global challenge. This is why Data61 was the lynchpin of our new strategy, and many of our new investments are channeled through our existing business units to drive collaboration with our new digital business Data61.

The above are some of the new investment areas, others include:

Big Data, a clear priority for us and for the Government as increasing Australia's data literacy was specifically funded through NISA (National Innovation and Science Agenda). What science can we create that will help our nation adapt to and even benefit from digital disruption? Clearly Cybersecurity, open data, and anonymisation of data sets are the gel that will enable greater sharing of data to deliver better outcomes faster.

A national platform for the application of environmental big data sets and sensor networks building in the successful collaboration demonstrated by sense T, the first whole of economy sensor network

Health, a major growth area if we can develop the right science to keep our people healthier and develop better technologies to mitigate disease – just like energy efficiency, keeping someone healthy has exponential cost savings, as we have already shown working with hospital ERs, data saves lives, in the same way that designer foods make lives healthier.

ON our deep-tech Accelerator program is opening to partners, increasing the start-up and product management capability across CSIRO and developing a deep customer-focused practice, supported by NISA funding. Already the first group of ON participants are sharing their learnings with their business units and in particular the

realisation that the scientific method can be applied to understanding customers, and that invention only becomes innovation in the hands of those customers.

ON is the wellspring that will drive change throughout our business, it will reward deeper collaboration with our 41 university partners, and it will feed our Innovation fund with the science it needs to support a new generation of deep tech companies.

We have a vibrant SME community, they have good market visions but limited capital, CSIRO has the ability to transform these companies as we did with Textor, MDI, and Anatomic, our technology and engineering expertise can take science off the lab bench and deliver a beta to an SME that can transform their business. We will deliver more open innovation centres like LAB 22, next will be our Food innovation Centre.

Improving the productivity and sustainability of the mining industry through ore sorting technology and partnerships.

SMIS particularly inspiring women in science and coding and innovation in kids, per the NISA objective - when we inspire a child, the payback is exponential and delivers for decades.

Understanding and finding new techniques and technologies for precision agriculture in a resource constrained world.

The SKA, the biggest science project in the world – move over Google, this is the BIGGEST data.

I know this is a lot, and with finite resources, we must pick and choose where to prioritise. This means as we focus on new areas we must stop other areas. Our people are innovative and many can reinvent themselves to learn these new areas. We will need new people with new skills to help us navigate this new future.

CSIRO pioneered climate research, the same way we saved the cotton and wool industries for our nation. But we cannot rest on our laurels as that is the path to mediocrity. Our climate models are among the best in the world and our measurements honed those models to prove global climate change. That question has been answered, and the new question is what do we do about it, and how can we find solutions for the climate we will be living with?

Our investment in precision agriculture combines unique sensors with predictive analytics to help our farming community respond to climate change, and grow their prosperity. Following our seminal work published in Nature around Australia's National Outlook, we believe there is a path where climate and industry can be partners, now we must walk that path to prove our science. The development plan for Northern Australia opens many questions around biodiversity and sustainability of agriculture, soils and water that we must answer to ensure the development is done responsibly and sustainably.

The Great Barrier Reef is at risk, and clearly we need to enhance our nation's capability to restore marine ecosystems. We will grow our capability in autonomous marine platforms to make a step change in our management of the oceans, climate adaptation, climate interventions (geo-engineering), emergency response to extreme events, understanding of cumulative impacts of Blue Economy developments, our world leading water management capability, genomics and remote sensing methods for fisheries.

Some of our businesses have saturated the domestic market, but as a result of our excellent science they have been recognised globally and we are working on opportunities for land and water reform and development in several large countries that need our help. As rapidly growing countries begin to dominate the carbon footprint we must find ways to help them grow sustainably, drawing on the lessons learned by our own experience. CSIRO developed many of the clean coal technologies that protected our environment from harmful emissions, but we must do more. We have shown by combining our climate models with smart algorithms that we can dramatically reduce energy consumption of buildings, but can we invent new materials and better building designs that can apply to smarter cities of the future to improve even more? Our energy storage technologies can be combined with our solar and grid management technologies to enable greater penetration of renewables without increasing the cost of electricity, reversing the unfortunate trend which limits these technologies today. As our National Outlook work 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%.

Food and Nutrition serves three markets, which is unnecessarily challenging. In discussion with Martin Cole and his team and with our Board, we are considering bringing the food activities into Agriculture as this would align our food and agriculture work perfectly with the Food and Agribusiness Industry Growth Centre. In this case, the nutrition part of Food and Nutrition would move to the new Health business (this would be analogous to eHealth

moving from DPAS into health earlier this year). In keeping with the structural shifts made previously, this completes alignment of our science to specific market verticals.

What does this all mean? Normally a business has to cut to grow, the cuts enable investment in the new direction. Fortunately, NISA gave us the runway we needed to realign and restore our business for growth. This was a major win for team CSIRO, but now we need to justify our country's faith in us by delivering.

However, as our business unit leaders work through the process of realigning their teams for the new strategy it is inevitable that there will be job losses. Overall, this strategic alignment will not lead to an overall reduction in our workforce. Our headcount is projected to be unchanged at the end of a two year period, but it is anticipated there could be up to 175 less CSIRO people per year during this two year transition. There will be reductions in headcount in Data61, Oceans & Atmosphere, Land & Water and Manufacturing, but other business units will also be impacted in that changes in capabilities are required and there will also be some transfer of personnel. For some business units there will be limited or no staff impacts.

