

# NCCARF Phase 2

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## Annual Report 2015-16



National Climate Change  
Adaptation Research Facility

October 2016

The National Climate Change Adaptation Research Facility is supported by funding from the Australian Government through the Department of the Environment and Energy.

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## 1. Context

### 1.1 NCCARF 2014 - 2017

The Australian Government has committed funding of \$9 million for the National Climate Change Adaptation Research Facility (NCCARF) to undertake a Phase 2 Program. This program is to support national capacity development in adaptation, and to deliver guidance that helps local decision-makers manage climate risks, especially in the coastal zone. Phase 2 commenced on 16 October 2014, and will complete on 30 June 2017.

The principal deliverables for the Phase 2 Program are:

- a) A tool to guide local and state governments and other organisations to make better decisions about managing risks from coastal climate change;
- b) Relevant and accessible climate adaptation material synthesising research information for policy and decision makers;
- c) Operation of four adaptation research networks in natural ecosystems, settlements and infrastructure, social, economic and institutional dimensions and vulnerable communities (including human health).

This second Annual Report sets out the overall activity in NCCARF Phase 2 for the period 1 July 2015 to 30 June 2016

## 2. Overview of NCCARF Phase 2 Activities

### 2.1 Project outcomes

The activities of NCCARF Phase 2 are directed towards three key project outcomes. These are to:

1. Deliver effective knowledge transfer from the adaptation research community to policy agencies and decision makers to build Australia's capacity to manage future climate risks, particularly in the coastal zone;
2. Achieve strong endorsement of synthesis information and tools from users, particularly from coastal users that supports its uptake and application among policy and decision makers;
3. Maintain Australia's adaptation research capacity and strengthen the capacity of adaptation information end-users in Australia to use adaptation research outputs, through the continued support of four adaptation networks.

### 2.2 Key activities to achieve project outcomes

NCCARF Phase 2 is organised into four Key Activities, as follows:

**Key Activity 1:** Governance, management and operations: Ensuring, monitoring and evaluating the effective governance, management and administration of NCCARF resources to support its key activities in Phase 2.

**Key Activity 2:** Preparing the Australian Coastal Climate Change Risk Management Tool: Through extensive stakeholder engagement, developing a framework for understanding and managing climate risks including sea-level rise in the coastal zone, in order to provide local governments and associated stakeholders with the skills, information and tools to support effective decision making.

**Key Activity 3:** Synthesis and Communication: Identifying, through extensive consultation with policy and decision makers, and developing synthesis products in formats readily accessible to end users. These products will be derived primarily from the more than 100 research projects on all aspects of adaptation funded by NCCARF in its first phase. This Key Activity will focus on communicating these synthesis products to end users in formats and ways that they will find useful and accessible.

**Key Activity 4:** Managing Adaptation Networks: Supporting NCCARF activities and bringing together practitioners and researchers to share knowledge and to maintain and build research capacity in climate change adaptation.

### 2.3 Milestone deliverables in 2015–16

NCCARF achieved a number of milestone deliverables (i.e., deliverables specified in the Funding Agreement, against which project payments are made) in 2015 – 16 as shown in Table 2.1. All milestone deliverables were submitted to the Department of the Environment and Energy on time, and were approved following minor changes.

These milestone deliverables are:

*The Development Plan including a work plan for years two and three for the coastal tool:* This report sets out a detailed plan for design and delivery of the Tool (CoastAdapt), based on extensive stakeholder consultation, demonstrating that it:

- Meets the needs identified in the Analysis of End User Needs report
- Is technically feasible
- Is compatible with existing regulatory and planning frameworks, and
- Draws on existing science.

*Policy Questions and User Needs Report:* This report assesses available research relevant to policy and decision making, sets out the key policy questions to be addressed by Key Activity 3, and describes the proposed synthesis products, together with a strategy for their dissemination.

*The 2014-15 annual report including audited financial report:* This report provides an overview of work undertaken and milestones delivered by the four Key Activities during 2014-15.

*Endorsed Synthesis Products:* Based on the Policy Questions and User Needs Report, seventeen synthesis products were developed and endorsed by the Project Review Committee. The products developed were:

- 6 Synthesis Summaries
- 6 Sector Briefs
- 5 Policy Guidance Briefs.

In addition, NCCARF worked on the development of CoastAdapt in the 2015-16 period, and this Framework was delivered to the Department of the Environment and Energy on 1<sup>st</sup> July 2016.

#### 2.4 Project Plan deliverables in 2015-16

In addition to the milestone deliverables specified in the Funding Agreement, NCCARF measures progress against a set of deliverables set out in the Project Plan. These deliverables are essentially markers on the way to achievement to major project objectives. They are listed in Table 2.2 under their respective Key Activities. All deliverables were achieved on time.

**Table 2.1:** Milestone deliverables submitted in 2015-16

Milestone Deliverables	Delivery date
Delivery to the Department of: a. An endorsed development plan for the development of the coastal climate risk management tool, including a work plan for years two and three for the coastal tool (KA2) b. A report on end user and research engagement and assessment of key policy questions to be addressed through synthesis activities (KA3)	1 July 2015
Delivery to the Department of the annual report (2014-2015) including an audited financial report (KA1)	30 September 2015
Delivery to the Department of endorsed synthesis products (KA3)	13 May 2016

**Table 2.2:** Project Plan deliverables for 2015-16 (not including milestone deliverables)

<b>Deliverable:</b>	<b>Due Date</b>
<b>KA1 Project Management</b>	
Delivery of a quarterly report (April to June 2015)	15 July 2015
Delivery to the Department of an annual work plan for year 2	30 August 2015
Delivery of a quarterly report (July to Sept2015)	15 October 2015
Delivery of a quarterly report (Oct to Dec 2015)	10 December 2015
Deliver of an independent mid-term monitoring and evaluation report	31 March 2016
Delivery of a quarterly report (Jan to March 2016)	15 April 2016
A minimum of 2 meetings held per annum with the Project Review Committee & the 2 reference Groups	30 June 2016
<b>KA2 Coastal Climate Risk Management Tool</b>	
Completion of the beta version of CoastAdapt (Coastal Risk Management Tool)	30 June 2016
Information manuals are peer reviewed and finalised	30 June 2016
Research Projects commissioned are finalised	30 June 2016
<b>KA3 Synthesis &amp; Communications</b>	
Testing, finalisation and endorsement of written synthesis products	13 May 2016
NCCARF newsletters distributed every 3 months	30 June 2016
NCCARF/CSIRO Biennial Conference planning complete	30 June 2016
<b>KA4 Networks</b>	
Network 2014-2015 Activity Reports submitted	31 July 2015
Networks commence National Adaption Research Plan (NARP) reviews	31 January 2016
Network 2015-2016 Work Plans submitted	30 April 2016

### 3. Key Activity 1: Project Management

The main activities undertaken in Key Activity 1 (KA1) during the period 2015-16 were:

- Operational reporting: quarterly and annual reporting;
- Ongoing maintenance of the risk register for Phase 2;
- Oversight of the monitoring and evaluation program;
- Management of staff, governance and finance for the project.

Progress in achieving the deliverables in the Project Plan due in 2015-16 is shown in Table 3.1.

