



# The Personality Portfolio

## Using organisational personality to accelerate climate adaptation in NRM

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Front Cover Image: Source: NRM North;  
Credit: Rob Burnett Images



  
An Australian Government Initiative





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## What to expect in this portfolio

This Portfolio borrows the concept of ‘personality’ to reflect on how natural resource management (NRM) organisations operate. It characterises six potential personality types of NRM organisations and uses them as a tool to reflect on strengths, collaborate differently to face challenges, and get better access to information for NRM groups. The end result should be a faster, more efficient adaptation journey.

Individual personality tests (e.g. Myers-Briggs, DiSC, or The Big Five personality tests) and their associated personality types have been used as a tool to encourage people to reflect on their own strengths and limitations and to consider how to work more effectively with others. For example, many of us have reported benefits or insights gained from reflecting on our own introversion or extroversion, or our tendency to be big-picture thinkers or more details-oriented.

Organisations can be thought of as having personalities just like individual people do. Thus, reflecting on the strengths our organisations possess and the challenges they are likely to face in adaptation based on their personality could help target adaptation efforts to achieve success faster or more efficiently.

This Portfolio borrows the engaging idea of personality types to foster such reflection for natural resource management (NRM) groups and those who collaborate with or deliver information to them. It introduces six personality types for Australia’s regional NRM groups – Generalists, Naturalists, Classicists, Explorers, Rebels and Responders. These types were derived from surveys we designed and asked NRM planners to complete, and analyses we performed to see how answers tended to clump or cluster together (Box 1). We invite you to explore these ‘personality types’, consider which personality your own organisation most identifies with, and reflect on how you might use the insights gained to accelerate your own adaptation journey.

Image: Staff tree planting day held on a landholders property at Quellington; Source: Wheatbelt NRM.

## Identifying NRM organisational personality types

To develop our six personality types, we first used the literature and personal knowledge to define eight potential types of traits of natural resource management (NRM) organisations that could be related to ability to adapt to climate change. We surveyed almost 80% (a high response rate) of Australia's regional NRM groups (n=44 out of ~56 total) to characterise their traits. We then used cluster analysis to identify clusters of NRM groups within which responses to our survey were relatively similar and also different from those of other clusters. This analysis yielded six clusters – our six 'personality types'.

One person per NRM group was targeted to respond to our survey to avoid engagement fatigue, but the questions sought information on the 'NRM organisation' as a whole, and not how the one person operated in the organisation. We also asked whether responses would likely be the same in a year or two and thus robust to staff turnover and changes in funding and political influences. Thus, we expect these personality types to be relatively robust.

We identified the questions and specific responses that were most influential in distinguishing the six personality types. Personality type was unrelated to external factors like geographic location, size, state-based statutory arrangements, or types of land uses. Instead, NRM groups fell into clusters based on their responses to questions about several key types of traits (see sub-section Organisational personality traits). Key strengths and challenges represent our own reflection on the traits of each type in relation to the four key challenges of climate adaptation that we previously highlighted in [\*The NRM Adaptation Checklist\*](#).

If you want to know more, a more complete description of the survey methods and analyses can be found in our scientific paper, which will be accessible once in the public domain via [www.adaptnrm.org](http://www.adaptnrm.org).

## How to use this Portfolio

The concept of organisational personalities has been suggested but rarely studied, and there is even mixed evidence that individual personality tests provide clear benefits. Thus, rather than advancing a field of organisational personality, we are merely borrowing the concept of personalities – a concept that many people find captivating – to provide a new way to think about how organisations work. Our personality types are derived from clustering analyses of NRM group responses to questions about their organisation's traits, rather than a formal 'personality test'. In this Portfolio, we provide descriptions of each of the 'personality types' and suggest that you use the descriptions and short self-diagnostic questions to decide which one or two personality types might best describe your organisation. Remember, personalities change over time, both for individuals and organisations. The types are general categories, so you are looking for a personality type that broadly resonates with the way your organisation goes about its business, not necessarily a perfect match.

Once you are focused on one or two personality types, you have options for how deeply you want to reflect on the consequences for your approach to climate adaptation. Options include:

1. Simply reflect on the key strengths and challenges we have suggested and use the reflections as you wish.
2. Use the additional ideas in the section **Using personality to accelerate climate adaptation** to think about how to capitalise on your organisation's strengths, address challenges through collaboration, and/or more effectively source adaptation information.
3. Identify additional strengths and challenges for your organisation beyond the key ones we have suggested, drawing on the section **Using personality to accelerate climate adaptation** to chart your way forward based on these additional strengths and challenges.

Note that the personality type descriptions are presented as individual pages in an overall 'Portfolio', as well as a single introductory page that compares them all. This allows you to print whatever portion of the Portfolio you might want to keep handy for quick reference. Also remember that these types are based on one snapshot analysis of Australia's regional NRM groups and are not set in stone – they are a tool to stimulate reflection. We hope you find this Portfolio an engaging and useful way to help you better adapt to the future.

# The concept of organisational personality

Exploring an organisation's personality can stimulate reflection on its style and preferences for engaging with people, ideas and information. These traits are shaped by the challenges organisations face, the personalities of the individuals who work there, and the attitudes of their stakeholders. Organisational personality types can provide a different way to consider and capitalise on differences between organisations.

Organisational personalities may reflect the preferences organisations have for the way they work and the way they conceptualise the tasks they perform. This is analogous to individual personalities, which may reflect a particular person's style and preferences for engaging with ideas, people, and work tasks. Organisations differ in their approaches, or 'personality traits', partly due to the types of tasks and challenges they face, their governance structures, and the collective personalities of the individual people who work there.

Unlike the concept of individual personality, the concept of organisational personality has not been used as a popular tool to stimulate reflection within or across organisations. Yet it could be applicable in the same sorts of ways as individual personality with similar benefits. Individual personality tests encourage people to reflect on differences between individuals in a non-judgemental way to understand how and why different people are good at different things. They have particularly helped people explore why partnering with different personality types in work or private life can be challenging (because you think differently) but also potentially produce better outcomes (because you can capitalise on combined strengths and compensate for each other's weaknesses). These same types of outcomes should be achievable for organisations using the concept of organisational personality.