I am mindful that CSIRO has had significant changes over recent years. This is not a repeat of the major change we had several years ago, and to put this planned transition into perspective, on average over a number of years we have had 220 people per year leaving CSIRO through redundancy. While I know that a smaller number of job losses in no way diminishes the pain of losing team members and friends, it is something that we must do to renew our business. The exact numbers are being worked through by business leaders, but I expect the numbers won't be too different from our historical average.

We will continue the process of integrating Data61 into CSIRO, and I am pleased to note that the impact on the numbers of staff will be significantly lower than was anticipated.

Turnover is essential for a healthy business, there must always be an advancement path for growth, and opportunity for new people to join CSIRO. This does not in any way diminish the importance of work done in the past and those who did it, we will always honour those who built the foundation for our future, but we must evolve or grow stagnant.

I realise that 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 or General Manager shortly to discuss the details 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 manager or to your closest comms colleague.

It's personally a tough message for me to share as I joined CSIRO with a growth objective and one which I don't resilie 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.

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)  
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## **Anevski, Pam (C&G, Parkville)**

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**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Friday, 5 February 2016 12:14 AM  
**To:** Wonhas, Alex (Executive, North Ryde)  
**Subject:** Path forward  
**Attachments:** NESP\_revised\_\_delivery\_Cai\_Lee.docx

Alex:

Cai thinks he can lead us through most of the NESP program deliverables with remaining staff – if we have access to the funds currently allocated. As you know, contract variations are part of our normal science business practice.

This proposal has the support of BD and Finance. I envision Cai leading our CSIRO contribution within the NESP Hub Partnership currently coordinated by Helen. If this isn't accepted, we will obviously work with the partners towards an alternative solution led by the other agencies.

Ken

**Kenneth Lee, Ph.D.**  
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Oceans and Atmosphere National Research Flagship  
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## **Delivering to NESP after restructure**

NESP funding towards ACCESS is approximately \$500k p.a., external (\$1m if counting our co-investment). Deliverables are primarily focused within 2 projects: 1) Participating in IPCC AR6 model experiment (\$250 p.a. external), and 2) ACCESS model improvement (\$200k p.a. external). Based on a total revenue base of only \$500k p.a.; it is impossible to justify our level of appropriation fund investment towards the development and maintenance of ACCESS model in the future (i.e., 15 FTE's identified by Helen).

However, we can deliver most of the NESP science related to ACCESS. The science in CMIP6 experiments can be delivered by using outputs from other models (there are some 30 models). We also suggest shifting some of the funds for ACCESS improvement to climate variability and predictability – work that is closely aligned with CSIRO's new strategic direction. This will potentially strengthen the outcome of our Argo work to improve the reliability and accuracy of our predictive models.

The remaining \$1.5 m NESP fund for science goes to water, extremes, climate projections, and Argo. We can deliver most of this work within O&A's revised organizational structure (see details below). If a small portion cannot be done, we can subcontract to universities (for example, our carbon work 2.9). This is the only project that is most in doubt, but still we can use outputs from other models.

**These changes will have to be agreed on by DoE prior to implementation through a contract variation.**

**Table 1: Summary of Earth Systems and Climate Change Hub Project Portfolio for Research Plan V1 and V2. [Note that Projects in the Research Plan V2 were scoped to be a maximum of 3 years in duration. Additional research proposals (to 2020) will be called for under later Research Plans].**

s47C



s47C



**Anevski, Pam (C&G, Parkville)**

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**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Saturday, 6 February 2016 10:02 PM  
**To:** Wonhas, Alex (Executive, North Ryde); Marshall, Larry (Executive, Campbell)  
**Cc:** Lonergan, Annemaree (Executive, Campbell); Moate, Toni (Executive, Hobart)  
**Subject:** RE: News on growth areas and changes

Larry/Alex:

While there will be reductions within all 5 of the Research Programs within O&A and growth in emerging areas, all of the discussion was focused on our climate research. Our scientists are reaching out to the scientific community with messages that are not accurate (e.g. cutting of all climate research) – as we have not announced the specific projects that will be impacted.

Apparently, BoM has asked Cai – if we were willing to transfer some of our specialized analytical monitoring instruments to their organization, if we are no longer using them.

Ken  
)

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**From:** Wonhas, Alex (Executive, North Ryde)  
**Sent:** Saturday, 6 February 2016 3:57 PM  
**To:** Marshall, Larry (Executive, Campbell) <Larry.Marshall@csiro.au>  
**Cc:** Lee, Ken (O&A, Kensington) <Ken.Lee@csiro.au>; Lonergan, Annemaree (Executive, Campbell) <Annemaree.Lonergan@csiro.au>; Moate, Toni (Executive, Hobart) <Toni.Moate@csiro.au>  
**Subject:** Re: News on growth areas and changes

Larry,

Happy to give you some of the issues that were raised in the Hobart meeting but frankly, I doubt they will be news to you. Key concerns were

