THE
CLIMATE CHANGE EMPOWERMENT HANDBOOK

Psychological strategies to tackle climate change
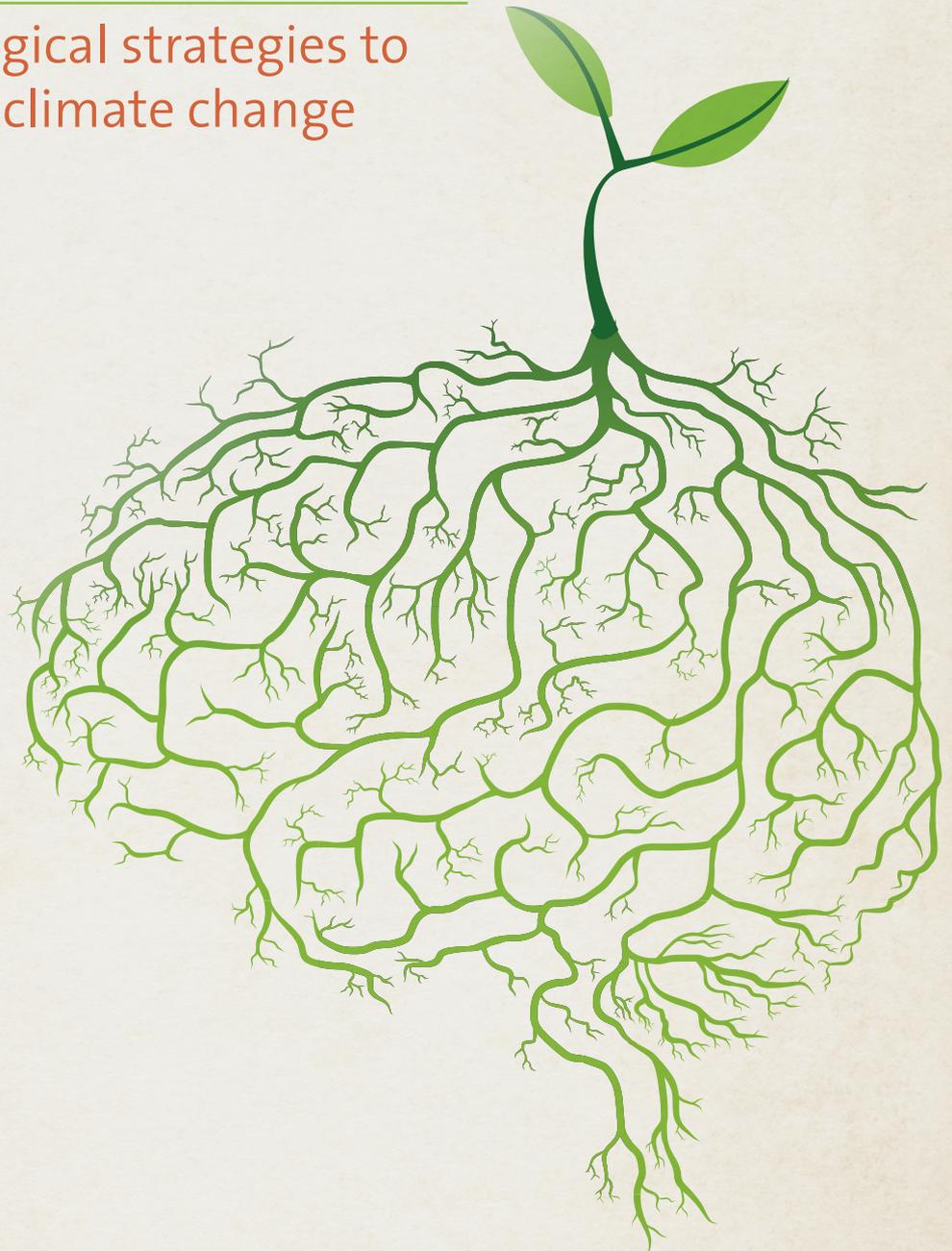
Executive Summary

In this document we put forward eight simple but important "best practice" insights from psychological science to help people come to terms and cope with the profound implications of climate change, so that they can stay engaged with the problem, see where their own behaviour plays a part, and participate in speedy societal change to restore a safe climate.

The insights are drawn from extensive research across a range of areas that psychologists work in (see for example Clayton et al., 2017a; Gifford, 2014; Reser & Bradley, 2014; Swim et al., 2011; van der Linden, 2015).

These eight insights make the acronym A.C.T.I.V.A.T.E. and we hope they will ACTIVATE the public into more effectively engaging with the challenge of climate change!

Acknowledge feelings about climate change to yourself and others and learn ways of managing feelings so you can face and not avoid the reality of climate change.

Create social norms about protecting the environment so that people see that 'everyone is doing it' and 'it's normal to be green'.

Talk about climate change and break the collective silence so that more and more people see it as a risk that requires action

Inspire positive visions of a low-energy, sustainable, zero carbon world so that people know what we are working towards and can identify steps to get there.

Value it – show people how their core values are often linked to other values that are about restoring a safe climate, and that caring about these issues actually reinforces *their* core values.

Act personally and collectively to contribute to climate change solutions *and* feel engaged and less despairing.

Time is now. Show people that climate change is here, now and for sure so they see it is timely and relevant to them and impacts the things that they care deeply about.

Engage with nature to restore your spirits and connect with the very places that you are trying to protect.

Contents

Introduction

Addressing climate change is an essential and urgent task if we are to have a chance of restoring a safe climate for humans and other species. Because climate change is caused by human behaviour, threatens human health and wellbeing, and requires profound changes in human behaviour to bring about solutions, it is as much a psychological and social problem as it is an environmental or ecological mega-disaster. The insights of psychologists and other social scientists into how people are responding to climate change are therefore critically important. The more we understand the psychology of how people are responding to climate change, the better we can help ourselves and others to overcome barriers of inaction, and get involved in effectively addressing climate change.

In this document we put forward eight simple but important "best practice" insights from psychological science to help people come to terms and cope with the profound implications of climate change. These insights are designed to help people stay engaged with the problem, see where their own behaviour plays a part, and participate in speedy societal change to restore a safe climate.

The insights are drawn from extensive research across a range of areas that psychologists work in (see for example Clayton et al., 2017a; Gifford, 2014; Reser & Bradley, 2014; Swim et al., 2011; van der Linden, 2015).

With 97% of climate scientists agreeing that climate change is caused by human behaviour (Cook et al., 2013), and 87% of Australians surveyed across the country also accepting that climate change is real, happening and driven in some way by human behaviour, it is clearly time to move to action. This handbook is for the huge majority of people who are concerned about the threat of climate change, accept that it is a serious problem for the planet right now, and know that they want to engage themselves and others with the problem and solutions, even if they're not sure how.