**Table 3.1:** KA1 deliverables due in 2015-16. (Milestone deliverables are in bold.)

Deliverable	Due date	Progress
Delivery to the Department of a quarterly update report (April to June 2015)	9 July 2015	Complete <ul style="list-style-type: none"> <li>• Report delivered 9 July 2015</li> <li>• Teleconference held 17 July 2015</li> </ul>
Delivery to the Department of an annual work plan for year 2	30 August 2015	Complete <ul style="list-style-type: none"> <li>• Submitted to the Department 26 August 2016 and approved by the Department 2 September 2015</li> </ul>
<b>Delivery to the Department of the annual report for 2014-15 including an audited financial report</b>	<b>30 September 2015</b>	<b>Complete</b> <ul style="list-style-type: none"> <li>• <b>Submitted to the Department 30 September 2015 and approved by the Department 26 October 2015</b></li> </ul>
Delivery to the Department of a quarterly update report (July to September 2015) including a draft annual report as supporting document.	15 October 2015	Complete <ul style="list-style-type: none"> <li>• Report delivered 9 October 2015</li> <li>• Teleconference held 27 October 2015</li> </ul>
Delivery to the Department of a quarterly update report (October – December 2015)	10 December 2015	Complete <ul style="list-style-type: none"> <li>• Report delivered 12 January 2016</li> <li>• Teleconference held 20 January 2016</li> </ul>
Mid-term monitoring & evaluation of NCCARF Phase 2 undertaken by monitoring and evaluation specialist (Coutts J&R)	31 March 2016	Complete <ul style="list-style-type: none"> <li>• Independent Monitoring &amp; Evaluation Consultants Coutts J&amp;R completed the mid-term review and the report was submitted to the Department on 15 March 2016</li> </ul>
Delivery to the Department of a quarterly update report (January – March 2016)	15 April 2016	Complete <ul style="list-style-type: none"> <li>• Report delivered 13 April 2016</li> <li>• Teleconference held 21 April 2016</li> </ul>
A minimum of 2 meetings held per annum with the Project Review Committee and the 2 reference Groups	30 June 2016	Complete <ul style="list-style-type: none"> <li>• 4 meetings with PRC held: Sept and Nov 2015 and March and June 2016</li> <li>• 3 meetings with EURG held: Oct and Dec 2015 and March 2016</li> <li>• 2 meetings with TRG held: Sept and March 2016</li> </ul>

### 3.1 Operational reporting

NCCARF reports quarterly and annually to the Department of the Environment and Energy on project progress. This reporting is against the deliverables specified in the Funding Agreement, the Project Plan and Annual Workplans. An evaluation of the status of the risk register is included. The independent monitoring and evaluation consultant provides an update from his perspective on our progress and activities. All quarterly reports were successfully delivered to the Department of the Environment and Energy on time and did not flag any concerns about progress. This document is the second Annual Report for the project.

### 3.2 Risk Register

NCCARF maintains a risk register for the project, which is updated as required. To date, the risk register has not flagged any developments that could affect project success.

### 3.3 The Monitoring and Evaluation Program

NCCARF contracted Coutts J&R to carry out an independent monitoring and evaluation program for Phase 2. As part of this program, Coutts J&R provides quarterly and annual reports on the progress of NCCARF against key performance indicators. A mid-term review was undertaken by Coutts J&R in March 2016 and a final independent evaluation report is due 31 October 2017. A copy of the 2015-16 annual monitoring and evaluation report may be found in Appendix 1.

### 3.4 NCCARF staff in 2015-16

NCCARF is based at Griffith University's Gold Coast Campus in South East Queensland. Staff members in 2015-16 were:

- Jean Palutikof, Director
- David Rissik, Deputy Director, General Manager
- Jennifer West, Business and Operations Manager
- Sarah Boulter, Senior Research Fellow
- Anne Leitch, Knowledge Communication
- Kylie Lindner, Administration Officer
- Jo Mummery, Senior Research Fellow (Coastal Adaptation)
- Fahim Tonmoy, Coastal Zone Specialist
- Ana Perez-Vidaurre, Research Assistant
- Steve Webb, Senior Programmer/Web Developer
- Kim Wilson, Graphic Designer

NCCARF maintains a substantial national (geographic and sectoral) footprint and outreach. We work hard to ensure that we are fully engaged throughout the country, following the roadmap laid out in the *Stakeholder Engagement Plan* (see Section 2.3).

### 3.5 Governance and advisory arrangements

NCCARF maintains three formal groups that provide regular input into the Phase 2 program. These are:

1. A *Project Review Committee* that includes representation from each state and territory government, local government, business and the community. The Department of the Environment and Energy is an observer on this body. The Committee has a formal role to

endorse key deliverables such as the Coastal Climate Risk Management Tool Development Plan and the final Tool.

2. A *Technical Reference Group*, which brings to Phase 2 a diverse range of experts drawn from universities, government and national science agencies. The Group provides guidance on technical aspects of NCCARF's activities, including identification of relevant information, research and technical expertise.
3. An *End-user Reference Group*, with geographically-spread representation from local governments across Australia (including leading practitioners and less-resourced councils), and local government and business associations. This Group provides advice and input to NCCARF Phase 2, especially around the understanding of end-user adaptation needs, and end-user engagement and consultation.

As specified in the Project Plan, the three groups meet regularly and at least twice a year (face to face and by teleconference) to ensure stakeholders are actively engaged in NCCARF's work, to optimise their input into the development and implementation phases of activities, and to provide the endorsement from the Project Review Committee as required by the Funding Agreement. Membership is shown in Tables 3.2 – 3.4.

**Table 3.2:** Membership of the Project Review Committee in 2015-16.

<b>Role/representation</b>	<b>Name and Title</b>
<b>Chair</b>	Prof. Tony Press Adjunct Professor, Antarctic Climate and Ecosystems Cooperative Research Centre and Institute for Marine and Antarctic Studies, University of Tasmania SCAR Visiting Professor, Instituto Antartica Chileno
<b>State and territory governments</b>	
ACT	Ms Catherine Keirnan Senior Policy Officer, Climate Change Policy, Environment and Planning
New South Wales	Mr Chris Lee Senior Team Leader Impacts and Adaptation - Regional Operations Group
Northern Territory	Mr Bethune Carmichael (resigned 27 August 2015) Senior Environmental Officer, Waste and Resource Recovery, Northern Territory Environment Protection Authority
Queensland	Mr John Lane Director Environmental Planning, Environment Policy and Planning, Department of Environment and Heritage Protection
South Australia	Ms Michelle English Manager, Climate Change Unit, Water and Climate Change Branch, Department of Environment, Water and Natural Resources
Tasmania	Ms Amber Sturges Policy Analyst, Tasmanian Climate Change Office, Department of Premier and Cabinet
Victoria	Ms Kate Wood (resigned 6 October 2015) Director, Climate Adaptation Policy, Department of Environment and Primary Industries  Ms Callie Donaldson (appointed 28 October 2015) Senior Manager, Climate Change Policy, Environment Policy, Land Fire and Environment, Department of Environment, Land, Water & Planning
Western Australia	Mr James Duggie Principal Policy Officer, Climate Change, Strategic Policy and Programs, Department of Environment Regulation

<b>Local government peak body</b>	
ALGA	Mr Josh Thompson Policy Adviser Australian Local Government Association
<b>Business interests</b>	
	Mr Fabian Sack Director, Sustainably Pty Ltd
<b>Youth and community engagement</b>	
	Ms Elissa Waters Department of Resource Management and Geography, University of Melbourne

**Table 3.3:** Membership of the Technical Reference Group in 2015-16.

<b>Name</b>	<b>Organisation</b>
Bruce Thom (Chair)	Wentworth Group of Concerned Scientists
Ron Cox	University of New South Wales
Nick Harvey	University of Adelaide
Mark Baker Jones	Dibbs Barker
Matt Eliot	Damara WA Pty Ltd
Darryl Low Choy	Griffith University
Katharine Haynes	Risk Frontiers, Macquarie University
Alistair Hobday	CSIRO
Russ Wise	CSIRO
Jon Barnett	University of Melbourne

**Table 3.4:** Membership of the End User Reference Group in 2015-16.

<b>Local Government</b>	<b>Name and Position</b>
<b>NSW</b>	
Lake Macquarie City Council	Dr Alice Howe Manager, Sustainability Department
<b>Victoria</b>	
City of Greater Geelong	Mr Ralph Roob (Chair) Senior Environmental Engineer
<b>South Australia</b>	
City of Holdfast Bay	Mr Peter Smith Manager Contracts and Strategic Projects (resigned March 2016)
City of Marion	Mr Con Theodoroulakes Development Engineer (Appointed March 2016)
<b>Tasmania</b>	
City of Hobart	Ms Katrina Graham Environmental and Climate Change Projects Officer
<b>Western Australia</b>	
City of Cockburn	Mr Doug Vickery Manager Infrastructure Services
<b>Queensland</b>	
Townsville City Council	Mr Greg Bruce