Key things to remember about organisational personality are:

- Personality types are general categories designed to stimulate reflection rather than 'label' or 'pigeon-hole' – in reality there is much richer variation and the concept is more a useful engagement tool than a well-established scientific approach.
- No personality type is overall better or worse than another, though each may be better at different types of tasks or challenges.
- Personalities are flexible and can change over time and in different contexts, particularly if they are shaped by strongly influential individuals within organisations.
- Organisational personality types are thus best used as an informal tool for reflection or for having discussions with others about 'how we work' at any given point in time or in any given context.
- Working with different personalities can be challenging but can provide the best mix of diverse strengths.

Image: National AdaptNRM workshop; Source: Lilly Lim-Camacho



## Personality vs. culture

The term 'organisational personality' hasn't been used nearly as much as 'organisational culture'. There has been a great deal of research and discussion on organisational culture and any reflection you already undertake about your organisation's culture is useful in this context. We believe the personality concept isn't an alternative, but rather provides a different, engaging (even entertaining) way to think about differences between organisations that might help more people reflect on how their organisations work. We have deliberately chosen to borrow the 'personality' concept because:

- In the popular literature, organisational cultures are often thought of as 'good' or 'bad' (like 'a supportive culture' or 'a bullying culture'), whereas personalities are just different.
- The notion of personality evokes a sense of working with the personality you have, but there is often pressure to deliberately change/improve an organisation's culture.
- Personality types are a useful synthesising tool that can capture people's interest.
- Personalities are often more explicitly recognised as flexible and different in different contexts, whereas an organisation's culture can be viewed as deeply entrenched.

## Organisational personality traits

Personality types are generally defined using a few key types of personality traits. For a fun example, see which Hogwarts' house (from Harry Potter) you belong in based on your personality traits: <http://www.allthetests.com/quiz33/quiz/1450979805/Which-Harry-Potter-House-Are-You-In>.

To establish organisational personality types for NRM, we asked about and analysed several key types of traits that we specifically thought could be related to an NRM group's ability to adapt to climate change. Five of the eight trait types we asked about were useful in clustering NRM groups together to create our 'personality types'.

In order of influence, the important types of traits were:

1. where and how information is sourced (adaptation experts, domain experts (e.g. water experts, biodiversity experts, etc.), literature, in-house knowledge)
2. possessing strategic skill sets for learning and reorganising
3. attention devoted to risk and uncertainty
4. perceptions of the role of NRM groups (i.e. whether the remit is largely about biodiversity or whether it strongly includes sustainable production)
5. strategies for stakeholder engagement – before or after initial approaches are determined.

In the Portfolio below, the traits of each of our personality types are described wherever they were helpful in driving the cluster analysis and thus in suggesting differences between types.

## The Personality Portfolio

The six NRM organisational personality types each have a different and successful approach to traditional planning, so the key strengths they can bring to adaptation and the aspects of adaptation they may find most challenging may also differ.

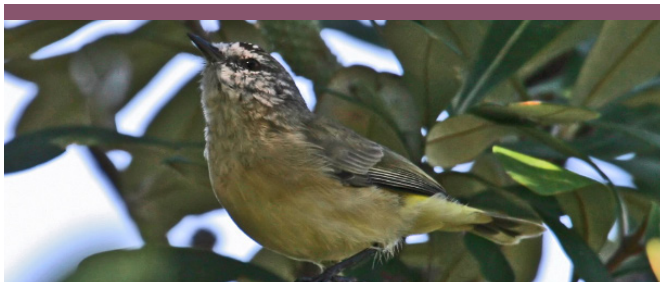
This Portfolio describes six NRM organisational personality types in the context of climate adaptation which we identified from data provided by 80% of Australia's regional NRM groups. After a single summary table, each personality type is described in a page, including a set of questions to help you consider which one or two personalities best match your organisation, and the specific traits that help to distinguish each personality type from the others (though there is some overlap). To stimulate your thinking about how to apply information on organisational personality types, we also note one potential key strength and one potential key

challenge for each personality type in tackling climate adaptation, with particular reference to the four key adaptation challenges identified in [The NRM Adaptation Checklist](#):

1. Making decisions for multiple possible futures
2. Employing flexible and adaptive planning processes
3. Explicitly identifying and preparing for likely future decisions
4. Strengthening adaptive capacity of people and organisations

# NRM Organisational Personality Types

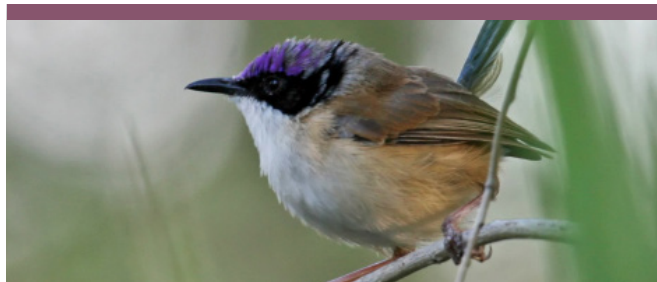
Here is a summary of the six personality types in a climate adaptation context:



## Generalists

Generalists try to plan for both biodiversity and land productivity by using all the information and tools they can – gathering information from many sources, networking widely, using diverse types of decision-making processes (though with some preference for formal ones) and being moderately innovative and flexible.

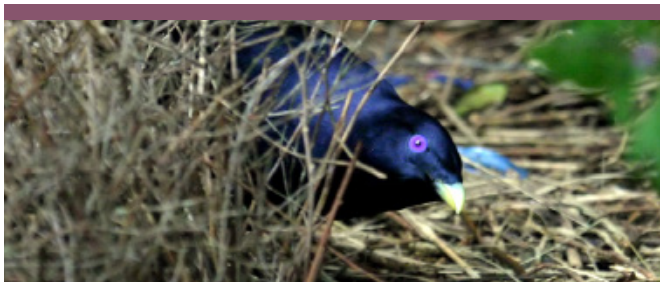
Image source: © Ian Montgomery



## Naturalists

Naturalists view their role as focusing mostly on biodiversity and natural assets. As such, they concentrate on networking with landowners, consider risk to their assets more than uncertainty in planning, and prefer to use information derived from expert opinion including adaptation experts.