97% of climate scientists agree humans are causing global warming

Doran & Zimmermann 2009; Anderegg et al 2011; Cook et al 2013   http://sks.to/consensus

Nature of the threat

Climate change is arguably the biggest global health threat of the 21st century (Costello et al., 2009; U.S. Global Change Research Program, 2016). Without concerted efforts, the growth in global emissions will continue. The safe limit for temperature increase is recognised as 1.5°C, but if we continue on a "business as usual" basis, global temperature will rise between 3.7° and 4.8 °C. This level of temperature increase would be catastrophic (IPCC, 2014). It would entail a world of unprecedented heatwaves, severe drought, bushfires, flooding, inundation of many cities and other land, and major storms. These events have serious impacts on all human systems and ecosystems, creating many climate refugees, increased mortality, and species' extinctions. Climate change increases the severity or frequency of health problems that are already affected by climate or weather factors, as well as creating unprecedented or unanticipated physical and mental health problems or health threats in places where they have not previously occurred (U.S. Global Change Research Program, 2016).

All of these changes are almost certain to increase as the impacts of climate change become more obvious, serious and ubiquitous. Already we are seeing climate disruption around the globe. All of the world's 10 warmest years have occurred since 1998 (Climate Council, 2016 https://www.climatecouncil.org.au/hottestyear2015).

What factors influence how people assess the risk of climate change?

Despite widespread acknowledgement that climate change is a profoundly serious global problem, and that urgent changes are needed in human behaviour at all levels of society to reduce greenhouse gas emissions, this awareness has not yet led to actions around the world that are commensurate with the threat. We *know*, yet at the same time we seem to *not know* enough to act.

Why is this?

For many years, social scientists have undertaken research to understand how people think about and understand climate change, the risk it poses, and many of the barriers that get in the way of us doing something about it (Gifford, 2014; Uzzell, 2000; Swim et al., 2011). Some of these barriers are things like government inaction, vested interests in fossil fuels, and cost of retrofitting homes or purchasing electric cars. But many of them are psychological barriers, like

a human tendency to see climate change as distant in time and space, and therefore not needing our own personal and urgent attention; or a desire to avoid distressing feelings that come with thinking about worrying things like climate change; or conflicting worries, like about our health or children, that seem to take centre stage in our minds.

The following examples show some of the well-documented difficulties that humans have with grasping an issue like climate change. Then, in the main section of the handbook, we elaborate on insights from psychological science to help us, and help others, overcome these biases, and face up to the reality of climate change.

 Some cognitive biases we need to overcome to properly address climate change:

- How humans make sense of facts does not simply follow from rational interpretations of scientific evidence. For example, humans are prone to exaggerate some risks: e.g., those that are spectacular, beyond personal control, much discussed, highly visible, or that affect them personally, and are imposed by a clear enemy.
- People tend to downplay other risks: e.g., those that are common, familiar, invisible, long-term, gradual, natural, affect others not self, and lack any clear 'bad guy'. Unfortunately, climate change is often described in these terms. It is caused by commonplace, natural, invisible gases (although excessive amounts of these are emitted by human behaviour, which is the major problem). It is seen as slow moving (although many would actually argue that it is taking place at breakneck speed). And it is often described in abstract, scientific terms, which makes it harder for people to engage with.
- Climate change can often seem distant in space. Most people tend to see the worst environmental problems as being global or far away from them (Leviston et al., 2015). However, people's feelings of responsibility for the environment are greatest at the neighbourhood level (Uzzell, 2000).
- People can also see climate change as distant in time. The worst impacts are far off in time so it still feels distant from everyday concerns. People are thus less likely to take action to protect themselves.
- Climate change can also feel socially distant, and not a problem that individuals can solve. As a global problem that requires global solutions, it is easy to think that world leaders, governments, and big multinational corporations have the most responsibility for doing something about it, not us.
- The way people see the risks associated with climate change are significantly influenced by their values, beliefs, worldviews and cultural identity. We automatically look for information that confirms what we already think, want or feel, and filter away opposing information. People who are already concerned about climate change, for example, will

read more news that confirms it. People who don't believe in it, or who are heavily invested in a world governed by fossil fuels, might prefer news that questions climate science. This can lead us to avoid or forget vital facts about climate change that would require us to change our own beliefs and behaviour.

- Some people are also deeply resistant to changes to the 'system' they are familiar with. This leads to a tendency in some individuals to defend society's status quo and to see the way things are now as right and just (sometimes called *system justification*). People engaging in system justification are likely to selectively attend to information about climate change that does not threaten their current way of life.

- People often experience *cognitive dissonance* when what they know (e.g. that burning fossil fuels contributes to climate change) conflicts with what they do (driving, flying, etc). If it's hard to change behaviour (because your lifestyle is car dependent), then it's often easier to change your thinking, and tell yourself things like: 'Well, compared to China, our emissions in Australia aren't really that big. It's not me who is the problem, it's them'.

These are just a few of the many cognitive tricks and biases that humans are vulnerable to which can make it hard for us to properly appreciate the size of the threat that climate change poses, and urgently do something about it.

But psychology also teaches us a lot about how to help people cope with and come to terms with the profound implications of climate change. We have summarised some key lessons into eight eights. The insights are drawn from extensive research across a range of areas psychologists work in.

These eight insights make the acronym A.C.T.I.V.A.T.E. and we hope they will ACTIVATE the public into more effectively engaging with the challenge of climate change.

Acknowledge feelings

- Acknowledge feelings about climate change to yourself and others
- Manage your feelings

It is common for people to have very strong feelings about climate change. The reality is actually very frightening. It is not just the phenomenon and threat per se, but the implications of climate change for individuals, human society, all other species, and the planet, that make this such a frightening, confronting and existential threat and concern. People can feel anxious, distressed, helpless, pessimistic, guilty, angry and stressed, amongst other feelings (Clayton et al., 2017a). How people respond to these feelings is very important. People can react in many unhelpful ways – e.g., by trying to minimise the threat, distract themselves and blame others, or by becoming helpless and resigned to the disaster. A more useful response is to anticipate, identify and manage these feelings so that we can properly accept the reality of climate change and not avoid it. Psychologists call this a skill of emotional self-regulation and it's an important part of climate adaptation and coping. Learning to cope with the feelings we have about climate change ensures that:

> **Coping with the feelings we have about climate change ensures that: we don't try to avoid the problem in order to avoid the feelings; we don't become overwhelmed by these feelings or burn-out; we can keep functioning well in our everyday lives.**

- We don't try to avoid the problem in order to avoid the feelings
- We don't become overwhelmed by these feelings or burn-out
- We can keep functioning well in our everyday lives.

Acknowledge feelings about climate change to yourself and others

- Anticipate that you are likely to have strong feelings when you are thinking about or learning about climate change threats and impacts. This helps you to recognise the feelings when they do arise, and be ready to manage them (see below), rather than just avoiding the topic or minimising or denying its seriousness (so as to avoid the uncomfortable feelings).
- Identify the actual feelings you have. Name them, acknowledge them. Talk about them with others.
- Also acknowledge your own tendencies to ignore, deny or avoid thinking about environmental problems. Talking about this will help others to identify and acknowledge similar reactions in themselves.

- Give others the space to be able to express *their* feelings about climate change too. This helps them to face the reality of climate change and be able to take the next step of engaging in solutions. This is also an important way of engaging in deep conversation that is discussed in section **T** - Talk About It.