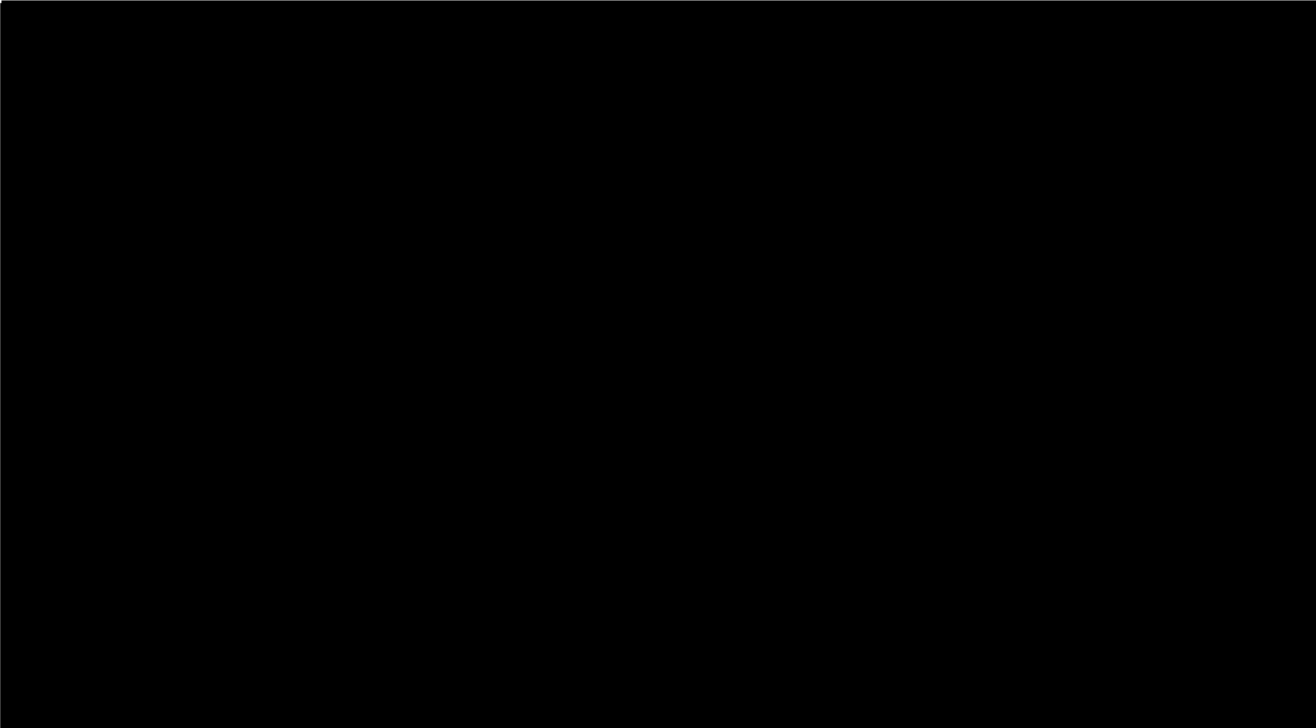
- Who will carry forward the measuring work if CSIRO doesn't do it? [There will be a reduction to the minimum contractual requirements. No one has the money]
- How can you do adaptation and mitigation in a targeted way without understanding the future climate?
- Would we consider moving capability to other players in the innovation system? [Yes, but no one is prepared to pay for it. I have already had the explicit discussion with Rob Vertessy the head of the Bureau of Metrology]

Ken, feel free to add any major ones I might have missed.

Cheers  
Alex

[REDACTED]

[REDACTED]



**From:** Marshall, Larry (Executive, Campbell)  
**Sent:** Thursday, 4 February 2016 11:46 AM  
**To:** All Staff and Affiliates-DG <[All-Staff-Affiliates-DG@internal.csiro.au](mailto:All-Staff-Affiliates-DG@internal.csiro.au)>  
**Subject:** News on growth areas and changes

Dear colleagues

We have seen a major change already this year with oil prices way down, other commodities were already low, China slowing growth, polar ice packs continuing to melt, major financial markets down, and our dollar losing value. How do we respond? More importantly, how can we better predict these changes so we aren't responding reactively but rather investing ahead of time in the right areas of science to help mitigate these changes? I've run companies through three recessions and 9/11 and recognise change can be frightening, but we must embrace it and turn it to our advantage if we want to flourish.

Few decisions are irreversible, but in Australia we worry a lot about failure and spend too much time analysing rather than doing. Startups work faster because they dare to try new things and measure in real time whether they are working, and they are not afraid to change or pivot to deliver the best outcome. We must not be paralysed by our past.

Indeed, just like a startup, our nation needs to re-invent itself (pivot) in order to navigate a new and uncertain future. Our nation needs us to create the science to enable the innovation for this profound reinvention. Commodities are the bedrock of our nation and we will always support that industry especially now in times of declining prices when innovation can fundamentally change the game. But just selling commodities is not the path to an innovation nation – we have to be smarter than that: can we develop science that turns a commodity into a unique product that sells for a premium? We need more from ore.

Personally, I have high hopes we can transmute commodity mineral sands into unique Titanium ink for 3D printing to create a new multi-billion dollar industry, or coal into a cleaner form of diesel fuel to reinvigorate a 43 billion dollar industry, or to improve yield and prevent waste, making mining more profitable and sustainable, or synthetic biology to engineer precisely the attributes we need for health or sustainability, or to breed new strains of food and agricultural products that are

healthier, more sustainable and highly differentiated so that Australia can become a unique source of quality value-added products rather than just a food bowl.

Digital technology will disrupt every Australian industry and each part of our business must reinvent itself to help Australia respond to this global challenge. This is why Data61 was the lynchpin of our new strategy, and many of our new investments are channeled through our existing business units to drive collaboration with our new digital business Data61.

The above are some of the new investment areas, others include:

Big Data, a clear priority for us and for the Government as increasing Australia's data literacy was specifically funded through NISA (National Innovation and Science Agenda). What science can we create that will help our nation adapt to and even benefit from digital disruption? Clearly Cybersecurity, open data, and anonymisation of data sets are the gel that will enable greater sharing of data to deliver better outcomes faster.

