



# Communication and Knowledge Brokering Strategy

VERSION 4

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***Communication and Knowledge Brokering Strategy***

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# 1 Introduction

## 1.1 NESP Earth Systems and Climate Change Hub

The Earth Systems and Climate Change (ESCC) Hub is one of six research hubs established under the Australian Government's National Environmental Science Program (NESP).

The Hub's overarching aim is to ensure that policies, plans and associated decision-making relevant to key stakeholders are effectively informed by Earth systems and climate change science now and into the future; thereby supporting the broader NESP outcomes for achieving a productive and resilient Australia.

The ESCC Hub will achieve this by:

- building a national partnership, with world-class capability in delivery of multi-disciplinary Earth systems and climate change science, modelling, information and associated products and services
- facilitating the uptake of knowledge, products and services through targeted stakeholder engagement, communication and knowledge brokering.

The ESCC Hub research project portfolio is designed to meet the needs of target next/end-users, featuring the following key research themes (these are the research priorities established by the Department of the Environment and Energy):

- Improved observations and understanding of past and current climate
- Improved understanding of how the climate system may change in the future
- Building the utility of Earth systems and climate change information.

Collectively, the project portfolio has a clearly defined 'path-to-impact' focused on addressing five key national challenges for Australia (which are the Hub's outcome areas):

- Hydroclimate and water resources
- Food security, ecosystems and natural resource management
- Carbon cycle and future warming
- Coastal climate
- Climate extremes and disaster risk management.

Consistent with the Hub's stated aim and intended outcomes, the specific objectives of the Hub are to:

- Advance understanding of Australia's climate variability, extremes and associated drivers and deliver enhanced weather and climate predictions and projections
- Provide relevant information, communications and knowledge products tailored to the needs of target next/end-users

- Develop and strengthen stakeholder relationships and support informed management and evidence-based decision-making through facilitated outreach of relevant products and services.

To meet its stated objectives, the ESCC Hub will deliver a suite of complementary knowledge, information and data products and services to ensure that environmental decision making is informed by an enhanced understanding of Australia's past, current and future climate.

## 1.2 About this document

The *Communication and Knowledge Brokering Strategy (C&KBS)* outlines:

- the rationale behind the Hub's communication and knowledge brokering activities (why?)
- key stakeholders and target audiences (who?)
- objectives, key messages and products (what?)
- delivery mechanisms, including services and support (how?).

The C&KBS is fully integrated with the closely linked *Indigenous Engagement and Collaboration Strategy*. Both are key components of the Hub's *Research Plan*, which more broadly incorporates overarching ESCC Hub governance arrangements, including the *Monitoring and Evaluation Framework* and associated *Risk Management Plan*.

## 1.3 Scope

The ESCC Hub C&KBS encompasses three fundamental areas of activity:

- Communication
- Knowledge brokering
- Stakeholder engagement.

## 1.4 Implementation

The ESCC Hub C&KBS will be implemented through the *Communication and Knowledge Brokering (C&KB) Action Plan*. This plan outlines the timing and purpose for the range of engagement activities undertaken by the Hub. The plan will be updated regularly in response to operational requirements and resources.

Implementation guidelines are provided in relevant protocol and guideline documents, including:

- *Branding and acknowledgement guidelines*
- *Editorial guidelines*
- *Publications, presentations and products protocol*
- *Public comment protocol*.

## 2 Purpose and objectives

The purpose of the ESCC Hub C&KBS is to:

- Guide the development of strategic, proactive communication and knowledge brokering activities with key stakeholders, including target next/end-users and associated decision-makers
- Increase awareness, build support, exchange information and facilitate outreach and maintain engagement with these stakeholders and the broader research and general community in delivery of ESCC Hub projects and activities, and the NESP more generally
- Facilitate development and management of productive stakeholder relationships, including collaborative partnerships where appropriate, in delivery of ESCC Hub research projects and activities
- Facilitate (i) implementation of the ESCC Hub *Monitoring and Evaluation (M&E) Plan*, (ii) adoption of key ESCC Hub outputs by next/end-users, (iii) management of attendant ESCC Hub operational risks, and
- Facilitate realisation of agreed strategic ESCC Hub research outcomes and impacts (i.e. path-to-impact), including successfully meeting and where appropriate adding value to stakeholder expectations.