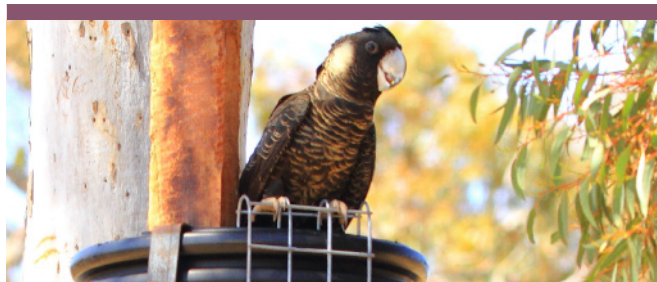
Image source: © Ian Montgomery



## Classicists

Classicists are domain-based planners (i.e. they focus separately on biodiversity, water, agriculture, etc.). They mostly source information from domain-based experts (not adaptation experts) and prefer to apply formal, structured decision-making processes within domains. They may view their role primarily as managing and protecting natural assets and as such they tend to network with landowners and other NRM groups.

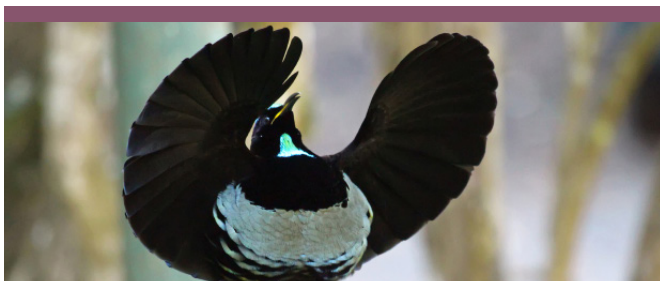
Image source: © Ian Montgomery



## Explorers

Explorers are also domain-based planners drawing information from domain-based experts but they tend to experiment and innovate a bit within individual sectors. Though they tend to engage a bit less with stakeholders, they are willing to supplement their information with adaptation expert opinion to help drive a measured approach to innovation.

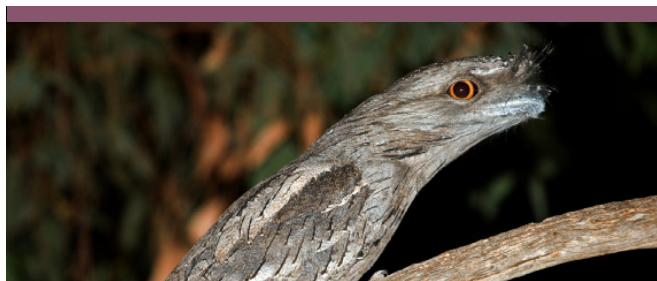
Image source: Rick Dawson, Department of Parks and Wildlife, Western Australia



## Rebels

Rebels put their energy into doing planning differently, including focusing on uncertainty. They may be quite conscious that they do things differently compared to other NRM groups, but they ensure they engage with stakeholders upfront so they have local support for their innovations.

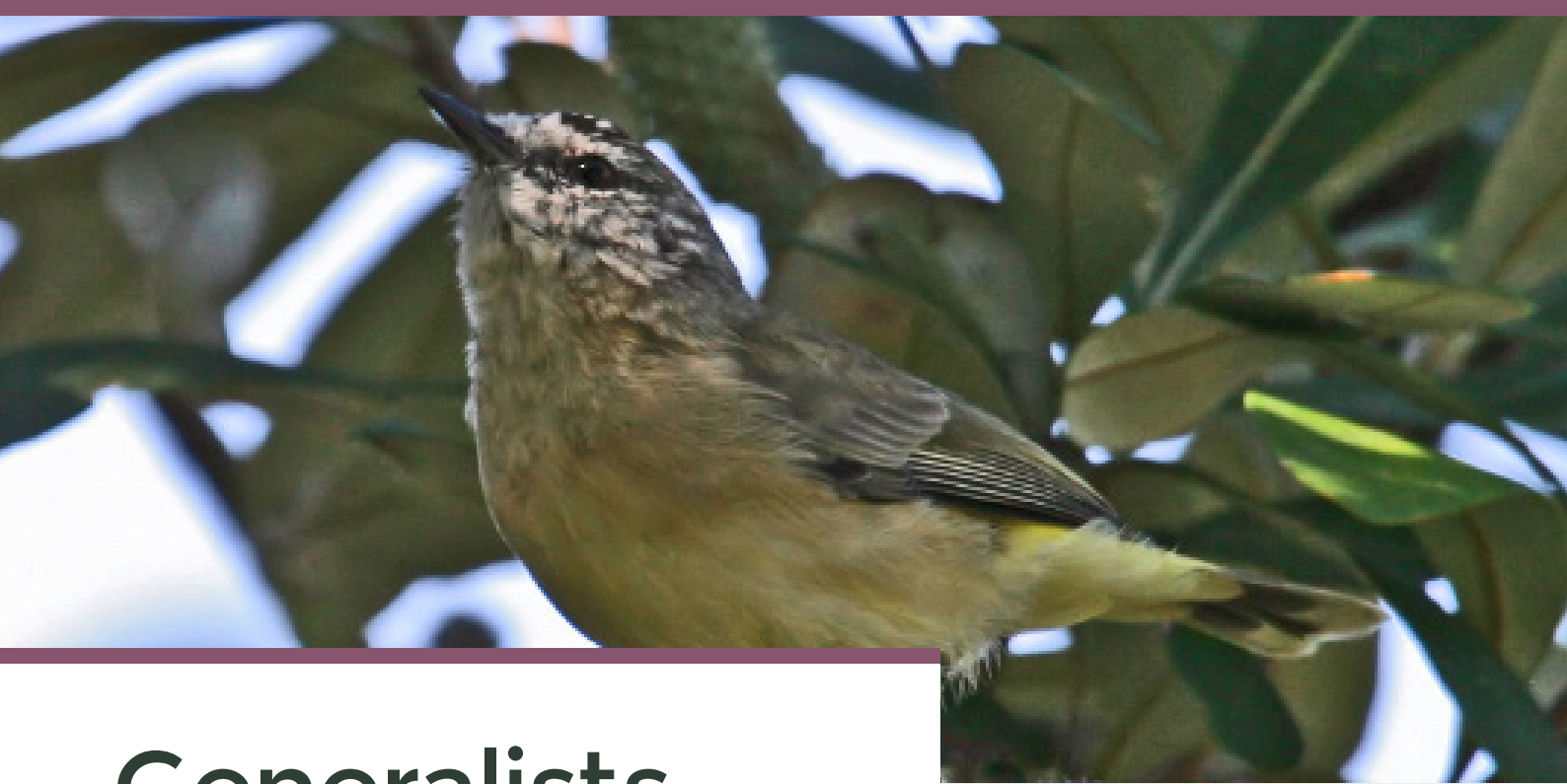
Image source: © Lorraine Harris



## Responders

Responders have strong preferences about when and how they engage with stakeholders, and then let their key stakeholders drive not just the details of their planning but their overall approaches, including who they network with, what decision-making processes they use, and what role they believe they should be playing in the region.