Manage your feelings about climate change

There are many ways in which people can cope with distressing feelings about climate change (Australian Psychological Society & Australian Conservation Foundation, 2015; Bradley, Reser, & Glendon, 2014; Reser & Swim, 2011). Emotion-focused coping strategies aim at helping people to manage their actual feelings. Self-regulation is the important skill of being able to manage our 'internal environment', and includes strategies like:

- Use expressive coping – e.g., spending time with and reflecting on your feelings; cry if you need to.
- Seek social support – e.g., talking with others about how you feel, just spending time with people who love you and care about you, belonging to a group who share your values, seeking a mentor who can help you think through your challenges.
- Maintain healthy routines - People thrive with routines, and making sure your routines also include some healthy behaviours is ideal.
- Restore yourself psychologically - People who are mentally fatigued are often in an emotional state that works against their capacity to behave in a reasonable fashion. Try spending time in green settings (see section E for Engage with Nature below), being away from settings that demand your attention, and doing something pleasurable.
- Use different ways of thinking about the problems to change how you feel. For example, instead of being overwhelmed and paralysed by guilt for all of the ways that your environmental footprint has already contributed to climate change, you could reframe how you think about it: 'We are all in this together. Most of us have been beneficiaries of our materialistic society. What matters most is the work we do now to transition to a low carbon world. We need to focus on that rather than beating ourselves up about what has happened. There's a lot we can personally do, starting today'.
- Allow yourself to be in touch with feelings of loss. Facing these deep feelings involves coming to terms with what has been lost already and will be lost in the future due to human impacts – extinction of numerous species and biodiversity; the loss of the sense of certainty and of 'life as usual' that we have had in a stable climate; the end of the fossil fuel age which has been incredibly rich and plentiful (Marshall, 2015). For many people, accepting the reality of climate change involves needing also to acknowledge these losses.

Problem-focused coping strategies aim at trying to do something about the problem which is causing the distress:

- Adopt a problem-solving attitude. This can involve breaking a big task into smaller, more manageable parts, and getting started on one step at a time. For example, you might want to persuade your children's school to switch to green power, so working out who to talk to at the school and council might be a first step.
- Take action: Taking action has multiple benefits - it helps us to 'self-regulate' our internal environment, and also reduce our personal and household carbon footprint; and we get to experience the collective efficacy of working with and experiencing the support of and common purpose with others (For more on this, see section A for Act).
- Take a break from being too focussed on the problem. Taking a deliberate break is different from putting your head in the sand, because you know you are only downing tools for a breather, not quitting altogether

Further reading: APS/ACF Coping with climate change distress information sheet.
http://www.psychology.org.au/Assets/Files/CopingwithClimateChange.pdf
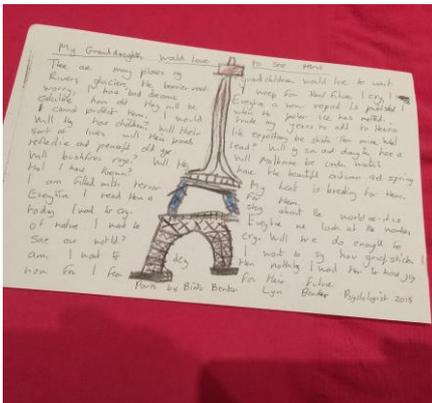
The 'Is this how you feel?' project is one way in which climate communicators have tried to facilitate the sharing of feelings about climate change. Climate scientists and others from around the world have hand-written letters talking about how they feel about climate change.

Create social norms

- Model pro-environmental behaviours and leave behavioural traces
- Show that it's normal to be green: Promote norms that 'everybody's doing it'
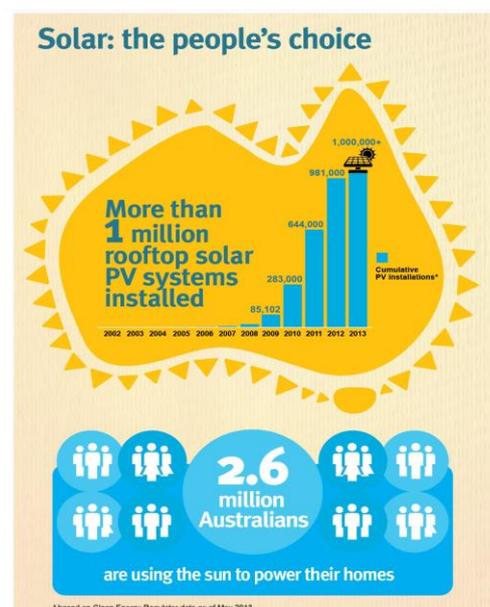- Show how well-known and respected people are also engaging with climate change

Social norms are group beliefs about how people should behave in a given situation. People are very sensitive to cues about what is normal behaviour, and like to follow suit (Cialdini, Reno, & Kallgren, 1990). Generally, people want to be 'normal' and like everyone else.

Model the pro-environmental behaviours that you would like other people to take up

What we see people doing matters. Our brains are highly tuned to noticing others' behaviours and copying them. This happens automatically and often unconsciously.

- Make your pro-environmental behaviour very visible so others can notice it.
- Leave behind as many 'behavioural traces' as you can. These are physical signs of the behaviour you engage in, like your bike helmet sitting on your desk signaling that you ride your bike to work.
- Transmit the meaning of your pro-environmental behaviour as well. People are always seeking the meaning of behaviour and actively interpreting what they see. By explaining the reason for your actions, you give other people another reason to copy them (Harré, 2011).
- Attach stickers to cars and letterboxes and other places that communicate your pro-environmental behaviours, like using solar power or a greywater system.
- People are more likely to copy models they see are rewarded (Bandura & Walters, 1977). Highlighting the satisfaction of engaging in a sustainable behaviour is one way of making the reward (in this case, the satisfied feeling) more visible, and therefore more likely to be copied. Also, research evidence very powerfully tells us that internal, self-motivating, reasons for doing things are much more influential and sustainable than external rewards and benefits (Deci & Ryan, 2013). And again, we can see that there are multiple benefits of action, both in reducing our footprint and giving us a sense of inner satisfaction.

Solar: the people's choice

More than **1** million rooftop solar PV systems installed

1,000,000+
981,000
644,000
283,000
85,102

2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013

Cumulative PV installations*

2.6 million Australians are using the sun to power their homes

* based on Clean Energy Regulator data as of May 2013

Source: CER, 2013a and derived from ABS, 2010, 2013

www.climatecommission.gov.au

<u>Promote norms that 'everybody's doing it' and 'it's normal to be green'</u>

- Provide explicit statements about the pro-environmental behaviours that people are already doing.
- The most useful norms are descriptive norms that say 'everyone's doing this' and 'It's normal to do this'.

> Examples
> *95% of the people using this trail put their litter in the bins.*
> *87% of people in this supermarket choose products that favour the environment.*
> *93% of people who work here use public transport, walking or cycling to get to work.*

- Show how 'people like you and me' are engaging with climate change.
- Tell stories.
- Show videos, photographs. (See section C - Creating Visions for more ideas).