<b>Local Government</b>	<b>Name and Position</b>
	Executive Manager, Integrated Sustainability Services (resigned August 2015)
Redland City	Mr Murray Erbs General Manager, City Infrastructure (appointed August 2015)
<b>Northern Territory</b>	
City of Palmerston	Ms Pam Robinson Environment and Climate Change Strategic Planner
<b>Business and Industry</b>	
Australian Sustainable Built Environment Council	Mr Paul Stoller, Atelier Ten
Lend Lease	Mr Jeremy Mansfield Sustainability Manager - Queensland and NT
Sydney Water	Ms Nicola Nelson Manager, Health, Environment & Asset Science
Planning Institute of Australia	Ms. Andrea Young (Extended leave 23 June 2015) Facilitator PIA National Climate Change Group Principal, Andrea Young Planning Consultants
	Mr Tony Huppatz Principal Coastal Planner, Coast and River Murray Unit, Department of Environment, Water & Natural Resources, South Australia (Stand in for Andrea Young approved 30 June 2015)
Haskoning Australia Pty Ltd	Mr Peter Horton Principal Engineer, Coastal & Maritime

In addition to the formal links between NCCARF, its Networks and Governance and Advisory bodies, we work closely with a range of Australian government departments, agencies and research institutions such as the Department of the Environment and Energy, Bureau of Meteorology, CSIRO and Geoscience Australia. We also engage with other relevant organisations such as CRCSI, ACECRC, and the NESP Earth Systems and Climate Change Hub.

NCCARF has good working relationships with related international organisations such as UKCIP (UK Climate Impacts Programme), KACCC (Korea Adaptation Center for Climate Change), KomPass (German Federal Environment Agency) and the UNFCCC Nairobi Work Program. NCCARF is represented on the Scientific Committee of PROVIA (Programme of Research on Climate Change Vulnerability, Impacts and Adaptation). Through this engagement, we are able to benchmark the work we do against international best practice, and ensure that we are up-to-date with international developments in adaptation.

NCCARF works to ensure it is up-to-date with developments in climate change adaptation within Australia and overseas. Staff members attend international adaptation conferences. In 2015-16, the principal international conference was Adaptation Futures 2016, held in Rotterdam in May 2016. This biennial event was initiated by NCCARF in 2010, and we have had representation at all conferences subsequently. Jean Palutikof, David Rissik and Sarah Boulter attended the Rotterdam event and gave presentations. In addition, Jean Palutikof attended the Annual Meeting of the American Geophysical Union in late 2015, and gave a presentation on CoastAdapt.

We have also begun to talk in detail, through regular Skype conversations, with the architects of the US Climate Resilience Toolkit, to share ideas and plans.

### 3.6 Indigenous participation

We are required to report on Indigenous participation in NCCARF Phase 2. The principal points are:

- NCCARF currently does not employ any Indigenous people.
- The Girringun Aboriginal Corporation, based at Cardwell, is a partner in the Social, Economic and Institutional Dimensions Network. Members of the Indigenous Theme of the SEID Network presented at the TUMRA Sea Country Conference in Cardwell in May 2016 (100 attendees) as well as held their own one day Indigenous peer learning event (10 attendees).
- Vic McGrath, a Torres Strait Islander, was the recipient of the NCCARF Adaptation Champions Individual Award for 2015-16.
- We have had participation by Indigenous people in our stakeholder consultation workshops for the synthesis program (see Section 4.1), as follows:
  - At the Darwin workshop there was four representatives from the Larrakia Nation Aboriginal Corporation
  - At the Cairns workshop, there was a representative from the Torres Strait Regional Authority.

## 4. Key Activity 2: Coastal Climate Risk Management Tool (CoastAdapt)

In Key Activity 2 (KA2), NCCARF has developed CoastAdapt, a web-based framework to support coastal stakeholders in Australia to understand and manage coastal climate risk, particularly from sea-level rise and storm surge. In 2015-16, NCCARF completed a substantial amount of work to deliver CoastAdapt. This included planning and writing material, working with experts to deliver material that was outside of NCCARF's capacity, managing peer review by experts and by end-users, and copy editing and laying out content.

Progress in achieving the deliverables listed in the Project Plan as due in 2015-16 is shown in Table 4.1.

**Table 4.1:** KA2 deliverables due in 2015-16. (Milestone deliverables are in bold.)

Deliverable	Due date	Progress
<b>Endorsed Development Plan for the development of the Coastal Climate Risk Management Tool, including a work plan for years 2 and 3 for the Coastal Tool</b>	<b>1 July 2015</b>	<b>Complete</b> <ul style="list-style-type: none"> <li>• <b>Approved by the Department 3 August 2015</b></li> </ul>
Development of the beta version of CoastAdapt	30 June 2016	Complete <ul style="list-style-type: none"> <li>• Submitted to the Department 1 July 2016</li> </ul>
Information Manuals are peer reviewed and finalised	30 June 2016	Complete <ul style="list-style-type: none"> <li>• Information Manuals available on the NCCARF website</li> </ul>
Research Projects completed	30 June 2016	Complete <ul style="list-style-type: none"> <li>• Five research projects received funding and completed their work by the due date.</li> </ul>

### 4.1 Stakeholder engagement

NCCARF has continued to engage with stakeholders about CoastAdapt. This has been predominantly through engagement with review groups and by working with Tool Development Partners, but has also included presentations at meetings, workshops, and conferences. The Coastal Tool can only be widely adopted if all potential users are made aware of the product.

The potential user base for CoastAdapt has continued to expand, with emerging interest being shown by members of the broader community and by the education sector. There has also been interest from the investor sector (through the Investor Group on Climate Change).

#### Tool Development Partnership (TDP)

To ensure that CoastAdapt is fit for purpose, NCCARF advertised for expressions of interest to be submitted from groups undertaking or planning adaptation actions, that would be prepared to work with NCCARF while CoastAdapt was developed, and provide feedback. The selected group of nine local government entities, and one industry peak body (see Figure 4.1), undertook a number of activities in 2015-16, including:

- reviewing material for CoastAdapt,
- providing feedback about presentations on CoastAdapt and its content made by NCCARF staff at TDP workshops,
- providing case studies (both written and videos) for CoastAdapt.



**Figure 4.1:** Location of the Tool Development Partnership participating organisations.

#### **Presentations at conferences and workshops**

NCCARF has made presentations at conferences and workshops throughout the year. This has been an important activity to create awareness and interest in CoastAdapt. Major conferences have included the Australian Coastal Council Conference, the New South Wales (NSW) Coastal Conference and Greenhouse 2015. Workshops and meetings have been held with councils and community groups (e.g. City of Gosford Council), with Queensland’s Minister for Ecosystems and Heritage Protection and his Head of Department, and with State Government representatives from Queensland, NSW, and South Australia. NCCARF Network workshops have also included presentations on CoastAdapt.

#### **Newsletters and website**

NCCARF has continually updated stakeholders on progress with CoastAdapt development through the NCCARF website, quarterly newsletters and through CoastAdapt updates distributed through email blast.

## **4.2 Development of CoastAdapt**

Based on the identified needs of end users, we designed and developed CoastAdapt to:

- deliver relevant information succinctly and in accessible and straightforward ways,
- support decision making under climate change and sea-level rise in the coastal zone.

CoastAdapt provides extensive technical information and guidance to support decision makers on the coast. We focussed on delivering information in ways that are accessible across a wide range of disciplines, experience and needs, including high-level decision makers (councils and boards), time-poor managers, and technical experts.

To assist users with easy navigability through the site, we conducted User Experience Testing with a range of users. Working with an experienced user experience organisation, we conducted workshops and one-on-one meetings to test various design aspects, ensuring that the needs of a diverse user group were catered for.

CoastAdapt is delivered through the web, and includes information, data, guidance, case studies and tools which support users to:

- Learn about climate change
- Assess risks and impacts
- Understand adaptation
- Undertake adaptation
- Connect with the adaptation community.

Key components of CoastAdapt are listed below.