Image source: © Ian Montgomery



# Generalists

## Overview

Is your organisation a **Generalist**? As an organisation...

- Do you try to spread your focus across many different domains, including looking after the productivity of your landscapes as well as their biodiversity?
- Do you try to source information from many different sources, including domain experts, adaptation experts, published literature, and to a lesser extent your own in-house knowledge?
- Do you network equally with lots of different types of stakeholders, including other NRM groups?
- Do you understand the difference between uncertainty and risk and focus on both in your planning?

If so, your organisation might be a **Generalist**.

## Traits

### SOURCING INFORMATION

Balanced use of many different types of sources (though slightly less reliance on in-house knowledge)

### SKILLS FOR LEARNING

Moderately innovative and flexible, balanced networking across many stakeholders but particularly landowners and other NRM groups

### RISK AND UNCERTAINTY

Attention to both with slightly greater attention to uncertainty

### ROLE OF NRM

Perceived role to support production and biodiversity relatively equally

### STRATEGIES FOR ENGAGEMENT

Variable, but tend to engage upfront before initial priorities are set

## Key Strength

Because Generalists have their eyes on many different domains at once, they may find it easier to envision integrated futures for their regions and recognise and avert potential cross-domain perverse outcomes (e.g. a negative outcome in one domain like water resulting from a positive outcome in another domain like biodiversity).

## Key Challenge

Generalists are often stretched thin, trying to incorporate all types of information, plan across all domains, involve all stakeholders, etc. This may mean that the sheer volume of work becomes overwhelming as adaptation is added to the mix, or that adaptation is slow to commence because of the desire to do it all, everywhere, at once.

Image: The busy Yellow-rumped Thornbill can be found in a wide variety of habitats from forests to scattered trees in agricultural areas, often in mixed species flocks. Source: © Ian Montgomery



# Naturalists

## Overview

Is your organisation a **Naturalist**? As an organisation...

- Do you believe the primary role of NRM groups is to protect and manage biodiversity and natural assets (more than land productivity)?
- Do you primarily use information sourced from domain experts and adaptation experts, supplementing with the literature where necessary?
- Do you do network with a diversity of stakeholders (researchers, government, etc.) but place the most emphasis on networking with your landowners?
- Do you focus more on risk in your planning than on uncertainty?

If so, your organisation might be a **Naturalist**.

## Traits

### SOURCING INFORMATION

Strong reliance on expert input from both domain-based and climate adaptation experts supplemented with the literature rather than in-house knowledge

### SKILLS FOR LEARNING

Somewhat balanced networking but with preference for landowners, especially over networking with other NRM groups

### RISK AND UNCERTAINTY

Most attention to risk (probably to assets rather than the organisation's decisions) with only minor focus on uncertainty

### ROLE OF NRM

Emphasis on biodiversity and natural assets with little to no focus on planning for productivity