In this context, the specific objectives of the C&KBS are to:

- Promote and communicate the aim, objectives, activities and outputs of the ESCC Hub *Research Plan V4* through development of clear, targeted and accurate ESCC Hub communication products and services focused on needs of next/end-users and other stakeholders [Communication]
- Manage the knowledge generated by the ESCC Hub including relevant data, information and associated products and services in a way that is secure, discoverable and accessible, and which meets agreed standards of quality assurance and control [Knowledge brokering]
- Develop and manage key stakeholder relationships and where appropriate collaborative partnerships to ensure that communication and knowledge brokering activities are strategically targeted to facilitate adoption and realisation of specified ESCC Hub outcomes and impacts [Stakeholder engagement].

These objectives will be addressed by the ESCC Hub through undertaking effective and efficient stakeholder engagement featuring regular interactions and information exchange between key internal and external ESCC Hub stakeholders, including:

- Department of the Environment and Energy and other targeted next/end users within government, private sector and the Australian community
- ESCC Hub Steering Committee and Stakeholder Advisory Group, ESCC Hub partner agencies and other NESP Hubs, and the Earth systems and climate change science research community more generally.

### 3 Governance, linkages and process

#### 3.1 Governance arrangements and linkages to key stakeholders/partners

A schematic summary of the governance structure for the ESCC Hub, with linkages between internal and external stakeholders and the Hub itself is provided in Figure 1.

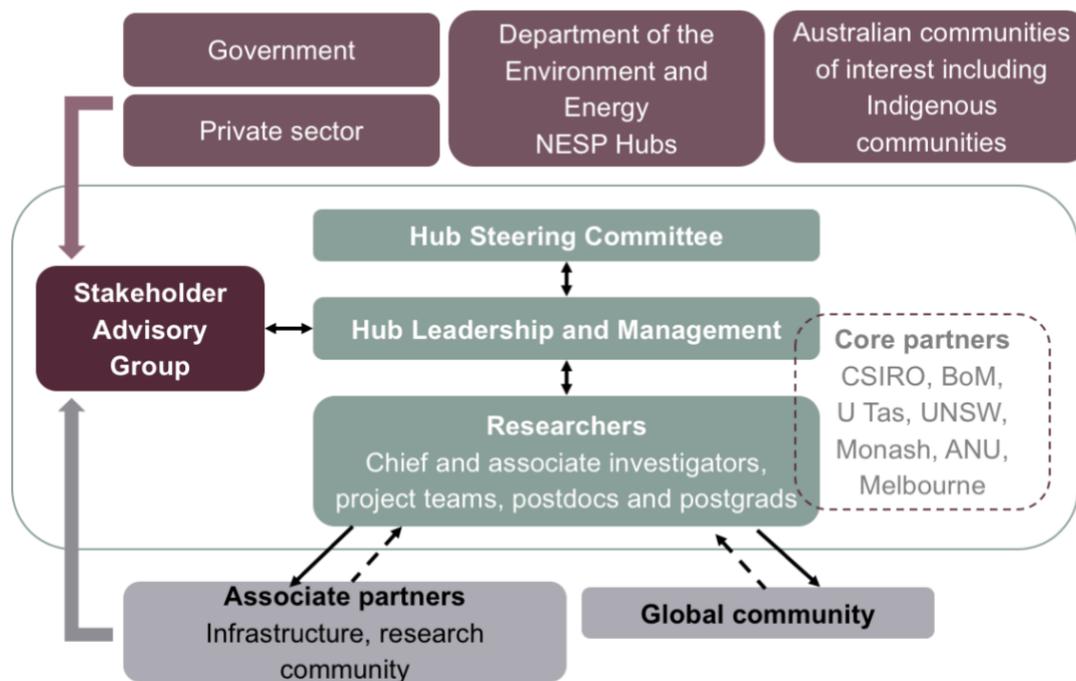


Figure 1: Earth Systems and Climate Change Hub governance structure and key stakeholder/partner linkages

As part of the ESCC Hub governance arrangements, responsibility for development of the C&KBS in the first instance is with the Hub Leadership/Program Management Team (HL/PMT), with input from key internal and external stakeholders as appropriate. The strategy will also be formally endorsed by the ESCC Hub Steering Committee (HSC) and Department of the Environment and Energy.

All communication and knowledge brokering functions and activities will be directed and coordinated at the Hub level by the HL/PMT, consistent with directions of the C&KBS. Delivery of general communication and knowledge brokering activities will primarily be undertaken at the Hub level, and specific research related communication and knowledge brokering activities primarily undertaken at the project level. This approach will ensure that individual research project outputs are appropriately targeted at next/end-user needs, consistent with broader provisions of the Hub’s *Research Plan V4* and associated project portfolio. Indeed, all projects will feature specific deliverables designed to contribute to the successful implementation of the Hub’s C&KBS and the realisation of the Hub’s specified outcomes and a tangible path to impact.