> *Field experiments have shown that when people are given feedback about the average energy consumption of their neighbours, they tend to adjust their own energy use to conform to the group norm.* (Nolan, Schultz, Cialdini, Goldstein, & Griskevicius, 2008).
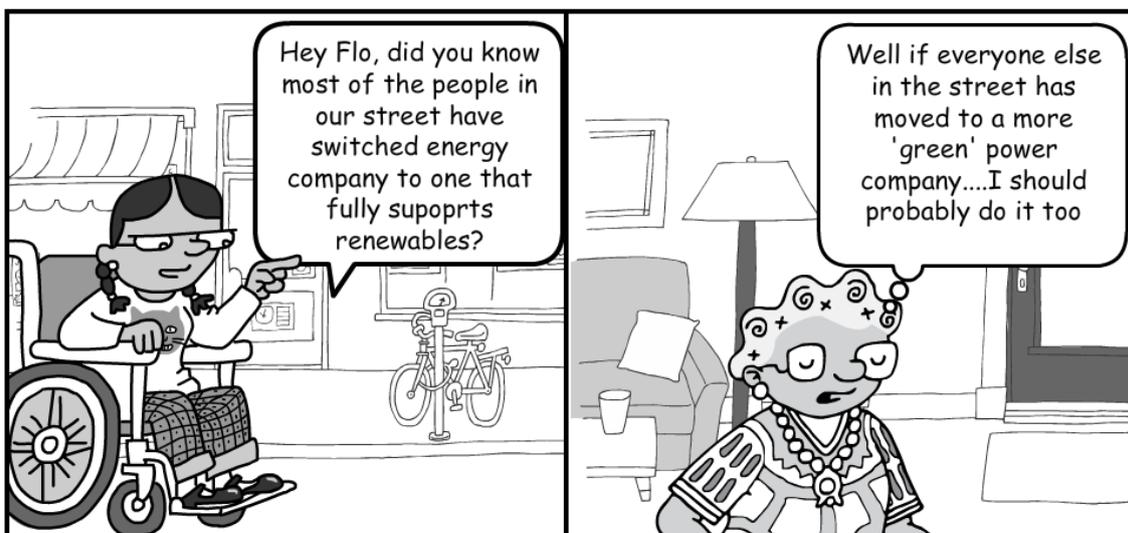
This comic strip was created at MakeBeliefsComix.com. Go there to make one yourself!

<u>Show how well-known and respected people are also engaging with climate change</u>

- Popular 'leaders' (political, spiritual, popular) are good at setting social norms.

- People are also likely to listen to and be influenced by the views of people they know and trust and feel are like them (Marshall, 2015).

- Most people value and highly respect the views of scientists and academics, while having very little faith in journalists or politicians (see for example the <u>Yale climate surveys</u>, the <u>Stanford surveys</u>, <u>PEW surveys</u> and the <u>Griffith University NCAARF</u> surveys).

- People are more likely to take action on climate change when they feel a strong sense of affiliation with the person or institution making the request (CRED, 2014). So local leaders (both individuals and institutions) may be more likely to set a norm for climate action than calls for action from people from outside the community (CRED, 2014).

David Pocock (World Cup Rugby Player)
"I believe it's time for direct action on climate change, standing together as ordinary Australians to take control of our shared future."

Cate Blanchett
"Everyone will benefit if we protect the environment. There is a societal cost of increased pollution and that's what I'm passionate about as a mother. That's where it gets me in the gut," she said. *"I can't look my children in the face if I'm not trying to do something in my small way and to urge other people."*

Pope Francis
"Climate change is a problem which can no longer be left to our future generation".

Prince Charles
"If the planet were a patient, we would have treated her long ago. You, ladies and gentlemen, have the power to put her on life support, and you must surely start the emergency procedures without further procrastination."

"Humanity faces many threats but none is greater than climate change. In damaging our climate we are becoming the architects of our own destruction. We have the knowledge, the tools and the money (to solve the crisis)."

Barack Obama
"As the leader of the world's largest economy and the second largest (greenhouse gas) emitter … the United States of America not only recognises our role in creating this problem, we embrace our responsibility to do something about it."

He set out "one possible future" of unchecked global warming: "Submerged countries, abandoned cities, fields that no longer grow. Political disruptions that trigger new conflicts, leaving more floods of desperate people seeking sanctuary in nations not their own."
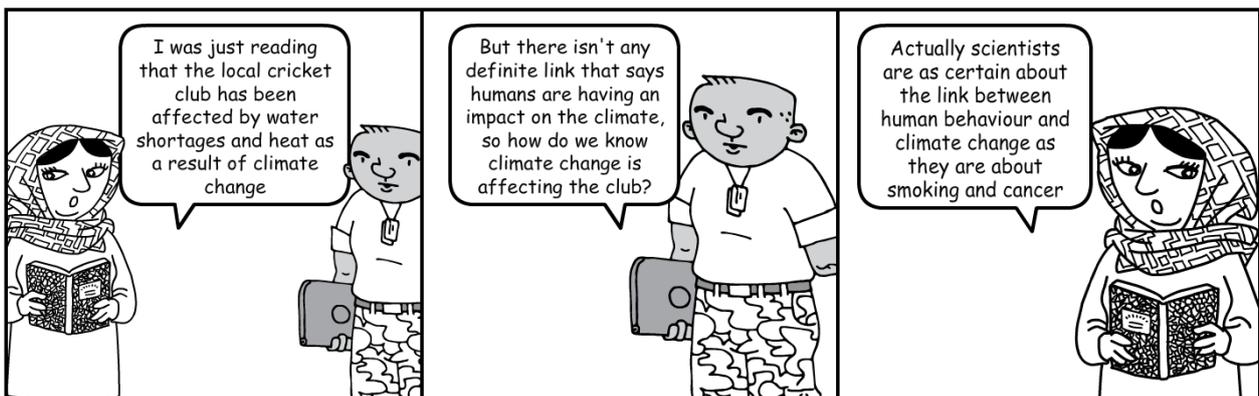
Talk about it

- Break the collective silence about climate change
- Challenge climate change denial when you hear it
- Explain the scientific consensus
- Advocate for action on climate change to politicians, opinion leaders, decision makers and in workplaces
- Engage in climate change dialogue

Surveys show that many people don't talk about climate change with anyone at all (Norgaard, 2013; Zerubavel, 2006). Climate change often gets placed outside people's 'norms of attention' – the social rules that define what is or is not acceptable to recognise or talk about. But a collective silence is dangerous - a problem as large and urgent as climate change needs to be talked about and acted on.

> The more people hear others talk about the risk of climate change, and the more climate change is viewed within one's social network as a risk that requires action, the more it amplifies an individual's own risk perception and intention to act.

Break the collective silence about climate change

This comic strip was created at MakeBeliefsComix.com. Go there to make one yourself!

The more people hear others talk about the risk of climate change, and the more climate change is viewed within one's social network as a risk that requires action, the more it amplifies an individual's own risk perception and intention to act (Renn, 2011; van der Linden, 2015b). People look to others for a cue as to the urgency of the situation.

- Find relaxed and casual ways of dropping the term 'climate change' into conversations with anyone about anything.
- Make links between climate and weird weather, refugees, rising conflict in the Middle East, or other issues they are concerned about.

Challenge climate change denial when you hear it

Psychological research on science denial provides a model, based on inoculation theory, for how to debunk myths about climate change (often spread by misinformation) which cause confusion and uncertainty in the community (Cook & Lewandowsky, 2012).