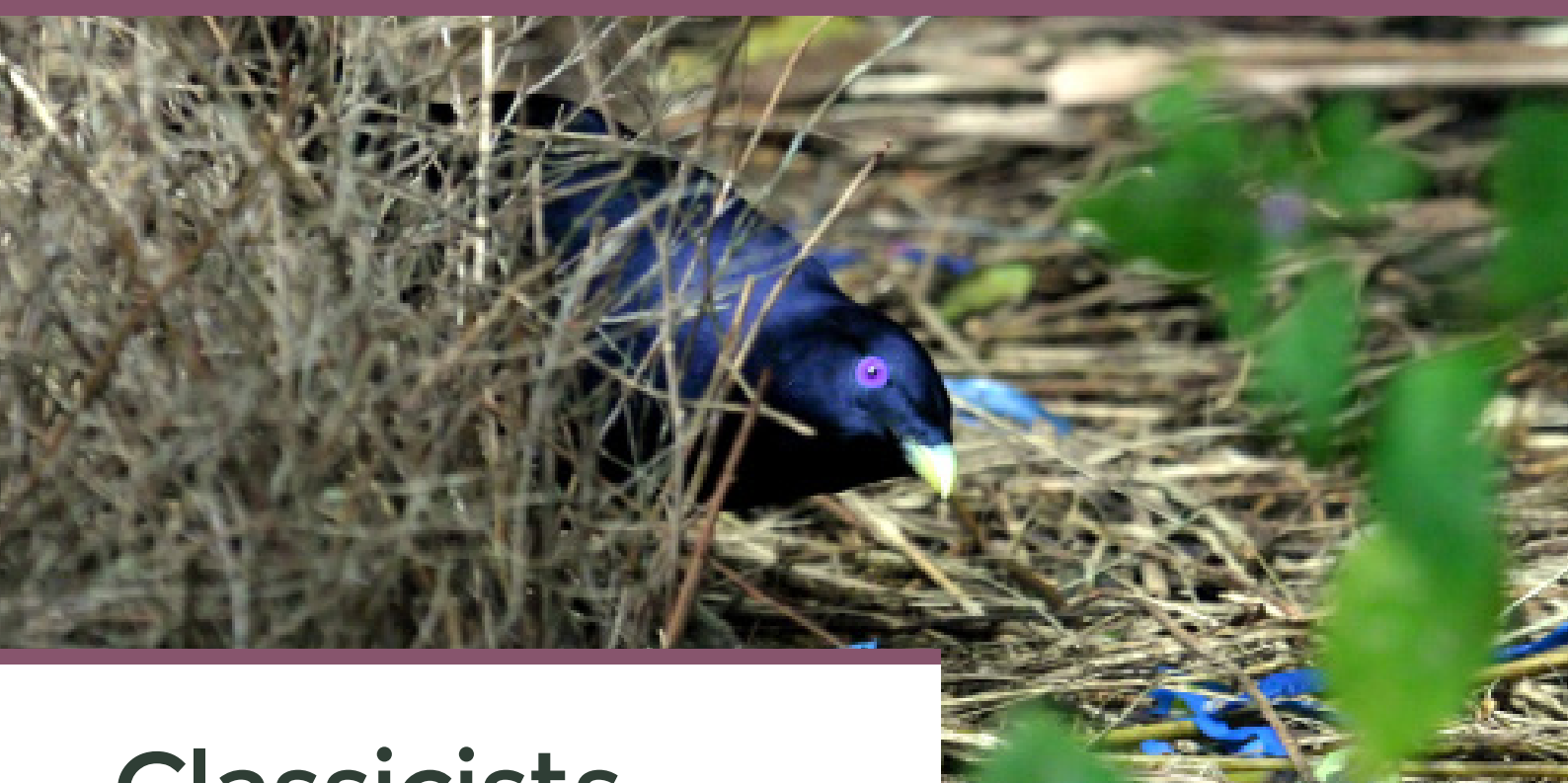
## Key Strength

Naturalists gain much of their information through accessing experts and they don't shy away from looking specifically for experts in climate adaptation. Given that the amount and nature of climate adaptation information changes rapidly, this can be a very efficient way to gain access to and incorporate new information in a flexible planning approach.

## Key Challenge

Core adaptation concepts like making decisions under uncertainty are often understood and used to innovate planning through repeated exposure in many different contexts. Because naturalists are focused on a more limited set of domains, they may have more limited exposure to and take longer to wrestle with some of the overarching adaptation challenges that cut across domains.

Image: Purple-crowned Fairy-wrens live strictly in dense riparian vegetation in northern Australia, but are quite flexible about moving within these riverine networks. Source: © Ian Montgomery



# Classicists

## Overview

Is your organisation a **Classicist**? As an organisation...

- Do you generally source information, including for climate adaptation, from domain-based experts rather than adaptation experts?
- Do you tend to look outside your organisation for all information rather than rely on in-house knowledge?
- Do you tend to use formal, structured decision-making approaches?
- Do you network fairly extensively with both landowners and other NRM groups?

If so, your organisation might be a **Classicist**.

## Traits

### SOURCING INFORMATION

Rarely use in-house knowledge, more likely to use domain-based expert opinion or the literature than adaptation expert opinion

### SKILLS FOR LEARNING

Generally strong preference for formal decision-making processes, extensive networking balanced between landowners and other NRM groups

### RISK AND UNCERTAINTY

Somewhat variable, but slightly more attention to risk than uncertainty

### ROLE OF NRM

Somewhat variable, though generally a stronger focus on natural assets than land productivity

### STRATEGIES FOR ENGAGEMENT

Variable, but tend to engage upfront before initial priorities are set

## Key Strength

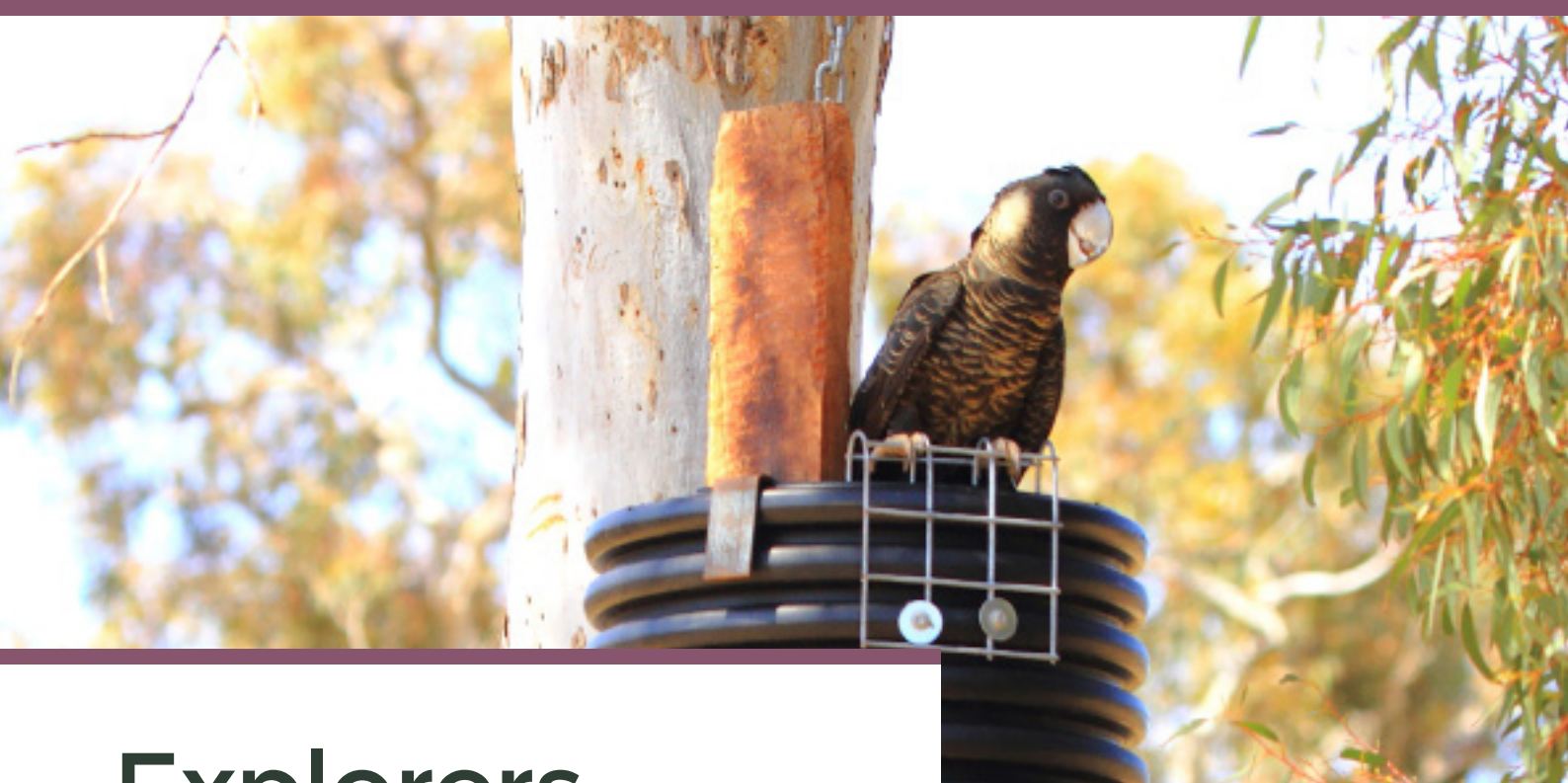
As Classicists tend to use formal, structured decision-making processes (like Cost-Benefit Analysis), they may more readily grasp the approaches suggested for decision-making across multiple possible futures (like Robust Decision-making, Real Options Analysis, etc.) and may be more rigorous and comprehensive when incorporating adaptation into their planning.