A national platform for the application of environmental big data sets and sensor networks building in the successful collaboration demonstrated by sense T, the first whole of economy sensor network

Health, a major growth area if we can develop the right science to keep our people healthier and develop better technologies to mitigate disease – just like energy efficiency, keeping someone healthy has exponential cost savings, as we have already shown working with hospital ERs, data saves lives, in the same way that designer foods make lives healthier.

ON our deep-tech Accelerator program is opening to partners, increasing the start-up and product management capability across CSIRO and developing a deep customer-focused practice, supported by NISA funding. Already the first group of ON participants are sharing their learnings with their business units and in particular the realisation that the scientific method can be applied to understanding customers, and that invention only becomes innovation in the hands of those customers.

ON is the wellspring that will drive change throughout our business, it will reward deeper collaboration with our 41 university partners, and it will feed our Innovation fund with the science it needs to support a new generation of deep tech companies.

We have a vibrant SME community, they have good market visions but limited capital, CSIRO has the ability to transform these companies as we did with Textor, MDI, and Anatomics, our technology and engineering expertise can take science off the lab bench and deliver a beta to an SME that can transform their business. We will deliver more open innovation centres like LAB 22, next will be our Food innovation Centre.

Improving the productivity and sustainability of the mining industry through ore sorting technology and partnerships.

SMIS particularly inspiring women in science and coding and innovation in kids, per the NISA objective - when we inspire a child, the payback is exponential and delivers for decades.

Understanding and finding new techniques and technologies for precision agriculture in a resource constrained world.

The SKA, the biggest science project in the world – move over Google, this is the BIGGEST data.

I know this is a lot, and with finite resources, we must pick and choose where to prioritise. This means as we focus on new areas we must stop other areas. Our people are innovative and many can reinvent themselves to learn these new areas. We will need new people with new skills to help us navigate this new future.

CSIRO pioneered climate research, the same way we saved the cotton and wool industries for our nation. But we cannot rest on our laurels as that is the path to mediocrity. Our climate models are among the best in the world and our measurements honed those models to prove global climate change. That question has been answered, and the new question is what do we do about it, and how can we find solutions for the climate we will be living with?

Our investment in precision agriculture combines unique sensors with predictive analytics to help our farming community respond to climate change, and grow their prosperity. Following our seminal work published in Nature around Australia's National Outlook, we believe there is a path where climate and industry can be partners, now we must walk that path to prove our science. The development plan for Northern Australia opens many questions around biodiversity and sustainability of agriculture, soils and water that we must answer to ensure the development is done responsibly and sustainably.

The Great Barrier Reef is at risk, and clearly we need to enhance our nation's capability to restore marine ecosystems. We will grow our capability in autonomous marine platforms to make a step change in our management of the oceans, climate adaptation, climate interventions (geo-engineering), emergency response to extreme events, understanding of cumulative impacts of Blue Economy developments, our world leading water management capability, genomics and remote sensing methods for fisheries.

Some of our businesses have saturated the domestic market, but as a result of our excellent science they have been recognised globally and we are working on opportunities for land and water reform and development in several large countries that need our help. As rapidly growing countries begin to dominate the carbon footprint we must find ways to help them grow sustainably, drawing on the lessons learned by our own experience. CSIRO developed many of the clean coal technologies that protected our environment from harmful emissions, but we must do more. We have shown by combining our climate models with smart algorithms that we can dramatically reduce energy consumption of buildings, but can we invent new materials and better building designs that can apply to smarter cities of the future to improve even more? Our energy storage technologies can be combined with our solar and grid management technologies to enable greater penetration of renewables without increasing the cost of electricity, reversing the unfortunate trend which limits these technologies today. As our National Outlook work 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%.

Food and Nutrition serves three markets, which is unnecessarily challenging. In discussion with Martin Cole and his team and with our Board, we are considering bringing the food activities into Agriculture as this would align our food and agriculture work perfectly with the Food and Agribusiness Industry Growth Centre. In this case, the nutrition part of Food and Nutrition would move to the new Health business (this would be analogous to eHealth moving from DPAS into health earlier this year). In keeping with the structural shifts made previously, this completes alignment of our science to specific market verticals.

What does this all mean? Normally a business has to cut to grow, the cuts enable investment in the new direction. Fortunately, NISA gave us the runway we needed to realign and restore our business for growth. This was a major win for team CSIRO, but now we need to justify our country's faith in us by delivering.

However, as our business unit leaders work through the process of realigning their teams for the new strategy it is inevitable that there will be job losses. Overall, this strategic alignment will not lead to an overall reduction in our workforce. Our headcount is projected to be unchanged at the end of a two year period, but it is anticipated there could be up to 175 less CSIRO people per year during this two year transition. There will be reductions in headcount in Data61, Oceans & Atmosphere, Land & Water and Manufacturing, but other business units will also be impacted in that changes in capabilities are required and there will also be some transfer of personnel. For some business units there will be limited or no staff impacts.

I am mindful that CSIRO has had significant changes over recent years. This is not a repeat of the major change we had several years ago, and to put this planned transition into perspective, on average over a number of years we have had 220 people per year leaving CSIRO through redundancy. While I know that a smaller number of job losses in no way diminishes the pain of

losing team members and friends, it is something that we must do to renew our business. The exact numbers are being worked through by business leaders, but I expect the numbers won't be too different from our historical average.

We will continue the process of integrating Data61 into CSIRO, and I am pleased to note that the impact on the numbers of staff will be significantly lower than was anticipated.