Figure 1. From the Debunking Handbook (Cook & Lewandowsky, 2012)

- Take care not to repeat the myth up front when you are debunking it. This can often reinforce it! Instead, start with the facts.
- Familiarise yourself with the five different techniques deniers often use to distort facts: Fake experts, logical fallacies, impossible expectations, cherry-picking evidence, and conspiracy theories (Diethelm & McKee, 2009).
- Use the Fact-Myth-Fallacy approach to correct misinformation (see box below)
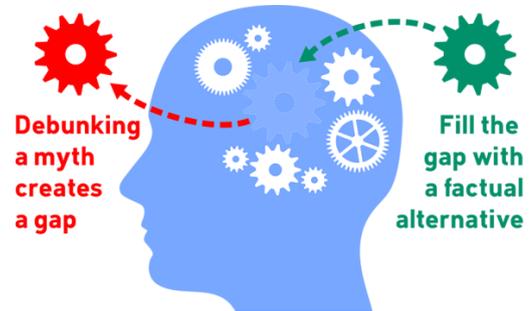
FACT	MYTH	FALLACY
First explain the facts	Then introduce a related myth (preceded by an explicit warning that it *is* a myth)	Explain the technique the myth uses to distort the facts. By understanding the technique used to create the myth, people are exposed to a "weakened form" of the misinformation
Climate change is like rigging the weather dice, making hot days more likely.	A common myth is that "It's cold outside so climate change must have stopped"	This is an example of 'Impossible expectations': Climate change doesn't mean no more cold weather, just fewer cold days compared to hot days.
Example from http://www.skepticalscience.com/docs/Fact_Myth_Fallacy.pdf		

Explain the scientific consensus

An analysis of 11,944 climate papers published between 1991 and 2011 showed that 97.1% of papers endorsed the consensus position that humans are causing global warming (Cook et al., 2013; http://theconsensusproject.com/).

'Lead with the consensus', by communicating this fact at the start of a conversation. This has been found to increase public awareness of human-caused climate change and support for climate solutions (Lewandowsky, Gignac, & Vaughan, 2013). It also addresses our

tendency to let perceived uncertainty be a sufficient reason to act in short-term self-interest rather than for our future environment. The public's perception of consensus has been shown to be a "gateway belief", influencing a range of other climate attitudes and beliefs.

Engage in climate change communication

Engaging in more serious conversations with climate dissenters, deniers, doubters, or the disengaged, is also very valuable, for those who are willing to take this on. These conversations can be difficult - climate change conversations are not just about science, but touch upon people's identity, beliefs and emotions – but they are important as a way of engaging more people on this very important topic.

- Begin by simply paying attention to people expressing different perceptions about climate change – show interest in them as individuals, in their lives, their local concerns and worries. (Moser & Berzonsky, 2014); see also Australian research on interpretive communities (Hine et al., 2013).
- Once people are engaged in a conversation, try to explore commonalities, differences, experiences, ideas, and information about a common concern (Schirch, 2015).
- Share your own personal journey of how you have come to the views that you currently hold on climate change. Show that change can occur over time (Marshall, 2015).
- Use foundational skills of communication dialogue such as being fully present, deep listening, respect, self-responsibility, clarity, authenticity, speaking one's own truth, and suspending judgment (Brown, 2010; http://www.publicconversations.org).

Use climate change frames which fit the audience

Framing refers to the way in which information is packaged and presented (or 'framed') to influence how the audience perceives the meaning of the information, making it more personal and relevant to them.

- Know as much as you can about your audience and their worldviews, political orientation, beliefs and values.
- Find a frame for climate communication that resonates with the person or people you are speaking with so they see it as relevant (Roser-Renouf, Stenhouse, Rolfe-Redding, Maibach, & Leiserowitz, 2014).
- For example, think about framing climate change as a health risk. E.g., "If we stop pollution from fossil fuels, we stop climate change and improve our health. We reduce diseases, illness, and injury brought on by pollution and severe weather".

There are many excellent sources for guides for climate messaging to suit different audiences:

- *'Psychology for a Safe Climate (2015). Facing the heat – stories of climate change conversations'; 'Climate for Change'*
- *George Mason University Center for Climate Change Communication (http://www.climatechangecommunication.org/)*
- *Yale project on climate change communication (http://climatecommunication.yale.edu/about/)*
- *Climate Outreach (formerly COIN) UK (http://climateoutreach.org/)*
- *Climate Access (http://www.climateaccess.org/)- see American Climate Attitudes*
- *The Center for Research on Environmental Decisions (CRED)(http://cred.columbia.edu/) see Connecting on Climate. A guide to effective climate change communication.*
- *EcoAmerica (2016). Let's Talk Health & Climate: Communication Guidance for Health Professionals.*

Inspire positive visions

- Describe the plausibility and positives of a zero carbon world
- Build efficacy by showing people that change is possible
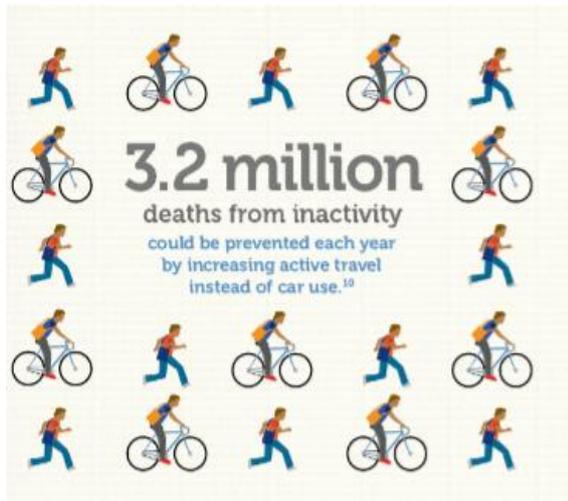- Use personal and vivid stories

In order to transform our society into a low-energy, sustainable, zero carbon one, we need to have a vision of what that world would look like, and also that it is plausible. Then we know what we are working towards, and this makes it easier to identify the steps to get there.

Describe the plausibility and positives of a zero carbon world

- Let people know that we already have concrete, plausible solutions which can drastically reduce carbon emissions so that you counter feelings of helplessness and being overwhelmed about the problem (Centre for Research on Environmental Decisions [CRED], 2014).

> In order to transform our society into a low-energy, sustainable, zero carbon one, we need to have a vision of what a zero carbon world would look like.

- Show people there are solutions available so that they are more likely to perceive climate change as a problem worth addressing.
- Frame climate change using positive narratives of opportunities to create a healthier environment and more resilient communities. Then it is much easier for people to listen to and engage with the problem. Doom messages can backfire by triggering defence mechanisms and leading to people switching off to avoid the distressing topic (see text box).
- Show how action on climate change has additional benefits (these are often called co-benefits):
  - A more just, equitable and healthy world.
  - Healthier bodies when we use active transport and eat less meat, dairy and processed food.
  - Increases in jobs and economic prosperity from a growing renewable energy industry.
  - Feeling a sense of a satisfaction, wellbeing and optimism from contributing positively to a safe climate.
  - These stories leave people feeling hopeful and positive and encourage people to think broadly about how they and others can contribute to a new way of life.