## Key Challenge

The flip side of using formal, structured decision-making processes is that the very formality of them can inhibit flexibility and experimentation in planning, both of which may be crucial to employing adaptive planning processes and strengthening the organisation's adaptive capacity.

Image: Like this Satin Bowerbird, each species of bowerbird in Australia has a different set of strict requirements about the objects they collect to decorate their bowers, and males very carefully arrange their decorations to do the best job they can attracting females.

Source: © Ian Montgomery



# Explorers

## Overview

Is your organisation an **Explorer**? As an organisation...

- Do you source information primarily from domain-based experts, but consider supplementing with adaptation experts where needed?
- Do you try to be innovative and deliver somewhat flexible plans, though often innovating first within a particular domain or sector rather than across sectors?
- Because your energy may be focused on innovating within domains, do you tend to put only a moderate amount of energy into engaging with stakeholders just to check your plan is on the right track?
- Do you have some preference for formal decision-making processes?

If so, your organisation might be an **Explorer**.

## Traits

### SOURCING INFORMATION

Greatest reliance on domain-based expert opinion, will supplement with other sources especially adaptation experts

### SKILLS FOR LEARNING

Generally high innovators with flexible plans, some preference for formal decision-making processes

### ROLE OF NRM

Generally a stronger focus on biodiversity and natural assets than land productivity

### STRATEGIES FOR ENGAGEMENT

Variable strategies with lower overall emphasis on engagement

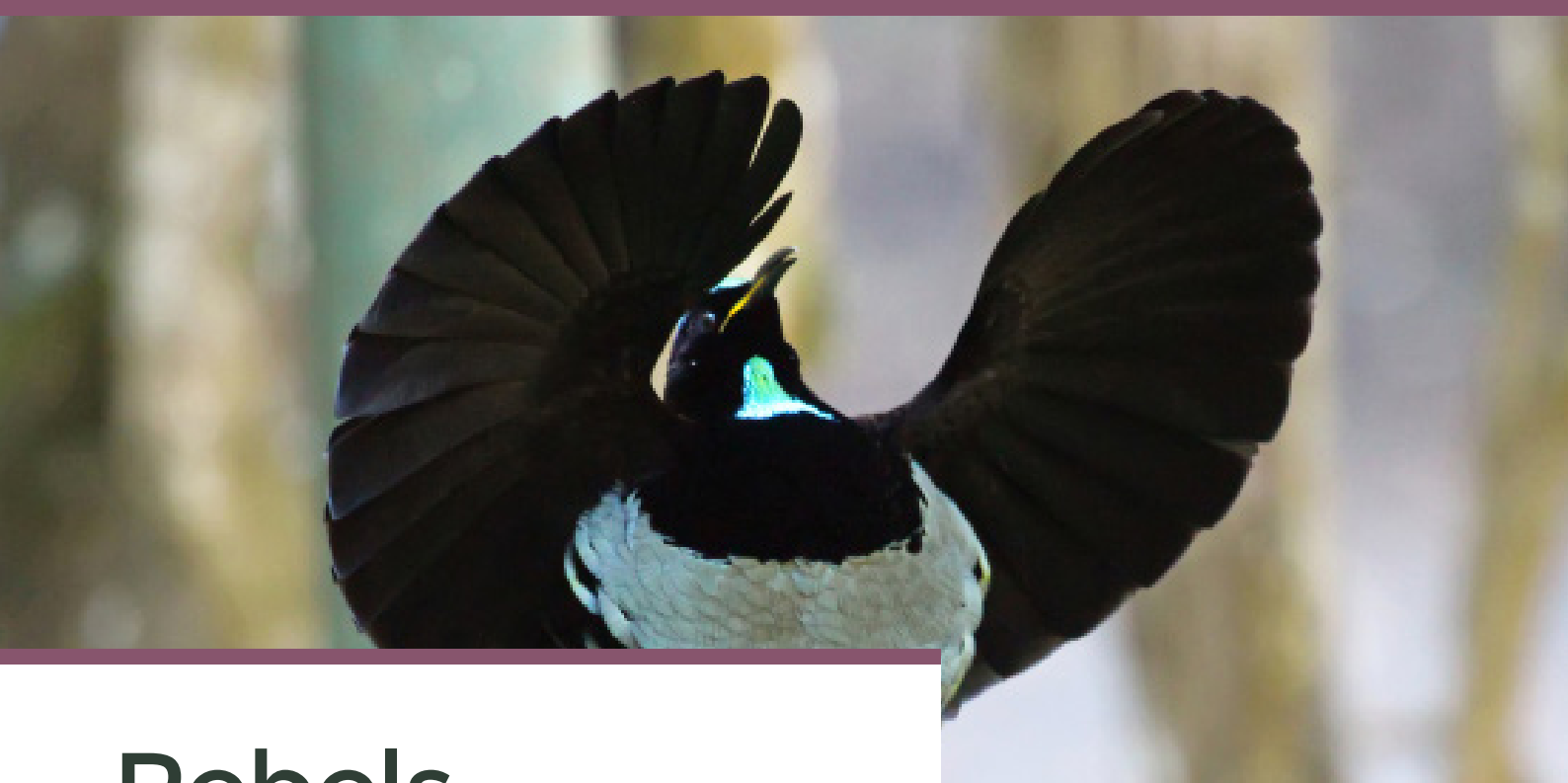
## Key Strength

Because Explorers tend to explore innovation or 'test the waters' within domains, they may be in a good position to experiment with new issues and trial new approaches in one domain before rolling them out across the whole organisation. New approaches can thus be refined in a kind of 'testing ground', ensuring that a better version is ultimately implemented across the organisation.