## 4 Communication

ESCC Hub communication will be resourced at both Hub and project level to ensure responsibility for communication activities are allocated across all relevant ESCC Hub personnel in an effective and efficient manner consistent with stakeholder expectations and needs, requisite expertise and available resources.

All communication activities—at both Hub and/or project level—will be guided by the strategic aims and objectives of the C&KBS. Additional advice and guidelines to assist with the implementation of the C&KBS are provided in guideline and protocol documents.

### 4.1 Guiding principles

- Hub communication is first and foremost about the Hub, rather than individual partners.
- Only identified spokespeople should speak on behalf of the Hub.
- There should be no surprises for the Department of the Environment and Energy or for Hub partners resulting from communication activities.
- All publications and communication materials must be reviewed/approved by the Hub leader prior to release.
- A copy of all publications and communication materials must be supplied to the HPMT.

All stakeholder engagement, knowledge brokering and communication activities and materials must adhere to the Hub's *Branding and acknowledgement guidelines* and *Editorial guidelines* to ensure a consistent and professional view of the Hub is presented.

### 4.2 Responsibility for undertaking communication activities

- Delivery of general communication and knowledge brokering activities will primarily be undertaken at the Hub level.
- Specific research-related communication and knowledge brokering activities primarily undertaken at the project level.
- Support will be provided by specialist communicators and associated technical experts from within existing networks across the Hub partners.

### 4.3 Key messages and themes

The ESCC Hub's key messages emphasise our science, collaboration and impact. The messages serve as standalone statements about the Hub's drivers and direction, and underpin more specific messaging in more detailed communication products and activities.

Topic	Message
Collaboration	The Earth Systems and Climate Change Hub brings together researchers from Australia's world-leading science agencies and universities. This unique collaboration ensures that Australia has the best possible climate change science to inform policy and decision making.

<b>Topic</b>	<b>Message</b>
Value proposition	Australia's geographic position in the southern hemisphere gives rise to a unique series of climate challenges in a warming world. Other countries will not spend time and money understanding our climate and how climate change will play out here. It is up to us to invest in our future.
Risk management	Climate change science provides an evidence basis for identifying and managing climate-related risk. Understanding both climate change and climate variability is essential for determining future risk exposure and the possible consequences.
Science informing services	To deal with a changing climate we need credible, useful and accessible scientific information. Translating our world-leading science to practical, actionable information in the form of climate change services that can be used to inform decision-making for climate adaptation planning, disaster risk management and associated assessments is an important role for the Hub.
Climate change services	Science-based climate data and information and associated products and services relevant over multi-decadal/climate change timescales. The Hub is a key national platform for development and delivery of climate change services, and for facilitating national level coordination across relevant service providers.
Water resources and hydroclimate	In a changing climate water availability and quality are likely to be affected by changing rainfall patterns and more frequent and/or severe droughts. We are improving our understanding of climate variability and other processes that affect water availability to inform effective water resources planning, management and infrastructure investment.
Food security, ecosystems and NRM	Primary industries and the environment are vulnerable to rising temperature, changes in rainfall and other changes in climate. We are improving our ability to provide primary producers, resource managers and ecosystem managers with information at the timescales needed for effective decision making and planning.
Carbon	Limiting future global climate change requires substantial and sustained reduction in net greenhouse gas emissions. We are improving our understanding of past emissions and predicting future changes to inform mitigation policy responses and help us determine the best way to manage the carbon budget.
Coastal hazards	Most of Australia's population and infrastructure is in the coastal zone. In a changing climate this zone is vulnerable to rising sea levels and more frequent and extreme storms. We are improving our understanding of coastal and climate processes, so planners, developers and decision makers have the information they need to minimise risks and respond to unavoidable impacts.
Extremes and disaster risk management	Extreme events such as bushfires, floods and storms are a feature of Australia's variable climate. In a changing climate, these events are likely to become more severe and/or frequent. We are improving our understanding of how extreme events will change in the future, so disaster risk managers have better quality information for planning responses to these events.
Climate models	Australia's national climate model, ACCESS, is an important tool for helping us to understand our past, current and future climate. Ongoing development of ACCESS, underpinned by research to better understand the components of the climate system, will ensure that Australia's climate modelling capability remains world-class and that we have the best available tool for planning for the future.