> *FOOD FOR THOUGHT: Fear Appeals*
>
> *There's been a long-running debate about the right balance to strike in talking about climate change between 'doom & gloom' at one end and 'bright-siding' at the other end of the scale (messages and campaigns that suggest* everything *will be better in a low-carbon world).*
>
> *When climate change is framed as an encroaching disaster that can only be addressed by loss, cost and sacrifice, it creates a wish to avoid the topic. Threatening communications (e.g., scary pictures) are often ineffective and may even backfire (See Peters et al., 2013 for a meta-analysis; http://fearappeals.com/). Hope, on the other hand, is a potentially motivating force in terms of engaging in collective action and social change. The best 'positive' messages are about being constructive and making people feel it is worth the effort, not making people feel unrealistically happy or complacent. There is no merit in downplaying the risks of climate change, but if you get people's attention with a threat you need to couple that with a plausible response they can take.*
> *(Hornsey & Fielding, 2016)*

Build efficacy by showing people that change is possible

Stories also need to show that change *is* possible, that there is much we can do to bring about changes necessary to restore a safe climate. Indeed, response efficacy ('is there something that I can do to prevent this?') is one of the key factors that risk communication specialists know influences behaviour change (Kok, 2016). The more that people believe that their actions can and do make a genuine difference, the easier it is for them to do these things.

Copenhagen Rush Hour - Author - Mikael Colville-Andersen.
Source https://www.flickr.c`om/photos/16nine/2743358467/
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(http://www.wearefuterra.com)

- Describe clear, plausible and meaningful actions that people can take in response to climate risks – as well as acceptable, feasible and effective solutions to the overall problems depicted (see research overviews by CRED, 2014).
- Show people that they can be involved in both individual change and societal level change, and that both are necessary.
- Make sure the proposed solutions are on par with what the audience can actually do.

Use vivid and emotive stories

Commonly, information about climate change is presented in terms of facts and figures, which rely on the brain's analytic processing system. This might increase knowledge, but doesn't help to stimulate motivation. Evidence from the social sciences is that our other information processing system, the experiential system, which responds emotionally, instinctively and rapidly to information that is presented in terms of concrete images, personal stories, and vivid emotions, is the

Black Rock Solar Field Trip to The Children's Cabinet with Clayton Middle School, Black Rock Solar Source: https://www.flickr.com/photos/freethesun/8553349450/in/dateposted/ License: CC by 2.0 https://creativecommons.org/licenses/by/2.0/3349450

stronger motivator for action (Kahneman, 2011; Slovic, 2010; Loewenstein, Weber, Hsee, & Welch, 2001). The most effective communication, of course, targets both processing systems of the human brain (CRED, 2014).

- Use personal stories to make communications more memorable, and therefore dominant in processing.
- Build emotional arousal into stories to attract people's attention and make listeners want to tell others about them. Once feelings are involved, people are become hooked to a story and are more likely to respond personally to it, and pass it on.

Townsville City Council, a Reef Guardian council, has stencilled entries to stormwater drains

- Use emotionally charged stories that elicit positive emotions and have a pro-social moral – stories that can generate emotions that steer us towards behaviours that are good for others and away from behaviours that damage others (Harré, 2011).
- Use vivid imagery to connect people with the experiential processing part of their brain. Climate Visuals - Seven principles for visual climate change communication (written by Climate Outreach) is based on international social research into which images work the best to communicate climate messages. (See also their Climate Visuals website for images to share http://www.climatevisuals.org/).

Value it – link values to climate change

- Build bridges between your audience's values and values that are about restoring a safe climate
- Build people's identity as carers for the environment
- Promote intrinsic values over extrinsic values

Identifying people's values, promoting certain values over others, and drawing the links with action on climate change, are all valuable strategies.

The values we hold affect our behaviours, choices and feelings, and are the bedrock on which attitudes are built. Values are learned, and can be shaped and cultivated.

Build bridges between your audience's values and values that are about restoring a safe climate

- Once you've identified your audience's values, look for the overlap between the values that are important to your target audience and values such as 'protecting the environment', 'helping others' and 'caring about their kids', that are crucial for building longer-term support for tackling climate change. (Read more about this in a section on 'framing' in T – Time is now).

- Build a bridge between the values of the audience and the values of a more sustainable society. Your audience is then able to see how their core values are linked to other values that are about restoring a safe climate, and that caring about these issues actually reinforces their core values.

This comic strip was created at MakeBeliefsComix.com. Go there to make one yourself!

Build people's identity as carers for the environment

- Show people how action on climate makes them *even more* who they are (Marshall, 2015).

- By building a bridge between sustainable values and people's existing values, show people how caring about climate actually *reinforces* their identity as a conservative, or as a member of a religious group, a loving parent, a health professional, a surfer, etc...
- Provide people with things to do which reinforce their sense of belonging to their group.
- Reinforce this with social cues and social proof that people like them are concerned about climate and are taking action.
- Help people to feel they belong to a group of similar others who care about climate change and who take action to reduce carbon emissions. People need to feel proud to belong to their group, and that the group boosts their position in society.

Promote intrinsic values

Most people hold two major types of values, extrinsic and intrinsic. There is plenty of evidence that humans are hard-wired both for self-interest *and* cooperation and empathy (Lakoff, 2005). What is important is the *relative importance* that a person attaches to extrinsic as opposed to intrinsic values. When people are focused on extrinsic values (e.g., rewards, financial success), they are also more likely to show lower empathy, higher preference for social inequality and hierarchy, and less concern about environmental problems. Intrinsic values, by contrast, provide a better source of motivation for engaging in bigger-than-self problems. Psychologists have shown that activating intrinsic values can increase pro-environmental behaviours.

- Inhibit extrinsic values and activate intrinsic values by talking in ways that show that these values are highly desirable.
- Say things like: "Everyone has a human right to breathe clean air and drink clean water"
- Show how intrinsic values are the social norm: "So many Australians believe they need to take action to protect the environment – you can see this in the huge numbers of homes with solar panels on their roofs".
- Attend to but move beyond 'what's in it for me?' to 'what's best for humanity?' (Bolderdijk, Steg, Geller, Lehman, & Postmes, 2013; van der Linden, 2015).

Intrinsic values are 'bigger-than-self' values. They include things like:
- *the value placed on a sense of community*
- *affiliation to friends and family*
- *caring for others*
- *empathy, cooperation*
- *ideas like equality, justice, and making the world a better place.*

Extrinsic values, by contrast, are more self-interested, like:
- *valuing personal success*
- *valuing wealth*
- *seeking power and status*
- *they are often contingent upon the perceptions of others.*

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Act personally and collectively

- Make climate action an informed choice
- Engage in personal actions
- Prioritise actions with high carbon reduction potential
- Be wary of tokenism and rebound
- Engage in group actions

Doing something to reduce your carbon footprint is a significant coping strategy, with the actions people take seeming to help them manage their experienced distress. Doing something that is environmentally significant often goes hand in hand with actions that are *psychologically* significant. The activity both contributes to the solutions to climate change and helps the person to feel engaged, to be part of the solution not just the problem, and to allay in some part the distressing feelings they might have about this grave threat (Reser, Bradley, & Ellul, 2012). Action is the best antidote to despair and helplessness. So getting active on solutions is also an important way of managing the feelings we have about climate change. It is also the case that speedy action on climate change will not happen unless we create the political will, and that requires action by all of us beyond the context of our personal lives.