- **Sea-level rise and you**, which allows users to obtain future sea-level rise data and associated inundation mapping for coastal local government areas around Australia.
- **Shoreline Explorer**, which provides information on secondary sediment compartments around Australia, coastal geomorphological data (SmartLine), and Water Observations from Space.
- **C-CADS (Coastal Climate Adaptation Decision Support)**, a risk-based process to help users develop a climate change adaptation plan.
- **CoastExchange**, a Community of Practice through which participants can share experiences and information, participate in discussions and quizzes, and 'Ask an Expert'.
- **Case studies**, a compendium of 54 case studies from Australia and abroad to illustrate concepts and provide insights about what is being done by practitioners.
- **Information Manuals**, ten detailed technical manuals on key adaptation topics of interest to stakeholders. The topics are listed in Table 4.2. All Information Manuals underwent peer review and revision. They were laid-out and published, and are available through the NCCARF website.
- **Assessing risk**, guidance and tools to support four levels of risk assessment.
- **Impact sheets**, thirteen short reports that highlight potential climate change impacts on different goods, services and sectors in the coastal zone.
- **Infographics**, six infographics to illustrate clearly and succinctly important aspects of effective coastal adaptation.
- **State specific information**, states were asked to provide information and links to data about specific state related information to be included in CoastAdapt, especially about the planning and regulatory frameworks within which adaptation actions take place, ensuring that CoastAdapt users are aware of jurisdictional requirements.
- **Research projects**, NCCARF worked with end users and experts to identify five research projects that could be conducted in a short period of time, and which would fill gaps in CoastAdapt. These projects are:
  - Building a business case for adaptation
  - Financing Adaptation
  - Valuing adaptation
  - Monitoring and evaluation of adaptation

- Assessing vulnerability and risk.

The research projects were scoped out, a call was made for proposals and an independent panel selected successful proposals. These were funded and managed by NCCARF. Results have been, and will continue to be, incorporated into CoastAdapt.

A key focus of CoastAdapt is helping decision makers overcome barriers to action. To support this focus, we put extensive effort into developing guidance material on relevant topics including:

- communication,
- getting organisational buy-in,
- working with consultants,
- developing business plans for adaptation and
- novel ways of financing adaptation.

Much of the CoastAdapt content was developed in-house, but NCCARF also worked with 61 external experts to ensure that data, information and guidance are authoritative. All content was reviewed by national and international experts, and by at least one end-user.

A beta version of CoastAdapt for consultation and review was delivered to the Department of the Environment and Energy on 30 June 2016. The home page is shown in Figure 4.2.

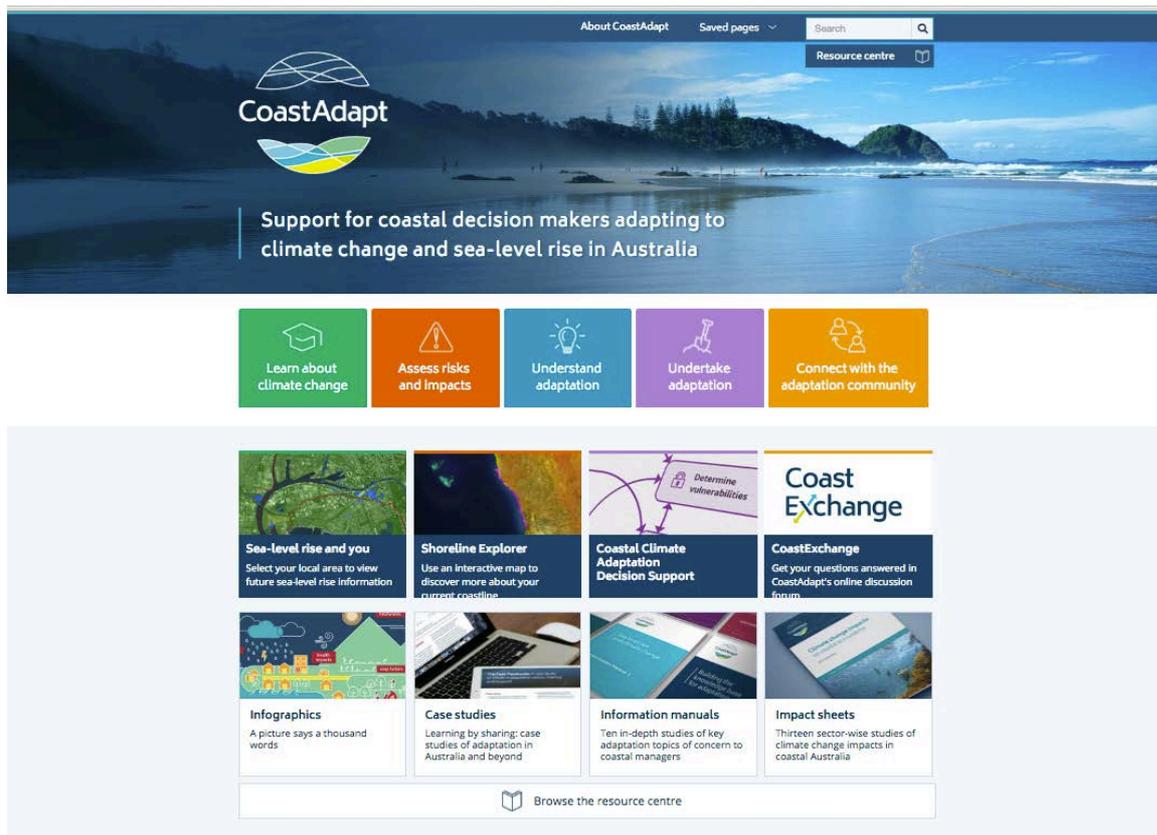


Figure 4.2. Partial view of the home page of the CoastAdapt website

**Table 4.2:** Topics and authors of the ten Information Manuals in CoastAdapt.

Information Manual Topics:	Author and organisation
Building the knowledge base for adaptation action	Sarah Boulter, NCCARF
Understanding sea-level rise and climate change, and associated impacts on the coastal zone	Mark Siebentritt, Seed Consulting Services
Available data, datasets and derived information to support coastal hazard assessment and adaptation planning	Jo Mummery, NCCARF
Coastal sediments, beaches and soft shores.	Matt Eliot, Damara Consulting
Climate change adaptation planning for protection of coastal ecosystems	Jane Chambers, Murdoch University
Assessing costs and benefits of coastal climate adaptation	Russ Wise and Tim Capon, CSIRO
Adapting to long term coastal climate risks through planning approaches and instruments	Barbara Norman, University of Canberra, and Nicole Gurrán, University of Sydney
Engineering solutions for coastal infrastructure	Tony Webb, Environmental Hydraulics
Legal risk: A guide to legal decision making in the face of climate change for coastal decision makers	Mark Baker Jones, Dibbs Barker
Community engagement	Tim Smith, University of the Sunshine Coast, Anne Leitch, NCCARF

## 5. Key Activity 3: Synthesis and communication

In Key Activity 3 (KA3), NCCARF produced a series of synthesis products that will make existing adaptation research relevant beyond the academic community. The emphasis is on helping policy- and decision-makers.

Progress in achieving the deliverables listed in the Project Plan as due in 2015-16 for KA3 is shown in Table 5.1.

**Table 5.1:** KA3 deliverables due in 2015-16. (Milestone deliverables are in bold.)

Deliverable	Due date	Progress
<b>Delivery to the Department of a report on end user and research engagement and assessment of key policy questions to be addressed through synthesis activities</b>	<b>1 July 2015</b>	<b>Complete</b> <ul style="list-style-type: none"> <li>• <b>Approved by the Department 3 August 2015</b></li> </ul>
Testing, endorsement and finalisation of synthesis products	12 May 2016	Complete <ul style="list-style-type: none"> <li>• 17 synthesis products were submitted to the Department 13 May 2016</li> </ul>
<b>Delivery to the Department of synthesis products</b>	<b>13 May 2016</b>	<b>Complete</b> <ul style="list-style-type: none"> <li>• <b>Accepted by the Department 21 June 2016 pending requested amendments being made.</b></li> </ul>
NCCARF 3-monthly Newsletter distributed	30 June 2016	Complete <ul style="list-style-type: none"> <li>• 4 newsletters distributed: <ul style="list-style-type: none"> <li>○ 7 August 2015,</li> <li>○ 23 December 2015,</li> <li>○ 31 March 2016 and</li> <li>○ 23 June 2016</li> </ul> </li> </ul>
NCCARF/CSIRO Biennial Conference planning complete	30 June 2016	Complete <ul style="list-style-type: none"> <li>• Conference held 5 – 7 July 2016 in Adelaide with close to 500 attendees</li> </ul>

### 5.1 Synthesis activities

The synthesis program builds on existing adaptation research, in particular the body of research arising from Phase 1 of NCCARF. The aim was to produce well-written, plain English communication products that are accessible to a broad range of stakeholders including policy-makers, decision-makers and practitioners.