## Key Challenge

Explorers may put their energy into innovating within domains, but the trade-off is that they put less energy into deep stakeholder engagement. As a result, stakeholders may not be truly part of the innovation process, which means their adaptive capacity may not be supported let alone increased, and ultimately innovations may fail to win their support.

Image: Though endangered through habitat destruction, Carnaby's Black-Cockatoo has increased the number of nests fledged each year through substantial use of artificial nesting hollows made out of PVC piping, known as 'Cockatubes'. Source: Rick Dawson, Department of Parks and Wildlife, Western Australia



# Rebels

## Overview

Is your organisation a **Rebel**? As an organisation...

- Do you try to be innovative with your overall planning approach and deliver flexible plans?
- Do you sometimes feel like the 'odd man out' because you do things differently than others?
- Do you focus on addressing issues of uncertainty?
- Do you initially engage your stakeholders upfront in the planning process, even before your own initial priorities are set?
- Do you tend to look outside your organisation for all information rather than rely on in-house knowledge?

If so, your organisation might be a **Rebel**.

## Traits

### SOURCING INFORMATION

Rarely use in-house knowledge; more likely to use domain-based expert opinion or the literature than adaptation expert opinion

### SKILLS FOR LEARNING

High innovators with flexible plans; generally some preference for formal decision-making processes

### RISK AND UNCERTAINTY

Greater attention to uncertainty with only minor attention to risk

### STRATEGIES FOR ENGAGEMENT

Engage upfront before initial priorities are set

## Key Strength

More than any other type, Rebels have the inherent adaptive capacity to lead the way in terms of developing new, innovative NRM planning processes in an integrated way across domains. And because they engage early with stakeholders, their innovations are likely to win support and become established practice, and boost the adaptive capacity of their regions.

## Key Challenge

Each Rebel may innovate in completely different ways. For the overall NRM community to gain adaptive capacity through learning from the Rebels, and for Rebels to learn from each other's experimentation, they may need to be more strongly networked with other NRM groups, despite feeling like the 'odd man out'.

Image: The spectacular mating display of the male Victoria's Riflebird leaves no doubt that this cousin to the birds-of-paradise isn't shy about doing his own thing. Source: © Lorraine Harris



# Responders

## Overview

Is your organisation a **Responder**? As an organisation...

- Do you prefer to use information sourced from experts rather than the literature?
- Do you have strong preferences about when and how you engage with your stakeholders?
- Are you highly responsive to key stakeholders such that you let them guide key aspects of planning, including who you network with, whether you consider risk and uncertainty, and the types of decision-making approaches you use?

If so, your organisation might be a **Responder**.

## Traits

### SOURCING INFORMATION

Rarely use in-house knowledge; preference for using expert opinion over the literature

### STRATEGIES FOR ENGAGEMENT

Strong preferences for when and how engagement happens, but the actual detail of those preferences is variable

Note that Responders were highly variable in terms of the other personality axes. Combined with our personal knowledge of these groups, we interpret this as being highly responsive to the needs and desires of key stakeholders (which will differ among regions), rather than having a strong, driving internal personality.

## Key Strength

Because Responders are so willing to follow the wishes of their key stakeholders, their plans are likely to have the greatest inherent stakeholder support. Responders may have the strongest relationships with their stakeholders and are thus best placed to collaboratively build adaptive capacity.

## Key Challenge

Responders are unlikely to change what they do unless that change is initiated, or at least strongly supported by a consensus of their key stakeholders – they need a strong social license. Thus, Responders may have difficulty innovating to incorporate adaptation, including considering multiple futures and developing flexible and adaptive planning processes.

Image: The Tawny Frogmouth is a master at blending into its environment by perfectly mimicking a broken-off tree branch.  
Source: © Ian Montgomery

# Using personality to accelerate climate adaptation

The real power of reflection, stimulated by the engaging lens of personality types, may come from deciding where you could be doing cutting edge adaptation, where you could be partnering with other organisations more effectively, and how you could be more efficient at sourcing climate adaptation information.

Personality tests and reflecting on personality types can be fun. To ensure it's more than just light entertainment, you may need to think strategically about how best to use the resulting reflections on your organisation to help guide your adaptation journey and make it more successful and more efficient. Here are our top three suggestions.

## Capitalise on your strengths

Strengths should indicate where or how your organisation will feel most comfortable in engaging in adaptation. Rather than taking these successes for granted, they can be explicitly planned as cornerstones of your adaptation approach. You can then link aspects of adaptation you may feel less comfortable with to these cornerstones so you always have a reference point that resonates with your organisation.

These cornerstones can then also be areas in which your organisation focuses on being innovative – developing new approaches to adaptation in NRM. You can advertise your advanced skills to share with others and build capacity in the whole sector or garner special funding when opportunities arise.

For example, Classicists have a strong preference for formal decision-making approaches and may more readily grasp the approaches that are new to NRM but are particularly appropriate for planning across multiple futures – things like Robust Decision-making, Real Options Analysis, and Risk Spreading or Portfolio Analysis<sup>1</sup>. By delving into these concepts and having a very explicit strategic decision-making approach to adaptation based on one or more of these economic concepts, Classicists may gain a framework to improve their ability to address uncertainty and understand precisely which information they can get from the domain-based experts they are more comfortable dealing with and which information may require them to seek adaptation experts.

Classicists may also be able to become more innovative by concentrating on this decision-making space. These decision-making approaches are quite conceptual in many ways and have rarely been made practical and operational in an NRM context. Classicists could be the organisations who develop new specific processes that make it easier to use these decision-making approaches in NRM, thus helping to transform the entire NRM sector.

## Address your challenges through collaboration

There are a variety of ways your organisation could consider tackling the things it is likely to find most challenging about climate adaptation. One of the most effective ways of dealing with challenges for individuals is to collaborate with others who have complementary strengths. Introverts often work with others who are more comfortable being the 'public face' of what they do together. Similarly, NRM groups could collaborate with each other to harness complementary strengths. The fact that personality was not related to geography in our analyses suggests that NRM groups are likely to have geographic neighbours with different personalities. Thus, a broader cross-regional adaptation initiative could provide an ideal opportunity to harness diverse strengths.