Topic	Message
Climate projections	The climate we experienced in the past is no longer a reliable indicator of the climate we will experience in the future. Climate projections narrow down the range of possible future climate conditions, so we can make management, policy and adaptation decisions accordingly.

#### 4.4 Key activities and methods

ESCC Hub communication activities fall into four broad categories, identified in Table 1. The table contains representative headline activities, products and services in each category.

Table 1. ESCC Hub headline communication activities

<p><b>A. General communication activities</b></p> <ul style="list-style-type: none"> <li>• Multi-format publications, including summary reports, brochures, fact sheets, videos, animations, infographics</li> <li>• Website and multi-media (including social media) products and content, with emphasis on the ESCC Hub website and links to partner agency and other NESP Hub websites</li> <li>• Hub newsletters for internal stakeholders (<i>ESCCapades</i>), external stakeholders and supporters (<i>Teleconnections</i>), and contributions to related newsletters and communiques (e.g. <i>The Chirp</i>)</li> <li>• Target syntheses of research outputs to meet particular stakeholder needs identified in consultation with the ESCC Hub Steering Committee, Stakeholder Advisory Group, the Department, and other NESP Hubs.</li> </ul>
<p><b>B. Science/technical communication activities</b></p> <ul style="list-style-type: none"> <li>• Peer reviewed science journal papers</li> <li>• Technical reports</li> <li>• Participation in, presentations at and reporting of workshops, conferences and other technical fora</li> </ul>
<p><b>C. Meetings, briefings and events</b></p> <ul style="list-style-type: none"> <li>• Targeted planning and inception workshops and regular meetings for/with NESP Hub Leaders, LCIs, project teams and other key stakeholders</li> <li>• Use of thematic conferences, seminars, webinars and workshops to facilitate communication of research outputs to target next/end-users and for gaining critical feedback</li> <li>• Networking and professional development events for young professionals and early career scientists</li> </ul>
<p><b>D. Information management and sharing</b></p> <ul style="list-style-type: none"> <li>• Various climate change services, including online data portal(s) and decision-support and associated management tools, application-ready data and associated visualisation products, and guidance materials</li> </ul>

Additional communication activities, products and services may be identified as a result of the development of future research plans, and updated versions of the *Indigenous Engagement and Collaboration Strategy*, *M&E Plan* and *Risk Management Plan*.

In addition to this range of headline activities and methods, ESCC Hub communication activities and methods more generally may also include consideration of:

- Brand and reputation management – for recognition and credibility of the products, quick response for risk and issues management
- Public affairs – proactive and responsive media, public websites, response to enquiries, articles for online or printed publications
- Building community and engagement – regular eNewsletter distributed to project stakeholders, participation in events, networks and engagement activities
- Face-to-face briefings, meetings, presentations
- Promotions – around release of technical products – including marketing techniques to reach broad group of stakeholders with varying interests
- Use of program champions, and other credible third-party endorsements to deliver messages targeted for specific stakeholders
- Social media activities using the platforms of all Hub partners to increase reach nationally and internationally
- Internal communication – to ensure effective interactions across the ESCC Hub, and as an integral part of the NESP Hub program.

## 5 Knowledge brokering

Managing ESCC Hub knowledge for delivering to target next and end-users in government, industry, scientific, Indigenous and other identified communities requires deliberate and coordinated planning and resource allocation designed to accommodate the full scope and scale of the Hub's research plan(s).

In this context, and for the purposes of the C&KBS, knowledge management and associated brokering activities outlined here are intended to fully complement the communication and stakeholder engagement components of the strategy, and include the full spectrum of creation, capture, storage, transformation and use of data, information and associated knowledge products and services for stakeholders.

More specifically, key features of the knowledge brokering components of the C&KBS are to:

- facilitate the transformation of such data and information into discoverable, accessible and actionable scientific knowledge for benefit of target end-users in an effective, efficient and sustainable manner
- continually engage with users of ESCC Hub data, information and knowledge to ensure products and services are tailored to specific needs
- prescribe appropriate knowledge management arrangements, including systems and procedures for collecting, securing and disseminating data and information.

It follows that these arrangements are not only aligned with the ESCC Hub *Research Plan V4*, but are also consistent with proposed governance arrangements for the Hub, including the *Evaluation Planning Framework* and associated *M&E Action Plan* and *Risk management plan*, to ensure delivery is to an agreed QA/QC standard and strategically aligned with identified needs of users; and thereby to facilitate realisation of expected outcomes and pathway to impact for the Hub.