In Phase 1, NCCARF commissioned and managed over 100 research projects, and several others were co-funded and managed by the NHMRC and the FRDC. The result of that work is a substantial body of research in the form of technical reports and peer-reviewed publications. While the work placed Australia at the forefront of adaptation research, the challenge was to ensure that decision

makers, practitioners and policy-makers could make the best use of the findings in their adaptation planning.

To ensure the synthesis program is effective and meets the needs of the practitioners, policy makers and decision makers it is intended to support, in 2015 we undertook a program of consultation with a range of stakeholders from all three levels of government, from business and private industry, researchers and peak industry groups. Stakeholders either took part in an online workshop or were interviewed one-to-one. We were then able to analyse the information provided by stakeholders, and design a program to develop synthesis products to meet stakeholder needs.

In consultation, we sought to address the following questions with stakeholders:

- What are their information needs?
- What key policy questions require information and products in order to be addressed effectively?
- What is their preferred format and mode of delivery?

The feedback we received identified stakeholder concerns about a number of key risk areas. These include:

- coping with the changing occurrence of climate extremes (e.g. bushfires, droughts, floods and heatwaves),
- biodiversity management under climate change,
- coastal management issues arising from the nexus of sea level rise, population increase and development pressures,
- building resilience in vulnerable communities,
- legal risk and liability issues around adaptation,
- land use planning for effective adaptation.

Stakeholders agreed that the delivery of information should be non-technical in its language, well designed in its format and supported by graphical illustrations. Information targeted and packaged for specific interest/employment groups was considered useful.

As a result of stakeholder feedback we designed the synthesis program to deliver information in four ways:

1. *A set of synthesis summaries.* These mid-level (in terms of their technical detail) summaries are 12-16 pages long and provide a synthesis of research findings from NCCARF Phase 1, recent academic research and stakeholder experience. They were developed by NCCARF staff and NCCARF network members and then tested and developed in workshops with end-users to identify evidence-based adaptation lessons.
2. *A set of short sector briefing notes.* Each double-sided factsheet looks at the role of particular actors (e.g. planners, engineers) and highlights key climate change challenges and potential adaptation responses drawing on the synthesis summaries and reflections of stakeholders on how they might use the synthesis information.
3. *A set of Policy Information Briefs* that focus on key adaptation challenges for Australia in the future. They were developed by individual external experts recruited to the project. They are primarily aimed at policymakers in state and federal government.
4. *The Adaptation Library.* An improved search facility on the NCCARF web site (see Figure 5.1). The online library uses topics, locality and keywords to improve the search experience for publications and products on the NCCARF web site.

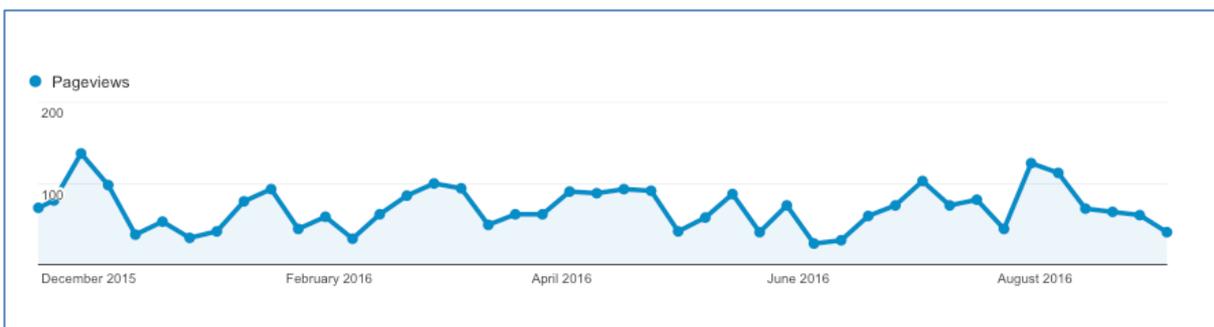
The Adaptation Library has been live since November 2015. We have seen a consistent use of the pages since its release (Figure 5.2) with an average of 70 views per week. Users are marking reports as “recommended” and using the “save” function to bookmark resources.

The screenshot displays the search interface on the NCCARF website. At the top, there is a search bar containing the text "evidence based adaptation" and a "Search" button. To the right of the search bar, it says "- hide filter options". Below the search bar, there are three columns of filter options, each with a header and a list of categories with checkboxes and counts:

- Location:** Australia Wide (4), New South Wales (2), Northern Territory (1), Queensland (2), South Australia (1), Tasmania (1), Victoria (1), Western Australia (1).
- Resource type:** Case studies (2), Factsheet (1), Guidelines (1), Technical report (12), Tool (1), Training materials (1), Video (1), Website (1).
- Topic:** Agriculture (8), Bushfire (8), Communities (7), Finance, business (8), Governance (7), Infrastructure (10), Local government (9), Biodiversity, natural resources (9), Coastal (7), Drought (7), Flooding (8), Heat (8), Legal issues (7), Storms, cyclones (7).

Below the filters, the "Search results" section shows a list of 10 results. The first result is highlighted in blue and is titled "Supporting evidence-based adaptation decision-making in Western Australia: A synthesis of climate change adaptation research". To the right of this result is a yellow star icon. Below the title, it says "Year: 2013 Author: AECOM". There is a small thumbnail image of a report cover. Below the image is a short description: "Designed to inform policymakers and other interested parties of relevant research for Western Australia (WA), this report draws together and presents key findings and lessons from individual NCCARF research reports and a selection of other supporting studies identified through a literature review. The main themes utilised in this synthesis are increasing resilience and adaptive capacity; learning from experience; costing, financing and funding adaptation; limits and barriers to adaptation; maladaptation; and the timing and scale of adaptation. A description of current and future climate conditions for WA is included, as well as the state's expected climate change impacts by sector, and current adaptation priorities and activities. It concludes summarizing WA's main adaptation challenges, policy implications and key lessons for decision makers." Below the description is a "Link:" field with the URL: "http://www.nccarf.edu.au/sites/default/files/attached\_files\_publications/AECOM\_2013\_Synthesis\_report\_for\_WA.pdf". There are also fields for "Resource Type:" (Technical report) and "Location:" (Western Australia). Below these are "Topics:" with buttons for Agriculture, Biodiversity, natural resources, Bushfire, Coastal, Communities, Drought, Finance, business, Flooding, Governance, Heat, Infrastructure, Legal issues, Local government, and Storms, cyclones. At the bottom of the result card, it says "Recommended by 1 reader" and "You have recommended this resource" with a green checkmark icon.

**Figure 5.1:** The improved search facility on the NCCARF website provides users with a greater ability to narrow their search by topic, geography and resource type. The search facility provides a short user-friendly summary of each resource.



**Figure 5.2:** Number of page views per week of the NCCARF Adaptation Library

At the time of writing (September 2016), NCCARF has published synthesis products as follows:

Synthesis summaries:

1. Heatwaves
2. Floods
3. Cyclones and windstorms
4. Bushfire
5. Community vulnerability and resilience
6. Terrestrial ecosystems

Climate adaptation briefing notes:

1. Community service organisations
2. Finance officers
3. Planners
4. Engineers
5. Local government executive
6. Elected representatives

The five Policy Information Briefs are with the Department of the Environment and Energy for final sign-off following revisions. The five in the series are titled:

1. Great Barrier Reef
2. Climate ready cities
3. Climate-adaptive northern development
4. Sustainable and thriving rural communities under climate change
5. Adapting Australia's trade and aid policies to climate change

## 5.2 Fifth National Adaptation Conference

The National Adaptation Conferences have become a key component of the Australian adaptation landscape since the first was held in 2010. Organised by NCCARF with support from CSIRO, the conferences provide a national community of practice for adaptation policy makers, researchers and practitioners. A focus on early career practitioners and researchers on the first day of the conference helps to build capacity in Australia.