Such relationships certainly require trust to share responsibilities rather than duplicate them, and will require some formal governance arrangements. Working with an organisation that thinks and operates differently than yours can also be a bit confronting and uncomfortable at times. We often naturally gravitate toward working with others (people or organisations) that share our personality type, or at least many of our traits. But explicit discussions about individual personality can help people navigate difficult collaborations and remember to appreciate the benefits of different personalities. Similarly, an informal process at the start of a cross-organisation collaboration or with neighbouring NRM groups may help consider how best to harness everyone's different strengths.

For example, at the time we conducted our surveys, we found that Generalists and Naturalists were often geographic neighbours. A collaboration between these two personality types could result in the Naturalist specialising on sourcing biodiversity information and tapping into biodiversity adaptation experts for both regions, while the Generalist could then specialise on incorporating the information and options for action into an approach to check for potential cross-domain perverse outcomes. In such a collaboration, each type focuses on their key strength, using it to improve planning for both regions. In addition, each type uses the other to compensate for something they might find challenging. The Generalist gets to reduce the scope of detail they are primarily responsible for by sharing the load with the Naturalist, while the Naturalist gets accelerated help thinking across domains.

<sup>1</sup>For more information on these decision-making approaches, see the MEDIATION project's briefing notes on decision support methods for adaptation: <http://mediation-project.eu/output/technical-policy-briefing-notes>

## Source information for climate adaptation in more targeted ways

Our last suggestion for using reflections on organisational differences to accelerate adaptation planning focuses on the fact that one of the most important types of traits in our analyses was where and how groups source their adaptation information. Strategies for sourcing information have developed over time as a response to different information needs among NRM groups and especially to constraints faced in terms of time and access to information resources. While these strategies may be highly effective for sourcing general information, it is worth considering whether targeted additions to information sourcing methods could be needed specifically for climate adaptation.

Specifically, adaptation information may need to be sourced in different ways because the field of adaptation has developed so rapidly and quickly become a fully-fledged discipline unto itself. When adaptation work was first commencing, it wasn't a discipline per se, so domain-based scientists (water researchers, biodiversity researchers, etc.) were the ones doing some adaptation work in addition to their traditional domain-based work.

But the field now has dedicated conferences and scientific journals. As a result, many of the scientists who work in adaptation are now adaptation specialists. They may still be adaptation specialists within a particular domain (adaptation in agriculture, adaptation in urban planning, etc.), but these adaptation experts are often different people than the domain-based experts NRM groups may have long-standing relationships with.

In addition, because the discipline of adaptation is still young, few syntheses have been produced and most work is designed for and shared through professional journal publications rather than specifically tailored for a practitioner audience.

This state-of-the-discipline means that at the moment, new information is constantly being generated but is not necessarily synthesised or easily accessible, the most up-to-date knowledge is held by new types of experts, and traditional domain-based experts may find their adaptation information quickly outdated.

Thus, regardless of preferences when it comes to sourcing information, NRM groups may need to concentrate on forming some new relationships with adaptation experts, and periodically target some effort toward delving into the scientific literature and synthesising what they find (perhaps via short, sharp consultancies with those who have good access to the literature).

For example, Rebels and Responders both rarely use in-house knowledge and instead rely mostly on outside expert opinion. However, neither type tends to draw on adaptation experts. Instead, they mostly rely on domain-based experts to bring in adaptation information. To ensure they are getting the most up-to-date information, it may be important to supplement their preferred approaches with some specific input from adaptation experts. The precise form this takes could differ to align with the other aspects of their personalities. Rebels also tend to source information from the literature, so they may benefit from using adaptation experts to conduct periodic targeted literature reviews and syntheses. On the other hand, Responders are less likely to use the literature. For them, it may be more important to cultivate relationships between their stakeholders and adaptation experts who can relate to the stakeholders and contextualise adaptation information appropriately.

### BOX 2

## Using personality types to improve information delivery

Information providers could also reinvent the way they deliver information by reflecting on organisational personality types. NRM groups may be able to help stimulate that reinvention by explicitly sharing these personality types with information providers and asking for new forms of information delivery.

Specifically, most information providers try to deliver information to many NRM groups at once. Information is most commonly shared via relatively detailed and technical written material. Our personality types suggest that information delivered in this way, similar to the scientific literature, is likely to effectively reach only a small subset of NRM groups – those who have personality preferences for engaging with the literature.

Instead, multiple pathways for delivery may be required. Adaptation experts may need to be trained and resourced to engage directly to deliver expert opinion. Adaptation information may need to

be delivered to NRM groups indirectly, by upskilling domain-based experts who have strong relationships with NRM groups. This may also mean that broadly applicable adaptation information may need to be contextualised within many different domains for it to reach domain-focused audiences. Finally, adaptation information may need to be delivered to the stakeholders of NRM groups, using much more plain-language approaches than adaptation researchers are accustomed to, to enable groups like Responders to gain the social license necessary to tackle adaptation.

Most importantly, a single piece of adaptation information may need to be delivered using all these pathways if the aim is to reach multiple audiences. This will require additional resources devoted to information delivery. But the benefits could be substantial, including providing a consistent evidence base upon which national NRM decisions could be made, with innovative tailoring and experimentation at regional scales.

## Adaptation requires many personalities

*The Lord did not people the earth with a vibrant orchestra of personalities only to value the piccolos of the world. Every instrument is precious and adds to the complex beauty of the symphony.*

– Joseph B. Wirthlin.

Adaptation in NRM will require us to experiment and innovate – to explore many possible ways forward. We hope that reflecting on organisational personality can inspire each NRM group to lead the way based on their own strengths, and collaborate with each other to produce a rich ‘symphony’ of next-generation approaches to natural resource management.



#### ABOUT ADAPTNRM

The National AdaptNRM Impacts and Adaptation Project is a multidisciplinary endeavour that brings together a diverse group of scientists working with NRM practitioners.

While the project itself consists of researchers from CSIRO and NCCARF, our output and initiatives have been shaped and informed through the generous input of NRM practitioners across Australia as well as a multitude of researchers, state and federal government stakeholders.

#### YOUR CSIRO

Australia is founding its future on science and innovation. Its national science agency, CSIRO, is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. It serves governments, industries, business and communities across the nation.

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