### 5.1 Data and information management

This strategy is informed by and compliant with the NESP *Data and Accessibility Guidelines V3* (Jan 2017), and makes specific provision for management of data, information and associated scientific and communication products and other assets used and/or delivered by the ESCC Hub.

These guidelines outline Department of the Environment and Energy requirements for ensuring NESP outputs are “publicly and freely accessible and available on the internet, for use by all persons, as required by NESP Programme Guidelines” (p. 4). The *NESP Data and Accessibility Guidelines V3* promote open access to data and information consistent with national and international principles and practices and with emphasis on discoverability, accessibility and useability, now and into the future. The stated rationale is that “providing open-access to the data and information products derived under the NESP will provide up-to-date, high quality data and information to decision-makers, environmental managers, other scientists and to the community” (p. 7).

The guidelines are indicative rather than prescriptive, and provide detail on expectations of the Department and to assist NESP providers to identify solutions for achieving open-access for 'research products'. The guidelines refer to all NESP research products, including the following categories:

- publications, including scientific papers, reviews, books and book chapters
- raw data sets, including spatial data
- grey literature, including fact sheets, project profiles and technical reports
- images, maps, photos, videos and animations
- models and other tools (e.g. decision support tools) such as software created by the research process, including value-added components developed for off-the-shelf or open-source software
- websites
- mobile or tablet apps
- unspecified emerging technology.

According to the guidelines, licensing of research data will be according to the Australian Government Open Access and Licensing (AusGOAL) framework. This framework provides clarity around permissions, terms and conditions for reuse of data within and across the research community and industry, reducing risk and enhancing efficiency by specifying and standardising the number and type of licence formats. Specifically, research products need to be made publicly available under the latest *Creative Commons Framework* (Creative Commons V4.0 International) using a *Creative Commons Attribution Licence* (CCBY4.0). Exceptions relate only to "...privacy, security or confidentiality reasons" (p. 4).

The ESCC HL/PMT has developed appropriate protocols to ensure that metadata statements for each project are completed, collated and catalogued as per NESP guidelines. The Hub aims to make the metadata catalogue available on the ESCC website in accordance with Departmental arrangements for NESP. The Hub leadership will also work with partner agencies to ensure consistency with relevant agency-specific data and information management arrangements.

## 6 Stakeholder engagement

Stakeholders are those people, groups, agencies or organisations that influence the implementation of the C&KBS and are affected by its implementation, primarily as the target audience.

The stakeholders for the ESCC Hub include any group or individual who has an interest in, or use for, the best available Earth system and climate change science. This is a broad group of stakeholders with varying interests and levels of technical understanding. They each require thoughtful and targeted engagement depending on the relationship they have with the Hub.

Effective stakeholder engagement is essential to realising the Hub's goals, outcomes and path to impact. The primary purpose of the Hub's stakeholder engagement is therefore to inform the Hub's research project portfolio development and implementation in a way that addresses the prioritised needs of the users of the Hub's research, information products and services.

### 6.1 Approach

The Hub has identified around 150 external stakeholder groups – mostly institutions and agencies but also some individuals – who meet the Hub's definition of a stakeholder, outlined above. These stakeholders encompass all levels of government, NGOs, Indigenous communities, peak bodies and private companies; many relevant sectors (including emergency services, environment, agriculture, fisheries, forestry, water, health, energy, defence, transport, infrastructure, finance, insurance, foreign affairs and trade, tourism, resources); research agencies and broader research communities, including other NESP Hubs.

To avoid any confusion, the Hub's primary focus is those internal and external stakeholders who are one or some combination of the following points along the 'knowledge value chain':

- a) Next-users of the knowledge and information delivered by the Hub's research – these are often allied researchers, research projects, programs or agencies (including both internal and external to the Hub and the NESP more generally).
- b) End-users (typically external to the Hub and the NESP more generally) of the Hub's information products and services, which may have been modified and value-added by next-users.
- c) Providers (typically external to the Hub and the NESP more generally) of research infrastructure and other inputs to the research undertaken by the Hub.

Given that a single forum cannot practically represent the interests of all these stakeholders, the Hub has developed a two-tiered external stakeholder engagement approach comprising a Hub Reference Stakeholder Network and a Hub Stakeholder Advisory Group.