The period 2014-15 saw the major elements of planning for the fifth National Adaptation Conference undertaken. The conference was held in Adelaide, 5-7 July 2016, and was a partnership between NCCARF and CSIRO, with NCCARF the primary organising partner. Key features of the planning in 2015-16 for the conference are outlined below.

*Sponsorship.* We were able to attract significant sponsorship from the following organisations:

- The Government of South Australia (Department of Environment, Water and Natural Resources)
- The Adelaide Convention Centre and The Adelaide Convention Bureau
- NCCARF National Adaptation Network: Vulnerable Communities
- Local Government Association of South Australia
- Adelaide City Council
- Adelaide Airport

*The program.* The major activities around development of the program were carried out in 2015-16. These included:

- Making a call for abstracts and evaluating abstracts for presentations. Evaluation was carried out by members of the conference organising committee. Once the successful abstract authors had been notified and had signalled their intention to attend the conference, the presentation were organised into parallel sessions. There were 34 parallel sessions in the program.
- Making a call for organisations to submit proposals for panel sessions. There were eight panel sessions in the program.
- Inviting speakers for plenary sessions. There were five plenary sessions in the program. Further information on the speakers invited to speak in the five plenaries is provided in Box 5.1.

There is further information on the conference at: <http://archive.climate-adaptation.org.au/events/climate-adaptation-2016/>.

The conference took place in the financial year 2016-17, and so the event itself will be reported on in detail in the next Annual Report.

**Box 5.1:** Plenary speakers invited to speak at the fifth NCCARF/CSIRO National Adaptation Conference

Opening plenary

**International dimensions of climate change risks and the risks and the work of the UNFCCC.**

Xianfu Lu, United Nations Framework Convention on Climate Change

Plenary 2: At land's end: coastal and marine adaptation

**Sea level rise and the vulnerability of the world's coasts.**

Robert Nicholls, University of Southampton, UK.

**NCCARF's work in the wider context of adaptation.**

Jean Palutikof, NCCARF.

**Loss? Insights from atoll countries.**

Jon Barnett, University of Melbourne.

Plenary 3: Taking a global perspective

**Investment priorities for climate and green bonds.**

Sean Kidney, Climate Bonds Initiative, UK.

**Climate change, national security and defence.**

Professor Admiral Chris Barrie, Australian National University.

**Trans-boundary climate change issues in the Asia-Pacific region.**

James Butler, CSIRO.

Plenary 4: The challenges of social change

**Climate change and human health.**

Kris Ebi, University of Washington, USA.

**Climate change, gender and the advancement of women in rural areas.**

Margaret Alston, Monash University.

**Vulnerability, marginalisation, anticipatory learning and flexible planning.**

Petra Tschakert, University of Western Australia.

## 6. Key Activity 4: Adaptation Networks

In Key Activity 4 (KA4), NCCARF provides support for the maintenance and growth of national adaptation capacity in the research and practitioner community. This capacity building is being delivered through NCCARF's four Adaptation Networks, with each network focusing on a key challenge area of adaptation. Specifically, the aim of the Adaptation Networks is to:

- build the capacity of researchers and end users to undertake, drive and use adaptation research
- provide technical support to NCCARF in the network disciplinary areas.

The four Adaptation Networks, and their conveners, are:

- Natural Ecosystems Network (NEN), convened by Stephen Williams at James Cook University
- Settlements and Infrastructure Network (S&I Network also known as Australian Climate Change Adaptation Research Network for Settlements and Infrastructure or ACCARNSI), convened by Ron Cox at the University of New South Wales
- Social, Economic and Institutional Dimensions Network (SEID), convened by Tim Smith at University of the Sunshine Coast
- Vulnerable Communities Network (VCN), convened by Peng Bi from the University of Adelaide, with support from the Australian Council of Social Services.

The first three of these networks were established in Phase 1 of NCCARF, while the Vulnerable Communities was established in Phase 2.

Each Adaptation Network maintains a strong presence across Australia through nodes (i.e. partners or themes) based at other institutions (see Figure 6.1), through management and advisory committees, and as a result of their stakeholder engagement activities.

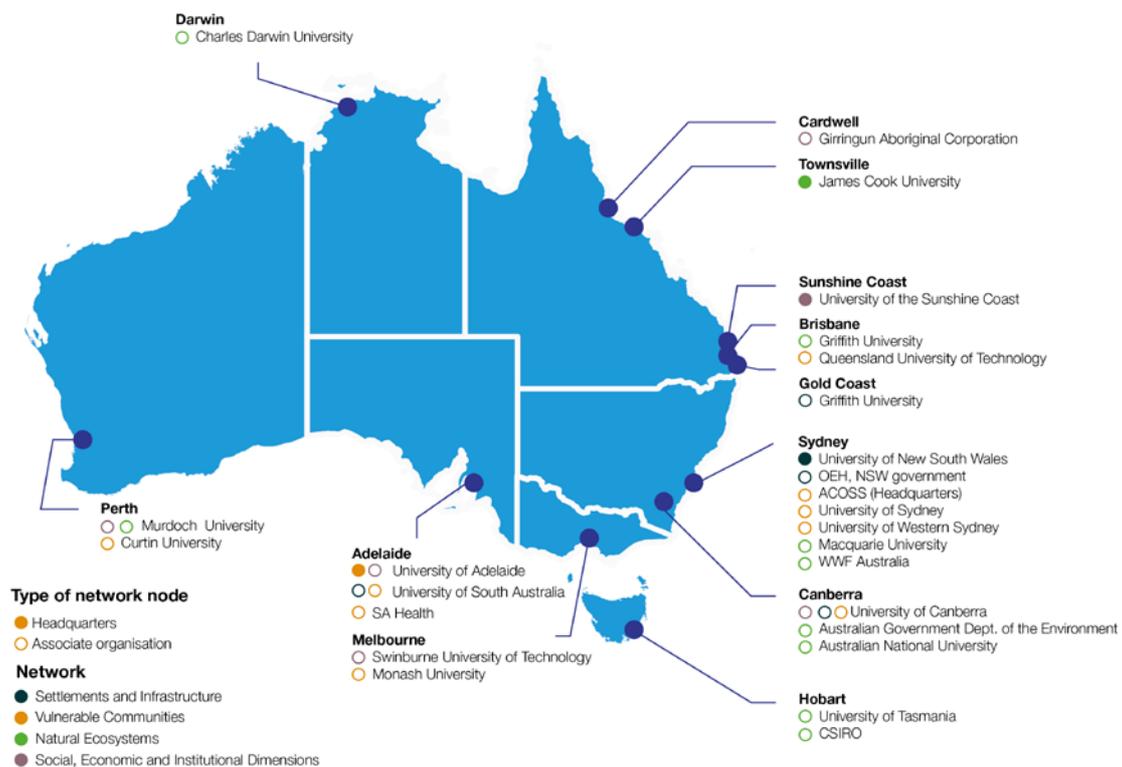


Figure 6.1: Locations of network headquarters and associated organisations

The Adaptation Networks have achieved the deliverables listed in the Project Plan as due in 2015-16 for KA4 and these are shown in Table 6.1 (KA5 had no deliverables in the Funding Agreement).

**Table 6.1:** KA4 deliverables due in 2015-16 (Milestone deliverables are in bold.)

<b>Deliverable</b>	<b>Due date</b>	<b>Progress</b>
Network Annual Activity Reports for FY 2014-2015 submitted	31 July 2015	Complete <ul style="list-style-type: none"> <li>• Network Host's Annual Activity Reports for Year 2 (2014-2015) were received and approved by NCCARF</li> </ul>
Networks commence Network National Adaptation Research Plan (NARP) reviews	31 January 2016	Commenced <ul style="list-style-type: none"> <li>• The NARP review process was well underway by the end of the reporting period</li> </ul>
Network Work Plans for Year 3 (2016-2017) submitted	30 April 2016	Complete <ul style="list-style-type: none"> <li>• Network Host's Annual Work plans for Year 3 were received and approved by NCCARF</li> </ul>

Each of the networks has been actively involved in supporting the other Key Activities through assisting with writing and reviewing material for CoastAdapt and the Synthesis products. Networks also actively supported planning for dissemination of CoastAdapt in financial year 2016-17.