Turnover is essential for a healthy business, there must always be an advancement path for growth, and opportunity for new people to join CSIRO. This does not in any way diminish the importance of work done in the past and those who did it, we will always honour those who built the foundation for our future, but we must evolve or grow stagnant.

I realise that 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 or General Manager shortly to discuss the details 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 manager or to your closest comms colleague.

It's personally a tough message for me to share as I joined CSIRO with a growth objective and 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.

Regards

Larry

**Dr Larry Marshall**

Chief Executive

CSIRO

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**Anevski, Pam (C&G, Parkville)**

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**From:** Wonhas, Alex (Executive, North Ryde)  
**Sent:** Sunday, 7 February 2016 7:10 PM  
**To:** Lee, Ken (O&A, Kensington)  
**Cc:** Nielssen, Oona (Comms, North Ryde)  
**Subject:** Correcting the record

Hi Ken,

Further to our discussion, I wanted to ensure that we can say the following things to correct the record:

- CSIRO is not exciting climate science. It is however correct that we are transitioning to more applied oceans and atmosphere research
- As a result the oceans & atmosphere business as a whole might loose up to 100 staff. At the same time, we want to create 35 new positions in applied oceans and atmosphere research
- CSIRO will continue to conduct work on understanding
  - The Southern Ocean
  - Ocean Carbon
  - Coastal sea level extremes and waves
  - Ocean forecasting
  - Ocean remote sensing
  - Broad scale observations and dynamics
  - Aerosols and air-quality
  - **Is this the right list? Is there anything else?**
- CSIRO will also work with the Bureau of Meteorology, who operates the Cape Grim measurement station to ensure essential measurements of CO2 concentrations continue
- CSIRO also aims to continue its major contractual commitments, specifically its leadership of the Earth System Science hub under NESP as well as our contribution to the Integrated Marine Observing System (IMOS)

Please correct anything I got wrong.

Cheers  
Alex

## Anevski, Pam (C&G, Parkville)

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**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Monday, 8 February 2016 12:19 PM  
**To:** Wonhas, Alex (Executive, North Ryde)  
**Subject:** Answers to part 1

Alex:

- What are the key areas that we're reviewing for reduction? What critical assets (e.g. Cape Grim, Atmosphere archive, ACCESS) etc will be at risk? Which of these will be most controversial?

Reviewing for reduction:

- ACCESS
- Atmospheric gases (other than those directly related to Cape Grim?)

All of these are likely to be controversial.

[COPIED FROM CAI & LEE OPTIONS DOCUMENT RE NESP:]

NESP funding towards ACCESS is approximately \$500k p.a., external (\$1m if counting our co-investment). Deliverables are primarily focused within 2 projects: 1) Participating in IPCC AR6 model experiment (\$250 p.a. external), and 2) ACCESS model improvement (\$200k p.a. external). Based on a total revenue base of only \$500k p.a.; it is impossible to justify our level of appropriation fund investment towards the ACCESS model in the future.

However, we believe can deliver most of the NESP science related to ACCESS. The science in CMIP6 experiments can be delivered by using outputs from other models (there are some 30 models). We also suggest shifting some of the funds for ACCESS improvement to climate variability and predictability – work that is closely aligned with CSIRO's new strategic direction. This will potentially strengthen the outcome of our Argo work to improve the reliability and accuracy of our predictive models.

- The NESP Hub Committee may not agree with this proposal.

The remaining \$1.5 m NESP fund for science goes to water, extremes, climate projections, and Argo. We can deliver most of this work within O&A's revised organizational structure (see details below). If a small portion cannot be done, we can subcontract to universities (for example, our carbon work 2.9). This is the only project that is most in doubt, but still we can use outputs from other models.

- What are the areas we're maintaining?

[COPIED FROM ALEX's EMAIL:]

- o The Southern Ocean
- o Ocean Carbon observations
- o Coastal sea level extremes and waves
- o Ocean forecasting
- o Ocean remote sensing
- o Broad scale observations and dynamics
- o Aerosols and air-quality

- What will be the impact on Cape Grim? Are we closing Cape Grim?

We aim to maintain our contribution to Cape Grim (?) (Apparently, there has been some discussion about the transfer of equipment for the analysis we conduct to BOM)

- Will any of the already approved journeys of the MNF be affected by the changes to climate research?

[COPIED FROM SUE BROWN'S EMAIL BASED ON FEEDBACK I PROVIDED AFTER CONSULTATION WITH RON PLASCHE:]

- CSIRO is scheduled to participate in major 6 upcoming voyages on the MNF for 15/16 and 16/17 (schedule is publicly available).
  - CSIRO is working through the details of the proposed staff and project changes on our participation in these voyages.
  - There is unlikely to be any major effect, such as complete cancellation of a voyage, due to the CSIRO changes.
  - However, it is possible that planned voyages will be impacted, such as needing to adjust staff rosters, reduce the scope of some work, etc.
  - Since MNF voyages usually consist of multiple organisations and have more than one purpose, it is unlikely that a voyage would be completely cancelled and it is always possible that other staff/projects/organisations could take up ship time if it became available.
- How can we mitigate impacts, e.g. by moving activities to our partners, by finding smarter ways of measurement
    - transfer capability to universities and/or BoM where possible and appropriate, e.g. some aspects of NESP
    - as discussed a national workshop with other agencies and the academic sector regarding a plan for Australia to move forward.
  - What is our cost and (expected) revenue by group for this year and next year?  
==> working with Phillipa and BD to answer
  - How much do we currently invest in maintaining ACCESS?