### 6.1.1 Hub Stakeholder Reference Network

The Hub Stakeholder Reference Network (HSRN) provides the primary register of stakeholders who will be the focus of the Hub's ongoing external stakeholder engagement. The HSRN comprises 200 or so external stakeholders. This focus will be appropriately prioritised across the HSRN in terms of allocation of dedicated resources for communication and knowledge brokering on the basis of the following categories:

- The Department and the Minister for the Environment and Energy
- Other target next/end-users for which the ESCC Hub has an existing and/or proposed project/case study collaborative link, including:
  - relevant Australian Government departments and associated ministers
  - other relevant state and local government departments
  - relevant private sector organisations and individuals
  - other NESP Hubs and research organisation partners.
- All other registered HSRN organisations/individuals

Responsibility within the Hub for the prioritised allocation of resources for stakeholder engagement will be collectively with the HLT, the HPMT and the project lead chief investigators (LCIs) in the first instance, and will be guided jointly by the Hub's C&KBS and the Evaluation Planning Framework and associated action plans.

### 6.1.2 Hub Stakeholder Advisory Group

Dealing with the Hub on behalf of, and in the best interests of the HSRN, is the Hub Stakeholder Advisory Group (HSAG). The primary role of the HSAG is to have governance oversight of the external stakeholder engagement arrangements of the Hub to ensure that such arrangements are effective, efficient, fair and equitable.

This group comprises up to 10 individuals who have been identified and appointed because of their acknowledged expertise and/or professional interest in those research domains of relevance to the Hub – especially the Hub's designated outcome areas. Meeting on a quarterly basis, the HSAG facilitates the Hub's engagement with the broader stakeholder community, using the HSRN as its 'eyes and ears' into stakeholder needs and views. The timing of the HSAG meetings is aligned to the HSC meetings.

The HSAG has an independent chair who also serves on the Hub Steering Committee.

## 6.2 Coordination and management

The Hub Program Management Team is responsible for ensuring that relevant engagement activities are undertaken across all external stakeholders in an effective and efficient manner, consistent with meeting the Hub's broader strategic objectives. Records of all Hub stakeholder engagements are kept on a central Microsoft Access database that is maintained by the Hub Program Management Team.

These arrangements should also provide appropriate assurance to the Hub Steering Committee, which has oversight of all aspects of the Hub’s operations and performance, that such activities are based on appropriate governance in terms of meeting the expectations of stakeholders and adding value where appropriate.

### 6.3 External stakeholders

The ESCC Hub’s external stakeholders fall into the eight broad categories (Table 2). The summary of the desired relationship the Hub is seeking with these groups that has been noted in the table is designed to explain why these stakeholders are important for the Hub, what information they might require and what information the Hub can provide (including when and in what format), and what role the Hub and these stakeholders might play in jointly facilitating path-to-impact for the Hub and the NESP more generally.

Targeted stakeholders within each group are identified on the *C&KB Action Plan*.

Table 2. ESCC Hub external stakeholders

External stakeholder group	Desired relationship
<b>Federal policy and planning</b>	<ul style="list-style-type: none"> <li>• The ESCC Hub is positioned as a valuable and reliable source of accessible ESCC information</li> <li>• Federal Ministers and Departments have the latest ESCC science available to them</li> <li>• Federal Ministers/Departments are engaged with the ESCC Hub, with open, two-way communication channels in place</li> </ul>
<b>State policy and planning</b>	<ul style="list-style-type: none"> <li>• The ESCC Hub is positioned as a valuable and reliable source of accessible ESCC information</li> <li>• State government departments have the latest ESCC science available to them</li> <li>• State government departments are engaged with the ESCC Hub, with open, two-way communication channels in place</li> </ul>
<b>Local policy and planning</b>	<ul style="list-style-type: none"> <li>• The ESCC Hub is positioned as a valuable and reliable source of accessible ESCC information</li> <li>• Local government has the latest ESCC science available to them</li> <li>• Local government is engaged with the ESCC Hub, with open, two-way communication channels in place</li> </ul>
<b>International policy and planning</b>	<ul style="list-style-type: none"> <li>• The ESCC Hub is positioned as a valuable and reliable source of accessible ESCC information</li> </ul>
<b>Private sector</b>	<ul style="list-style-type: none"> <li>• The ESCC Hub is positioned as a valuable and reliable source of accessible ESCC information</li> <li>• The private sector has the latest ESCC science available to them</li> <li>• The private sector is engaged with the ESCC Hub, with open, two-way communication channels in place</li> </ul>
<b>NGOs</b>	<ul style="list-style-type: none"> <li>• The ESCC Hub is positioned as a valuable and reliable source of accessible ESCC information</li> <li>• NGOs have the latest ESCC science available to them</li> </ul>