> **Doing something to reduce your carbon footprint is a significant coping strategy**

Make climate action an informed choice

There is enough evidence to tell us that climate change is real, happening now, escalating, and becoming increasingly dangerous. We also have an enormous amount of information about what we need to do (reduce carbon emissions, increase carbon sinks) and how to do this (switch to renewable energy, protect the world's forests). This makes climate action an informed choice in favour of a safe climate, and conversely, means that *inaction* is also an informed choice, but in favour of a catastrophic climate altered future.

Engage in personal actions

What makes climate change stand out from *all* other global problems is that our contributions can be measured. We cannot identify our contribution to any other 'wicked' problem such as poverty, terrorism, or drug abuse – let alone quantify it. But we can with climate change. People often feel powerless in the face of climate change, but in fact there is much that we can

do to reduce our workplace contributions, or our local council's contributions, or even our nation's contributions, as well of course as our own personal contributions.

- Calculate your carbon footprint to see what things are making the most contribution to greenhouse gases in your own life. There are many tools for measuring this, e.g., http://www.epa.vic.gov.au/AGC/home.html

- Find information about which behaviour changes you can make that would be most impactful. Some actions have greater carbon emission reduction potential than others. People can often overlook actions with the greatest conservation potential if other options are more visible. We can see that lights and televisions consume energy but don't notice the larger energy costs associated with inefficient heaters and inadequate insulation (see the list that psychologists (Gardner & Stern, 2008) have compiled of low cost and higher cost household and transport options to choose actions that give 'best bang for your buck').

- Find ways to make changes in your own life to live in a more responsible, authentic and less environmentally harmful way.

- Reduce your carbon footprint by doing things like purchasing green power, turning down heaters, commuting by bike or public transport, reducing consumption of beef and lamb, and shopping from local producers.

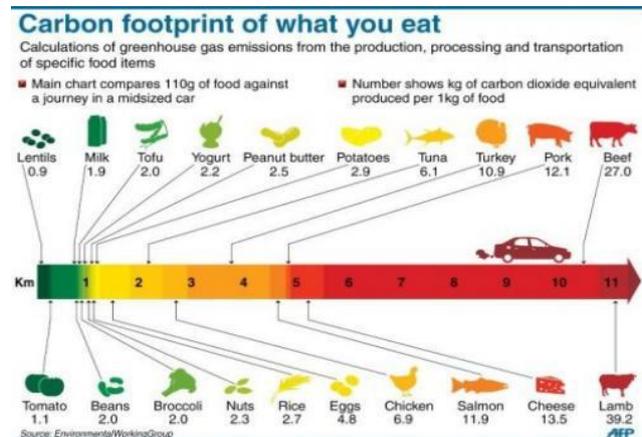

Image :(Green Left Weekly, 2015)

Image: (Climate CoLab, 2014)

- Seek action beyond your own personal lives, and engage in broader societal efforts to address climate change.

- Support and join climate action groups, express your support of renewable energy to politicians, protest against the environmentally destructive behaviours of fossil fuel companies, etc.

- Be wary of tokenism - Environmental tokenism is when people engage in individual behaviour that aims to reduce their environmental impacts, but the action doesn't really make much of a difference in the bigger picture, and worse, people then think they have done their bit for the environment, and are now 'off the hook' for any further action.

- Also be wary of our frequent recourse to offsetting - cashing our positive efforts in for some slack in being less responsible. This is also called the rebound effect. It is commonly found that, after making some savings in emissions in one area, people erase the gains by using the savings to treat themselves on an even higher carbon emitting product or activity - *"Hey Honey, let's take the Prius and drive to Darwin"* (Gifford, 2010).

<u>Engage in group actions</u>

- The global nature of the climate change problem tends to make people feel powerless (van der Linden, 2015). Group efficacy is the recognition of the extraordinary change that can come about when people join together with others and make much greater changes than they can do on their own. Group action is also hugely motivating, and people are able to support each other emotionally and practically.
- Weave climate change into the activities of existing social groups and networks, such as sporting clubs, religious groups, parent–teacher associations or company departments. People are more likely to become engaged on an issue when *their valued* group also cares about it (CRED, 2014).
- Consider collective action where citizens gather together to use the democratic process to ensure that our councils, state and federal government are treating the issue with the right seriousness, and participate in monster petitions, rallies, sit-ins, or lobbying government.
- Consider the divestment movement, where thousands of people all over the world are moving their money out of banks and institutions that fund fossil fuel projects, in order to weaken

Lawley Primary plant sunflowers
Source https://www.flickr.com/photos/tentenuk/17364606936/in/dateposted/
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the viability of future fossil fuel projects. You could switch your superannuation to a fossil fuel free fund (e.g., https://superswitch.org.au/) and the same with your banking so that your savings are not being used to fund activities that cause climate change.
- Consider local events like community tree plantings, where groups of people can re-vegetate much larger areas than they could do on their own.

<u>Advocate for action on climate change to politicians, opinion leaders, decision-makers and in workplaces.</u>

Effectively addressing climate change will need political and nation-wide change as well as personal change. So speaking up about climate change also includes advocating for action and solutions at all levels of influence. Politicians make policies based on what they think voters want and will support, so let them know! (NB: Some people feel more comfortable than others at doing this, and that's fine).

- Register your concerns about climate change with policy makers and leaders wherever you can. There are many ways you can do this:
  - online petitions
  - email campaigns
  - phoning, writing letters, visiting
- Raise the need for pro-environmental change within your workplaces, schools, and community groups. Start green teams; get your work place to develop an environmental policy.
- Use your expertise in your own area (e.g., in mental health, children's wellbeing, fire-fighting, football) to lobby leaders for urgent action to protect individuals and communities from the threat of climate change.

Time is now – show that it's here, now and for sure

- Show that climate change is personal and affects you and I
- Show that climate change is happening now, not just in the future
- Show that climate change is happening in your local area, not just elsewhere

This comic strip was created at MakeBeliefsComix.com. Go there to make one yourself!

Show that climate change is personal and affects you and I

To counter the sense that climate change is only a distant threat, we need to show people that climate change is relevant to them, and that it threatens *their* health, families, communities, jobs or other things they deeply care about. People are more likely to heed risks they see as relevant, personal and salient (CRED, 2014). Indeed, research findings are documenting

> **Ask 'What do you love that is threatened by climate change?'**
> - **Surfing?** *Climate change is likely to increase risks of sharks close to shore, smaller waves, loss of coral reefs that create many of the world's greatest surf breaks.*
> - **Family?** *Health impacts of climate change include exacerbation of heat-stroke, hypothermia or asthma, greater spread of infectious diseases.*
> - **The bush?** *Rapid ecological change will be an important feature of Australian landscapes in the future. Climate change will affect plants, animals and ecosystems across the entire continent, with many species becoming extinct, woodlands becoming grasslands etc. The bush will look, smell and sound very different 50 years from now.*

increasingly high levels of perceived personal encounters with climate change (surveys report 45% of respondent in Australia, 39% in the U.S., 85% in the Philippines (Reser, Bradley, Glendon, Ellul, & Callaghan, 2012; Leiserowitz, Maibach, Roser-Renouf, Feinberg, & Howe, 2013; Social Weather Stations, 2013).

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> To counter the sense that climate change is only a distant threat, we need to show people that climate change is relevant to them, and that it threatens their health, families, communities, jobs or other things they deeply care about.