[COPIED FROM CAI & LEE OPTIONS DOCUMENT RE NESP]

Our investment in ACCESS, which is at ~ \$3m cash, or some \$5.4m total, including overheads, is not financially sustainable, if NESP is the only funding source available.

**Kenneth Lee, Ph.D.**  
Director  
Oceans and Atmosphere National Research Flagship  
CSIRO

E: ken.lee@csiro.au  
T: +61 8 6436 8629  
M: s47F

Australian Resources Research Centre  
26 Dick Perry Avenue  
Kensington, WA, 6151, Australia

## **Anevski, Pam (C&G, Parkville)**

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**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Monday, 8 February 2016 12:22 PM  
**To:** Wonhas, Alex (Executive, North Ryde)  
**Subject:** FW: Key questions

**Importance:** High

Alex:

With limited time – this is the information that BD can provide to your questions. Trust this is sufficient to put things into context.

Ken

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**From:** Ormandy, Phillipa (C&G, Hobart)  
**Sent:** Monday, 8 February 2016 8:57 AM  
**To:** Lee, Ken (O&A, Kensington) <Ken.Lee@csiro.au>; Schiller, Andreas (O&A, Hobart) <Andreas.Schiller@csiro.au>  
**Subject:** FW: Key questions  
**Importance:** High

Some initial comments.

From BDC, we know a little about dot point one. The major controversy will be that CSIRO will no longer update and develop ACCESS, though if we retain NESP ESCC then some development of ACCESS will happen there.

Cape Grim will still be there if we stop that activity as we don't own it. We collect data from Cape Grim, analyse (process) it and make it publically available so BOM will need to find someone else to do that work.

The other major activity is the OzFlux project. If we withdraw from that UQ will still be responsible for collecting the data as we are only subcontracted by UQ.

CSIRO has been subsidising the wider climate community by providing these services, using appropriation, for free. Currently the major point is that the users of this information receive it for free and we subsidise substantially. Most of it doesn't even have 50:50% co-investment and we then hand it out for free.

Investment in ACCESS to date has been predominantly appropriation. Remember when we first formed O&A Cai thought there was a special pool of appropriation available to support ACCESS.

Specifics for Alex

Cape Grim: planned expenditure this year was \$1.9M. Approximately \$450,000 from BOM and the rest (\$1.45M) from CSIRO appropriation. As you know Ken recently has agreed to an apparent 50:50 co invest for this project activity ie \$450,000 from BOM and the same from CSIRO but reality is that Cai will likely continue to spend the same amount as planned and 'hide' it in the un-allocated appropriation spend. If we retain Cape Grim work then CSIRO will need to discuss with BOM how that works going forward with reduced allocation of appropriation from CSIRO.

OZ Flux: planned expenditure for 15/16 is \$1.09M. CSIRO has to receive \$810,000 this financial year, has a carry forward of \$134,000 from last financial year and will spend \$146,000 in appropriation. Most of the external revenue (\$780,000) goes to external collaborators.

Andreas has answered the ACCESS information. (\$5.4M expenditure with \$0.5M from NESP and the rest from appropriation

## **Anevski, Pam (C&G, Parkville)**

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**From:** Lee, Ken (O&A, Kensington)  
**Sent:** Monday, 8 February 2016 1:29 PM  
**To:** Wonhas, Alex (Executive, North Ryde); Shrives, Kimberley (Executive, Campbell)  
**Cc:** Baxter, Jenny (Science & Government, Dutton Park); Duffy, Peter (C&G, Clayton); Bennett, Hazel (Executive, Campbell)  
**Subject:** RE: New urgent info request

Alex:

- Capability transfer (in the climate sense)
  - o We **will work with** the BoM, who is operating the Cape Grim facility, to find efficient ways to continue the measurement of atmospheric CO2 concentrations. For example, there has been some discussion of transferring analytical equipment to BOM – if we are no longer using it.
  - p Where appropriate, we will also work with universities on a transfer of capabilities in the climate research area.
- What are we retaining in climate science (examples):
  - o We will continue our contribution to the international Argo floats oceans measurement program, see <http://www.argo.ucsd.edu> .
  - o CSIRO also aims to continue its major contractual commitments, specifically its leadership of the Earth System Science hub under NESP as well as our contribution to the Integrated Marine Observing System (IMOS).
  - o We will continue to measure human impacts on air pollution.
- What are we doing in mitigation and adaptation (some good examples):

These projects were recently completed (note: funding for future work in the area is still limited in the pipeline)

- o Delivery of Natural Resource Management (NRM) climate projections to public: Release of website [www.climatechangeinaustralia.gov.au](http://www.climatechangeinaustralia.gov.au) in 2015. This provided access to Cluster brochures, Selected Cities reports, a Technical Report, downloadable data, guidance material, fourteen tools and online training.
- o Customised Australia-wide projections at [www.climatechangeinaustralia.gov.au](http://www.climatechangeinaustralia.gov.au) for the Victorian Dept of Land Water Environment and Planning (DELWP) in collaboration with a consultant (January 2016). There are 7 Victorian brochures: 6 regional and 1 statewide, accompanied by 6 datasheets. The brochures link climate observations with climate projections, sectoral impacts and adaptation actions.