### 6.1 Adaptation Network for Settlements and Infrastructure (ACCARNSI)

The S&I Network has five partners: University of New South Wales, Griffith University, University of Canberra, University of South Australia and Office of Environment and Heritage NSW. The network membership has remained stable at around 600 members over the reporting period.

Communication activities by the Network include distribution of newsletters and building a profile through social media. In addition to quarterly newsletters, ACCARNSI has introduced a monthly e-list of 'recommended reads' and weekly new snippet posts on the Adaptation Networks Facebook page. The Network Resource database has around 100 resources and is updated every two months.

The Network continues to build on its strong tradition of early career (EC) events and held one EC event in July 2015 at Griffith University's Gold Coast campus (18 participants) and one in February 2016 at the University of Canberra (12 participants). A third EC event is planned for Adelaide in September 2016 and a fourth event will be held early in 2017.

The Network has also been involved in the 'Learning to Adapt' professional development series, including delivery of three training models in April, May and June 2016: 41 professionals participated in these three modules. Three additional modules will be delivered in August, September and October 2016.

Preparation for the review of the S&I NARP to be delivered next financial year will draw on the Network's resource database to develop the NARP literature review. The Network has also used the early career forums to help to build the revision of the Settlements and Infrastructure NARP in time for delivery in the next financial year.

## 6.2 Adaptation Network for Social, Economic and Institutional Dimensions

The SEID Network includes four themes— Business/Industry, Government, Indigenous peoples and NGOs— that are led by partners at Swinburne University of Technology, University of Canberra, University of Adelaide, Murdoch University and Gurrigun Aboriginal Corporation. The Network has a Stakeholder Reference Committee.

The Network has been working to build its outreach through a range of social media activities and has expanded its membership to a subscription list of 545 people. Communication products have been developed, including a policy guidance brief for NGOs, and a local government synthesis summary for KA3.

Three peer learning events were organised by the NGO, Government and Indigenous Themes and these events aimed to engage representatives from key sectors and to share contextually-relevant knowledge. Two more events are planned for the Indigenous and Business/Industry Themes for delivery in July/August 2016. An early career forum is planned in conjunction with the National Coast to Coast Conference in September 2016.

Preparation for the review of the SEID NARP, to be delivered in 2016-17, has included a knowledge needs analysis online survey, and a systematic literature review of climate change adaptation literature addressing social, economic and institutional dimensions.

## 6.3 Adaptation Network for Natural Ecosystems (NNE)

Hosted by James Cook University and led by convenor Stephen Williams, the NNE amalgamates three of the Adaptation Research Networks from Phase 1: Freshwater, Marine and Terrestrial Biodiversity. Covering a spectrum of natural landscapes, the Network includes a diverse group of partners from Charles Darwin University, Griffith University, the Australian National University, Macquarie University, Murdoch University, University of Tasmania, CSIRO, the Worldwide Fund for Nature, and the Australian Department of the Environment and Energy.

The Network has re-established its profile across the marine, terrestrial and freshwater sectors and has built its base from 1500 to 2100 members. The Network has developed Stakeholder Advisory Groups for each of the three network nodes. These advisors work to integrate a diversity of views into network activities to help guide support for decision-makers to manage climate risks in natural systems.

Communication activities by the Network include distribution of newsletters, publishing of media articles, developing synthesis summary documents for KA3, and building a profile through social media and conference sponsorship. Production of several short videos is planned for next year.

The Network has supported early career members through three travel scholarships for postgraduate students (two from University of Queensland and one from James Cook University) and one travel scholarship for an early career practitioner, from the Biodiversity and Climate Change Virtual Laboratory.

The Network has supported two peer learning events: an Australian Alps Science Management workshop in June 2016 organised by the Australian Alps Liaison Committee, and a Legal Frameworks workshop held by the University of Tasmania. Two workshops are being planned for next financial year: one on climate variability (past, present and future) led by Bec Harris and David Bowman to be held in NSW, and one on ecosystem services led by Lesley Hughes and Stephen Garnett to be held in the Northern Territory.

A major focus of this Network is the review of three NARPs to be delivered in 2016-17. Several meetings and workshops for the review process were held during the reporting period including one event at the Species on the Move conference in February 2016.

#### 6.4 Adaptation Network for Vulnerable Communities

The Adaptation Network for Vulnerable Communities (VCN) is the only entirely new network in Phase 2. Hosted by the University of Adelaide, this network is led by Professor Peng Bi. The network has grown steadily and by June 2016 had reached its target membership of 150 people. Members are drawn from a diverse range of sectors, including local, state and federal government, community service organisations, the university sector, the private sector, Indigenous health, CSIRO and other research agencies. The Network has promoted itself through targeted emailing, a booth and other activities at the NCCARF conference, VCN newsletter promotion, and by utilising VCN member networks, including ACOSS.

Relationships with the community service sector continue to grow as the network works closely with organisations such as the Australian Red Cross, ACOSS, TASCOS, VCOSS and WACOSS. ACOSS launched the web-based Resilient Community Organisations (RCO) benchmarking tool on 10 June 2016, and this tool will be promoted and disseminated through a series of national workshops organised by ACOSS in the next financial year. RCO is a toolkit developed by and for the community sector to help organisations measure and improve their resilience to disasters and emergencies.

Two policy workshops were held, in Perth and Melbourne, which focused on facilitating engagement and dialogue between researchers, policy makers and the community sector around the complex causes of social vulnerability to climate change. Attendees included 50 Community Service Organisation staff with service delivery, policy and advocacy roles.

Considerable effort has been expended on planning for key events to be held early in the next financial year to build adaptation capacity in research and end-user communities through the NCCARF/CSIRO National Adaptation Conference, the VCN Masterclass, and through granting 32 scholarships to early career researchers and practitioners to attend and present their work at these events. As a bronze sponsor of the NCCARF/CSIRO National Adaptation Conference, the VCN will organise a conference session on vulnerable communities and climate change and will facilitate networking with delegates through its conference booth. A satellite workshop at the conference is the VCN Masterclass which will be led by international experts on climate change and health: Professor Kristie Ebi from the University of Washington and Professor Yinlong Jin from China's Centre for Disease Control. This masterclass will be held on the day following the National Adaptation Conference.

A nice synergy was created through a partnership between the VCN, GoGo Events and Adelaide's Hutt St Centre (a shelter for the disadvantaged and homeless) to run workshops to screen-print the NCCARF/CSIRO National Adaptation Conference bags. The workshop provided a context by which people experiencing disadvantage could engage in discussion with VCN on how climate change interacts with social vulnerability. It also promoted an initial segue into further research on this topic with the Hutt St centre and their clients.

## 7. Next steps

### 7.1 Key Activity 1: Project management

Key Activity 1 will continue to support and manage activities under NCCARF Phase 2, including progress and financial reporting, management of NCCARF's governance and advisory groups, and human and financial resource management.

### 7.2 Key Activity 2: Coastal Climate Risk Management Tool

Following approval of the beta version of CoastAdapt by the Department of the Environment and Energy early in 2016-17, NCCARF will engage closely with stakeholders from government, business and industry, along with relevant experts, to roll out the beta version for consultation and review. An Engagement and Consultation Plan will be prepared, which will outline a program of workshops in each State and Territory, conference presentations and booths, newsletters and small group meetings with key stakeholders.

Important activities include:

*An outreach program.* NCCARF will continue to promote CoastAdapt and its use by a range of different user groups through its own workshop program, presentations at conferences organised by other organisations, small group meetings and other appropriate means as these become available.

*Creating the Tool Implementation Partnership.* NCCARF has contracted fifteen organisations to work closely with us throughout the rollout of CoastAdapt (beta and final versions). Partners will support assessment and outreach of CoastAdapt, and provide regular feedback on CoastAdapt.