External stakeholder group	Desired relationship
	<ul style="list-style-type: none"> <li>• NGOs are engaged with the ESCC Hub, with open, two-way communication channels in place</li> </ul>
<b>Indigenous groups</b>	<ul style="list-style-type: none"> <li>• Indigenous Australian groups have targeted climate information that is relevant and useful</li> <li>• ESCC Hub research is informed by relevant Indigenous weather and climate knowledge</li> <li>• Key Indigenous stakeholder groups are engaged with the ESCC Hub, with open, two-way communication channels in place</li> </ul>
<b>Next users/research community</b>	<ul style="list-style-type: none"> <li>• The ESCC Hub is positioned as a valuable and reliable source of accessible ESCC information</li> <li>• The Australian research community has access to the latest ESCC science</li> <li>• The Australian research community is engaged with the ESCC Hub, with open, two-way communication channels in place</li> </ul>

## 6.4 Internal stakeholders

The ESCC Hub's internal stakeholders are listed in Table 3, along with a summary of the desired relationship the Hub is seeking with them.

Table 3: ESCC Hub internal stakeholders

Internal stakeholder group	Desired relationship
<b>Hub staff (Hub Leadership/ Program Management Team and project CIs/teams)</b>	<ul style="list-style-type: none"> <li>• People working in the ESCC Hub are kept informed about Hub activities</li> </ul>
<b>Hub Steering Committee</b>	<ul style="list-style-type: none"> <li>• The HSC is kept informed about Hub activities</li> </ul>
<b>Hub Stakeholder Advisory Group</b>	<ul style="list-style-type: none"> <li>• The HSAG is kept informed about Hub activities</li> </ul>
<b>Hub partner organisations</b>	<ul style="list-style-type: none"> <li>• ESCC Hub partners are kept informed about Hub activities</li> <li>• ESCC Hub partners have access to the latest ESCC science</li> <li>• ESCC hubs are engaged with the ESCC Hub, with open, two-way channels of communication in place</li> </ul>

## 6.5 Indigenous community engagement

The vulnerability of Indigenous communities to climate-related risks is well understood by the ESCC Hub. The Hub also understands and respects the role that traditional knowledge can play in informing the Hub's research. In turn, through its Bureau of Meteorology, CSIRO and university partners, the ESCC Hub has the potential to leverage off previous work with Australian and Pacific Island indigenous communities in climate science and other technical domains to ensure effective Indigenous engagement that benefits the Hub's Indigenous community stakeholders, including collaborative partners.

Meaningful, thoughtful and appropriately resourced engagement with Aboriginal and Torres Strait Islander peoples will result in benefits to Indigenous Australians and to Australian communities in general. Genuine engagement and participatory communication and knowledge brokering activities that are sensitive to the culture and needs of Indigenous Australians are essential to build strong, effective and mutually respectful working relationships.

More details on arrangements for ESCC Hub engagement of Indigenous communities are outlined in the ESCC Hub's *Indigenous Engagement and Collaboration Strategy*.

## 6.6 Case studies

By NESP standards, the research projects being undertaken in the ESCC Hub are relatively long (three years), so opportunities to demonstrate impact for stakeholders are more limited than for the shorter projects in other hubs. As a means to facilitate the path-to-impact for the Hub's existing research project portfolio, the ESCC Hub has developed a suite of case studies – short research and engagement activities that develop products and services targeted to meet the needs of specific stakeholders.

The case studies not only offer a means to demonstrate the path-to-impact of the Hub's science, but also provide the opportunity for meaningful engagement with tangible benefits for the targeted stakeholders.

Case studies are identified through submissions of expressions of interest aligned with the annual research planning process. Case studies will generally be expected to be completed within the Research Plan year.

## 6.7 Business development

The existing scope and scale of the ESCC Hub strategic outcome areas, designated research priorities and needs of target next/end users presently exceeds available resources for projects and activities to address all priorities. Likewise, the ESCC Hub needs to attain a level of practical flexibility in resource allocation to be able to respond to new and emerging priorities (yet to be identified) over the term of the Hub. It also follows that the Hub needs to allocate resources to support, within practical limitations, maintenance of critical capabilities across core partners to allow for future research planning contingencies.

Accordingly, a strategic process of developing new business opportunities leveraged off the ESCC Hub's core research delivery and communication and knowledge brokering activities will be undertaken by the HL/PMT, with support from CIs and relevant (Business Development) capability of the Hub's core partners where appropriate. This will be a somewhat ancillary but otherwise important additional function of the stakeholder engagement component of the C&KBS (and by association M&E) implementation over the life of the Hub. Such an approach aims to identify and indeed realise opportunities for further discretionary co-investment from ESCC Hub partners and new co-investment from other key stakeholders, thereby increasing the overall resource base for the Hub.