Ken

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**From:** Wonhas, Alex (Executive, North Ryde)  
**Sent:** Monday, 8 February 2016 9:04 AM  
**To:** Shrives, Kimberley (Executive, Campbell) <Kimberley.Shrives@csiro.au>  
**Cc:** Baxter, Jenny (Science & Government, Dutton Park) <Jenny.Baxter@csiro.au>; Duffy, Peter (C&G, Clayton) <Peter.Duffy@csiro.au>; Bennett, Hazel (Executive, Campbell) <Hazel.Bennett@csiro.au>; Lee, Ken (O&A,

Kensington) <Ken.Lee@csiro.au>

**Subject:** Re: New urgent info request

Hi Kimberley et al.,

Ken is busy working on this. I'm now with the unions so maybe worthwhile to follow-up directly with Ken while I'm in that call.

Cheers

Alex

On 8 Feb 2016, at 11:08 AM, Shrives, Kimberley (Executive, Campbell)  
<[Kimberley.Shrives@csiro.au](mailto:Kimberley.Shrives@csiro.au)> wrote:

Can you please get for us some info on:

- Capability transfer (in the climate sense)
- What are we retaining in climate science
- What are we doing in mitigation and adaptation (some good examples)

And need this asap to aid media interviews that Larry is doing soon.

Thanks

K



## **Anevski, Pam (C&G, Parkville)**

---

**From:** Marshall, Larry (Executive, Campbell)  
**Sent:** Monday, 8 February 2016 2:16 PM  
**To:** All Staff-DG  
**Subject:** Update

Dear everyone

After last week's news many of you are catching up with your managers and others to hear further details. As our internal consultations proceed, I am disappointed that there has been some miscommunication spread by the media. I want to share with you a public statement I made today which corrects some of this, and I remind you that your Business Unit Director or General Manager, or Executive Team member is the right source for more information.

Regards

Larry

<http://www.csiro.au/en/News/News-releases/2016/Public-statement-Correcting-the-Public-Record-on-Changes-at-CSIRO?featured=27F6622E2C954B819F5E36ECE881FA68>

### Correcting the Public Record on Changes at CSIRO

Last week CSIRO shared some plans with staff, in the same spirit of openness that we developed our Strategy, plans which included exiting some of our climate work, and it is important to get some facts straight so I would like to directly address some of the incorrect reporting by media.

Firstly the overall number of people in CSIRO is projected to be unchanged at the end of a two year period, however up to 350 people may lose their positions as we change the focus of our work program. Some people will be redeployed or reskilled and some will be made redundant and those final figures are not yet determined. CSIRO has a well-established and respectful process when changes are made. People are advised early, as was done last Thursday, updated as soon as details are available, as is continuing this week, and consulted on how best to implement decisions.

In our Oceans and Atmosphere business we have about 420 staff, not 140 as reported by some media, and after these changes we expect to have about 355, contrary to media reports. We asked business unit leaders to focus their operational plans on growth, and growth within finite resources will always initially lead to making choices about what to exit. However, as painful as any redundancy is, for the majority of the 5,200 CSIRO employees there will be no change to their current circumstances as a result of these plans, and we will also recruit new people with new skills.

The second area of correction is our ability to support climate measurement in Australia. Cape Grim and RV Investigator are not under threat from these changes. The Cape Grim air pollution monitoring station which is a source of much of our greenhouse gas information will continue to be that source. Our climate models have long been and will continue to be available to any researcher and we will work with our stakeholders to develop a transition plan to achieve this. The RV Investigator, operated by CSIRO for scientists from Australia and around the world as a state of the art research facility will continue to operate scientific voyages, gathering data every day at sea. We also have an air archive which is a resource available to any researcher to investigate air changes over time. We will also continue our contribution to the international Argo floats program which provides thousands of datapoints for temperature and salinity of our oceans; and we will be investing more in autonomous vehicles, using innovation to collect more data than ever before.

However we must also focus where we have most need and that need is in innovation, turning inventions into benefit for society. Australia has long been an inventive society but realising the benefits of those inventions is a well-identified gap in our culture and practice.

Australia's biggest challenges and opportunities lie in the health, prosperity and sustainability in the face of rapid global changes; climate is one piece of a much larger puzzle. As we balance our broad portfolio of investments from Digital to Agriculture we must weigh up where we can have the greatest impact and where Australia has the greatest need. No one is saying climate change is not important, but surely mitigation, health, education, sustainable industries, and prosperity of the nation are no less important.

CSIRO is working on tomorrow. For example our world leading solar thermal technology has already attracted exports, we are using sky cameras to better integrate solar into our grids, we are working on methods to control fugitive emissions from mining activities, and we are dramatically reducing energy and chemical use, and greenhouse gas emissions in the minerals industry through smart ore sorting technology. Each of these technologies is addressing a fundamental need that faces society now, climate mitigation.

The changes at CSIRO are deeply embedded in our Strategy 2020, to be Australia's innovation catalyst. We are one player in Australia's innovation system along with Universities, other research organisations and industry. We must focus our work on areas of the most benefit and sometimes this means making some tough choices, making changes and most importantly looking 20 years ahead to what Australia will need. The plans we shared with staff last week were developed through deep engagement and research and we believe they will serve the country for many years to come.

**Dr Larry Marshall**

Chief Executive

CSIRO

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8 FEBRUARY 2016

# Correcting the Public Record on Changes at CSIRO

*By Larry Marshall, Chief Executive*

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Firstly the overall number of people in CSIRO is projected to be unchanged at the end of a two year period, however up to 350 people may lose their positions as we change the focus of our work program. Some people will be redeployed or reskilled and some will be made redundant and those final figures are not yet determined. CSIRO has a well-established and respectful process when changes are made. People are advised early, as was done last Thursday, updated as soon as details are available, as is continuing this week, and consulted on how best to implement decisions.