*Trialling CoastAdapt.* NCCARF will conduct facilitated test cases with organisations such as infrastructure providers and local councils in the coastal zone (identified with assistance from the Tool Implementation Partners) looking at the application of CoastAdapt to real-world problems of coastal management under climate change and sea-level rise.

*User survey.* An online survey will be conducted combining open-ended and multiple-choice questions to obtain general evaluation as well as specific feedback about individual elements of CoastAdapt. The survey questions will be aligned with five overarching indicators of quality (awareness, trust, satisfaction, usability and influence). In addition, we will survey respondents for personal details such as their professional role, their organisation and geographic location, so that we can understand whether the survey has been completed by a balanced range of respondents, and can analyse the feedback received in the light of these characteristics.

*Updating CoastAdapt.* A number of modifications can be made to CoastAdapt even before the consultation and review process is completed. These include small changes, such as mending broken links and correcting references, as well as large changes such as commissioning entirely new content for CoastAdapt. Other changes will be best delayed until the consultation is completed, allowing a consensus view to emerge regarding the required action. Once the feedback and survey results have been collated (sometime in November) we will make a decision regarding what final modifications will be made to the beta version of CoastAdapt. This will include, for example, any cases where webpages are to be substantially rewritten or modified.

*Endorsement and delivery of CoastAdapt.* Once the consultation is complete, NCCARF will make a decision, in consultation with the Department of Environment and Energy (DOEE),

regarding necessary changes and additions to CoastAdapt, and these decisions will be implemented. Then, a final version will be submitted to the Project Review Committee for endorsement in February, with a final endorsed version provided to the DOEE for approval on February 28<sup>th</sup> 2017.

### **7.3 Key Activity 3: Synthesis and Communication**

NCCARF will continue to engage with stakeholders to roll out the synthesis products. The roll out will be aimed to achieve wide dissemination and up-take of the synthesis products. We plan to do this through:

- Exhibition at relevant conferences and industry activities
- Presentations to stakeholders as part of the CoastAdapt roll out and as round-table briefing sessions in regional centres and government departments.
- Social media and related activities.

### **7.4 Key Activity 4: Adaptation Networks**

The Networks will continue to operate through 2016-17. As well as ambitious plans to hold many training and early career workshops, a major undertaking for three of the networks will be delivery of the revision of the National Adaptation Research Plans.

## Appendix 1: Independent monitoring and evaluation report

Coutts J&R have continued to provide independent monitoring and evaluation of NCCARF Phase 2 against the deliverables specified in the Funding Agreement, the Project Plan and Annual Work Plans. Coutts J&R report quarterly to NCCARF, Griffith University and the Department of the Environment and Energy. A mid-term review was undertaken and completed in February 2016 with a final evaluation report due in October 2017.

### Findings of the Mid-term Review

The mid-term review evaluated NCCARF's performance and progress against the project log frame and performance indicators to date. The timing preceded the release of the beta version of the Coastal Development Tool (CoastAdapt) and so the focus was on the *engagement and development process* – rather than the *adoption and impact* of outputs of the project. The report was based on extensive feedback from consultation processes with NCCARF and its stakeholders, interviews with key stakeholders and web surveys of newsletter recipients and network members. The review concluded that:

1. **NCCARF was on track.** It was clear that NCCARF had met its milestones to date and was on track to deliver its contracted outputs in the time allocated to this phase of the project – despite the tight time-frames and extensive consultation that has been required.
2. **The level of engagement with stakeholders was high and there was strong support from those involved in the engagement process.** NCCARF had successfully established its advisory groups, networks and research projects and constructively engaged with a wide range of stakeholders – including end-users – to provide input and guide the development of project outputs.
3. **Networks were up and running and waiting to disseminate more from NCCARF.** The networks had (re) established quickly and most have increased their membership over the project.
4. **There was a lack of clarity about the final 'format and content' of the Tool.** At the mid-point in the project, there was some lack of clarity amongst stakeholders about what the 'Tool' will look like (structure and content) and therefore how it will be used. This would be addressed by the release of the beta version after July 2016.
5. **There was some concern about different demands on the Tool.** The differences between states were noted in terms of legislation and codes and this was also seen as a 'moving feast'. It was generally agreed that a national approach was needed with capacity for the Tool to be able to respond to changes.
6. **There was much concern about the legacy and ongoing momentum.** The chief concern raised by stakeholders is that of the ongoing legacy post-NCCARF Phase 2. This was seen as critical to gaining the full value of the outputs of the program in this phase.

### Progress to June 2016

Quarterly monitoring and evaluation reporting has continued to be based on feedback from advisory groups, interviews with Network convenors and NCCARF staff and secondary data and summarised against progress in its four activity areas. In all quarters during the year, each activity area was judged to be "Green" indicating that the program is *generally on track* in all activity areas. Findings at June 2016 are summarized below:

- **Overall:** The project team has done a remarkable job over the last quarter with the work on the beta version of CoastAdapt, the establishment of CoastExchange, and the completion of most of the planned synthesis products. Stakeholder engagement and endorsement of progress to date has been strong. The networks are looking quite healthy and dynamic, although they are also raising the concern of the lack of certainty and product continuity beyond the current phase of NCCARF. The July conference will provide an excellent forum to showcase the work undertaken by NCCARF to date and to further engage stakeholders in the on-going development process.
- **Activity Area 1 - Project Management:** Project activities and deliverables are on track as per the contact and project needs.
- **Activity Area 2 – CCCRMT (Coastal Tool):** The beta version of CoastAdapt is on track to be completed and submitted on 1<sup>st</sup> July with a release to stakeholders for testing and feedback in August. CoastExchange is up and functional with some need for review and potential modification/promotion. There is strong positive feedback on the tool from the *Project Review Committee* and *Tool Development Partnership*. Recruitment is underway for the Expert Panel that will address questions to “Ask an Expert”.
- **Activity Area 3 - Synthesis and Communications:** Seventeen items of synthesis products have been submitted to the department – 6 Sector Briefs have been approved. The remaining 11 synthesis products (6 Synthesis Summaries & 5 Policy Guidance Briefs) are pending revision and approval.
- **Activity Area 4 - Adaptation Networks:** Networks are continuing to report strong activity and in some cases, continued growth and a good mix of targeted stakeholders. They have contributed to product development and are in a good position to be able to promote and support the beta version of CoastAdapt.

### Indication of Impacts

It is too early to assess the extent of achievement of targeted outcomes given the stage of the project at June 2016 with the beta version of CoastAdapt yet to be released for trial and testing. An early indicator – apart from the strong positive feedback on process and outputs to date - is the feedback from Tool Development Partners (represented regional councils from New South Wales, Queensland, Tasmania, Victoria and Western Australia and Growcom representing Horticultural growers in QLD) in their activity reports for the 2015-2016 period. As a result of their interaction with the program and resources accessed, they reported a greater understanding of climate adaptation and the issues being experienced by other coastal areas of Australia. Specific examples were provided where outputs to date had been already used by members. These included:

- Use in the communication of issues experienced on the coast to internal staff: E.g. Emissions projects and potential coastal implications; issues around cost benefit assessments. (Bega Valley Shire Council);
- Use of information provided in the draft CoastAdapt materials to inform the preparation of the draft Coastal Zone Management Plan Byron Bay Embayment (Byron Bay Shire Council);
- CoastAdapt tools, case studies, Information Manuals and Coast Exchange Forum (including expert panel) have been utilised/applied - in developing scope of works for coastal projects (PNP)

Following the release of the beta version, steps will be taken to assess the use and planned use of CoastAdapt, Synthesis Products and other outputs by targeted user groups.

**Going Forward**

The focus over the next year will be on the testing, refinement and evaluation of CoastAdapt. A series of workshops planned for September-December 2016, together with an on-line survey, will provide an opportunity to gain detailed feedback on the tool, its perceived usefulness and refinement needed to maximise its value to decision-makers. The year will also provide opportunity to assess the full value of synthesis products and the value adding provided by the networks being supported by the networks.

*Dr Jeff Coutts*

Coutts J&R

October 2016