For governance purposes, the priorities and specific details of the Hub's business development activities will be developed and documented and reported as part of the annual work planning process for the HL/PMT, with input where appropriate from partners and both the HSC and HSAG.

## 7 Achieving outcomes, measuring impact and managing risk

### 7.1 Monitoring and evaluation

The Hub's *Evaluation Planning Framework* (EPF) sits within the Hub but otherwise is designed to complement the overarching NESP Monitoring and Evaluation (M&E) Plan relevant to all hubs. Specifically, the ESCC Hub's EPF outlines the process by which both Hub and project level (including case studies) evaluation planning is developed and implemented in a way that is outcome focussed, targeted at next-users and end-users, and delivers measurable impact.

The EPF, through design and implementation of a specific Hub-level *M&E Action Plan*, also provides for real-time performance monitoring and management, progress reporting and review, along with, how the Hub will assess and report on its strategic path-to-impact across its portfolio of integrated projects and associated case studies.

In this context, the EPF is a key strategic document that is directly linked to the C&KBS and the Indigenous Engagement Strategy, all of which inform the implementation of the Hub's annual Research Plan. As for the C&KBS, the Hub's EPF also underpins the Hub's flexibility and responsiveness (e.g. through the operational development and implementation of annual case studies – see previous section) to accommodate changing research priorities on an annual basis, in addition to the Hub's commitment to facilitating innovation and continuous improvement in research project-based service delivery.

In practice, the Hub-level *M&E Action Plan* is updated by the Hub on an annual basis and therefore also provides the relevant input to facilitate implementation of the NESP M&E Plan, specifically including the delivery of the Biennial Evaluation Report. As previously stated, it also ensures that the Hub's research is continually informed by stakeholder needs

### 7.2 Managing risk

The Hub risks are identified in each research plan; this includes the communication and knowledge brokering risks identified in Table 4.

Table 4: Communication and knowledge brokering risks

Risk	Existing controls	Risk rating			Risk response strategy	Proposed risk treatments	Due date	Responsible officer	Target risk rating		
		C	L	R					C	L	R
External stakeholders:		High	Possible	Med	Accept				Mod	Unlikely	Low
<p>1. Poorly coordinated (inefficient, repetitive, incomplete and/ or ineffective) engagement and/ or inadequate expectation management</p> <p>2. Inadequate approach to the large and diffuse stakeholder group</p> <p>3. lack of fairness, equity and transparency in undertaking meaningful stakeholder engagement.</p>	<p>1. All partner agencies engage in frequent stakeholder discussions and development of communication products. Skill level and understanding by partner agencies has increased in recent years (e.g. via CCIA project).</p> <p>2. Hub developed and implemented a strategically designed and endorsed <i>Communication and Knowledge Brokering Strategy (C&amp;KBS)</i> incorporating stakeholder engagement.</p> <p>3. The Hub has an outcome-focused <i>Evaluation Planning Framework</i> targeted at needs of next/end-users complemented by the C&amp;KBS; appropriate stakeholder engagement arrangements; and governance. This includes the Hub Stakeholder Advisory Group and the HSC.</p>					<p>1. Appointed a third Deputy Hub Leader with deep experience in stakeholder engagement to complement existing stakeholder engagement experience of the HLT/HPMT.</p> <p>2. Manage stakeholder expectations through: i) effective and ongoing engagement with key bodies/agencies; and ii) effective communication, and iii) role of the HSAG.</p>	Ongoing through life of Hub.	Hub Leader is accountable; but Hub Leadership team and all Hub researchers have a responsibility, with emphasis on pivotal role of Cis			
<p>Hub-level communication and knowledge brokering; stakeholder and Indigenous engagement</p> <p>If this is inadequate then it limits the effectiveness at research project level.</p>	Significant consequences in terms of realising research impact	Mod	Unlikely	Low	Avoid	<p>NEW (RPV3): Ensure CIs allocate time to these tasks; training modules.</p> <p>EXISTING: Continue with existing controls; use strong governance and M&amp;E framework to monitor and manage this risk; ensure continuous feedback and improvement strategies are in place; leverage experience and relationships across NESP and partner agencies.</p>	Ongoing	Hub leader, Deputy Hub leaders	Mod	Unlikely	Low



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