In our Oceans and Atmosphere business we have about 420 staff, not 140 as reported by some media, and after these changes we expect to have about 355, contrary to media reports. We asked business unit leaders to focus their operational plans on growth, and growth within finite resources will always initially lead to making choices about what to exit. However, as painful as any redundancy is, for the majority of the 5,200 CSIRO employees there will be no change to their current circumstances as a result of these plans, and we will also recruit new people with new skills.

The second area of correction is our ability to support climate measurement in Australia. Cape Grim and RV Investigator are not under threat from these changes. The Cape Grim air pollution monitoring station which is a source of much of our greenhouse information will continue to be that source. Our climate models have long been and will continue to be available to any researcher and we will work with our stakeholders to develop a transition plan to achieve this. The RV Investigator, operated by CSIRO for scientists from Australia and around the world as a state of the art research facility will continue to operate scientific voyages, gathering data every day at sea. We also have an air archive which is a resource available to any researcher to investigate air changes over time. We will also continue our contribution to the international Argo floats program which provides thousands of datapoints for temperature and salinity of our oceans; and we'll be investing more in autonomous vehicles, using innovation to collect more data than ever before.

However we must also focus where we have most need and that need is in innovation, turning inventions into benefit for society. Australia is underdone on innovation. Australia has long been an inventive society but realising the benefits of those inventions is a well-identified gap in our culture and practice.

Australia's biggest challenges and opportunities lie in the health, prosperity and sustainability in the face of rapid global changes; climate is one piece of a much larger puzzle. As we balance our broad portfolio of investments from Digital to Agriculture we must weigh up where we can have the greatest impact and where Australia has the greatest need. No one is saying climate change is not important, but surely mitigation, health, education, sustainable industries, and prosperity of the nation are no less important.

CSIRO is working on tomorrow. For example our world leading solar thermal technology has already attracted exports, we are

using sky cameras to better integrate solar into our grids, we are working on methods to control fugitive emissions from mining activities, and we are dramatically reducing energy and chemical use, and greenhouse gas emissions in the minerals industry through smart ore sorting technology. Each of these technologies is addressing a fundamental need that faces society now, climate change mitigation.

The changes at CSIRO are deeply embedded in our Strategy 2020, to be Australia's innovation catalyst. We are one player in Australia's innovation system along with Universities, other research organisations and industry. We must focus our work on areas of the most benefit and sometimes this means making some tough choices, making changes and most importantly looking 20 years ahead to what Australia will need. The plans we shared with staff last week were developed through deep engagement and research and we believe they will serve the country for many years to come.

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**About us**

At CSIRO, we do the extraordinary every day. We innovate for tomorrow and help improve today - for our customers, all Australians and the world.

We imagine. We collaborate. We innovate.

More about us

**From:** Wonhas, Alex (Executive, North Ryde)  
**Sent:** Monday, 15 February 2016 8:08 AM  
**To:** Lee, Ken (O&A, Kensington) <Ken.Lee@csiro.au>; Broadfoot, Lyndelle (HR, Dutton Park) <Lyndelle.Broadfoot@csiro.au>; Brown, Sue (Executive, Campbell) <Sue.Brown@csiro.au>; Creagh, Ben (Comms, Dutton Park) <Ben.Creagh@csiro.au>; Hardisty, Paul (L&W, Floreat) <Paul.Hardisty@csiro.au>  
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**Subject:** Plan to resolve climate related issues

Hi all,

I hope you had a relaxing weekend after a very difficult week!

At our discussion on Friday, I have tried to compile a process that we could use to ensure we resolve the situation especially around the climate change science part. It is an ambitious timeline but suspect we all agree there is value trying to resolve this quickly. I have also tried to consolidate the commitments we have made to date in terms of activities that we'll work with stakeholders on to ensure they are maintained for the benefit of the nation.

### **Process we will be following**

Phase 1: Understand national need and key stakeholders based on current activities CSIRO is currently undertaking (by 19 Feb)

- CSIRO to compile key activities
- CSIRO to test activities with key stakeholders

Phase 2: Define the capability required to deliver to this need (by 26 Feb)

Phase 3: Determine the right long-term organisational home(s) including financial support (by 4 Mar)

Phase 4: Plan and communicate the transition (by 11 Mar)

**Partners to talk to**

- BoM
- ARC CoE of climate system science
- Chief Scientist
- UKMO - to explore greater leverage of their climate models

**Desired outcome of the discussions is to ensure Australia continues to**

- Conduct vital atmospheric measurements, specifically at the Cape Grim air pollution monitoring station
- Maintain key records, eg air and ice archives
- Have access to a state of the art climate model to understand our changing climate and inform adaptation and mitigation decisions
- Deliver on key contractual commitments, such as CSIRO's leadership of the Earth System Science and Climate Change Hub under the National Environmental Science Programme (NESP) and our contributions to the Integrated Marine Observing System (IMOS)
- Contribute to the international Argo floats program, which provides thousands of data-points for temperature and salinity of our oceans
- Operate the RV Investigator for the benefit of scientists from Australia and around the world as a state of the art research facility

At our change management discussion this afternoon, I propose to talk through this plan and I might also ask Sue, Lyndelle and Ben to take us through the change management plan they have developed. I hope this helps us to get more on the front foot.

And finally, Jack and I worked on Friday on a response to the open letter by the international community. It largely re-states the publicly known facts and our commitments, re-iterated above. I hope Jack can let us know when it actually went out.

Cheers

Alex