Show that climate change is happening now, not just in the future

- To counter the cognitive bias tendency to discounts threats that are far away from us in time, climate change also needs to be presented as a present risk rather than just a future risk.
- Make climate change conversations about impacts of climate change for specific localities and communities *that are already happening*, like changed weather patterns, increased risk of drought, bushfires, increased spread of infectious diseases, failing crops, heatwaves, or rising prices of electricity, water and food (CRED, 2014).

A WORD OF CAUTION IN LINKING EXTREME WEATHER EVENTS AND CLIMATE CHANGE

*Social scientists argue that making links between extreme weather events and climate change is a way of building awareness and conviction around climate change. Because the weather events are personal, emotional, can be seen, felt and lived through, they can help climate change feel more real and salient. Critically, though, personal experiences of extreme weather events per se do not change climate change beliefs and behaviour. Any increase in psychological adaptation and behavioural engagement (action) requires the crucial **perception and attribution** that climate change was a probable contributing cause of the weather event (Reser & Bradley, 2014; Brügger, Morton, & Dessai, 2015).*

Also, there is a risk that using extreme weather events as a proxy for climate change trivialises and normalises the problem when in fact climate change is much, much more than just extreme weather events. It is a wholly unprecedented, cataclysmic, continuous global disaster, and it exacerbates all other problems around the world.

Show that climate change is happening in your local area, not just elsewhere

- Notice the changes that are happening where you live that are a sign that climate change is having an impact in your area. This might be an emerging pattern of earlier budding in spring, indicating average winter temperatures are warmer than usual. Or it might that your beach is washing away, or longer heatwaves. Ask your community what they have noticed.

- Pair conversations about the local and personal impacts of climate change with *solutions* to climate change. Showing people things they can do to reduce the threat of climate change is a way of preventing emotional overwhelm leading to numbing and avoidance.
- Find interactive online tools that can show how climate change impacts in your local area e.g., CSIRO's climate analogue. (Note, though, that many of these are predicting *future* changes, so are not great tools if you're wanting to use a *happening now* frame).

Engage with nature

- Spend time in nature
- Seek out a wide range of experiences of nature
- Value what remains

Humans have spent almost all of our evolutionary history in the natural environment and lived in a close connection with the natural world, with numerous health and wellbeing benefits (Hartig et al., 2010). Today, however, more than half the world's population live in urban environments, and citizens of developed nations spend most of their time indoors (Cohen, 2007; MacKerron & Mourato, 2013).

> **A strong relationship with nature gives rise to a motivation towards environmentally responsible behaviour**

Eco-psychologists claim that this disconnection from nature is a root cause of environmentally-destructive behaviour (e.g., Bragg, 1996), and that a strong relationship with nature gives rise to a motivation towards environmentally responsible behaviour (e.g., Schultz, 2002). Nature connectedness consistently predicts pro-environmental attitudes and concerns about the environment (e.g., Mayer & Frantz, 2004). Thus re-establishing human-nature connectedness is thought to be a key part of achieving ecological sustainability (Bragg, 1996). Ecosystems and human communities need to be seen as a single, albeit complex, system that is inter-dependent (Berkes, Colding, & Folke, 2003; Ross, Cuthill, Maclean, Jansen, & Witt, 2010).

Time spent in nature also has significant psychological benefits for people. It can be *'psychologically restorative',* by reducing stress and improving attention (Hartig, Mitchell, de Vries, & Frumkin, 2014; Kaplan, 1995); providing a sense of identity and 'belonging' (Bentrupperbaumer & Reser, 2008); and building a personal connection with a coherent and meaningful world (e.g., Uzzell & Moser, 2006). Psychological restoration in nature is also a source of motivation for pro-environmental behaviour (Hartig, Kaiser, & Strumse, 2007).

Image source: Google images

- Spend time in nature. This could be as simple as growing plants on the windowsill, walking in local parks, or interacting with animals, or more substantial like working in a garden, spending time in the bush, living or holidaying in the countryside, joining landcare groups, or participating in environmental education programs.
- Seek out a wide range of nature experiences. This is important for people to develop a sense of themselves as being a part of the natural world (Chawla 1998). It is also important for forming an environmental identity (i.e. seeing oneself as part of a living ecosystem), which in turn increases environmental concern and pro-environmental behaviour (Clayton 2012).
- Have nature experiences with others. Being part of a social group who are busy together with a shared interest, like tree planting, or weed removal, or bird watching, can promote self-efficacy and be very empowering. This empowerment, plus the social connections with others, can in turn foster environmental activism, like being involved in further conservation, or supportive of good policies to protect nature.
- Be open to having both positive and negative experience of nature. Negative experiences (like being frightened or uncomfortable) help to show us nature in a way that is not idealised and disconnected from lives, but as something of which humans are a part (Clayton et al., 2017b).
- Value what remains. With one fourth of the Earth's species heading for extinction by 2050, the importance of valuing what remains is more important than ever. Build a personal and intimate connection with the very nature you are trying to protect. This experience can be a deep source of motivation for protecting the environment.

Conclusion

Addressing climate change is an essential and urgent task if we are to have a chance of restoring a safe climate for humans and other species. Climate change is as much a psychological and social problem as it is an environmental or ecological mega-disaster, and the insights of psychologists and other social scientists into how people are responding to it, and about how to help people cope and adapt to its consequences, are critically important.

The eight insights gathered together in this document are designed to help with the two vital tasks of 'coping' and 'doing' - addressing and managing our internal environment and responses (how we think and feel about climate change, and our level of self-efficacy), and addressing our actions in the external world (what we can and should do to restore a safe climate). Let's get ACTIVATEd!

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ACTIVATE

8 strategies from psychology to tackle climate change

Climate change is the biggest health threat in the 21st century. Already we are seeing climate disruption in many places on the globe, with far worse forecast.

These 8 simple but important insights from psychological science, summarised with the acronym A.C.T.I.V.A.T.E., help people come to terms and cope with the profound implications of climate change.

We hope they will ACTIVATE the public into more effectively engaging with the challenge of climate change and participate in speedy societal change to restore a safe climate.

Acknowledge feelings about climate change to yourself and others and learn ways of managing feelings so you can face and not avoid the reality of climate change.

Create social norms about protecting the environment so that people see that 'everyone is doing it' and 'it's normal to be green'.

Talk about climate change and break the collective silence so that more and more people see it as a risk that requires action.

Inspire positive visions of a low-energy, sustainable, zero carbon world so that people know what we are working towards and can identify steps to get there.

Value it. Show people how their core values are often linked to other values that are about restoring a safe climate, and that caring about these issues actually reinforces their core values.

Act personally and collectively to contribute to climate change solutions and feel engaged and less despairing.

Time is now. Show people that climate change is here, now and for sure so they see it is timely and relevant to them and impacts the things that they care deeply about.
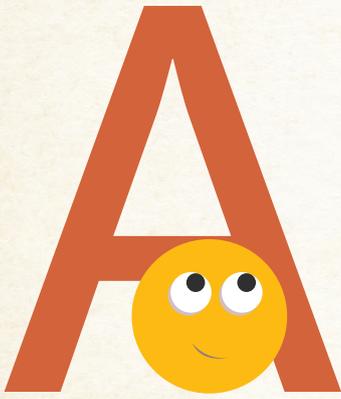
Engage with nature to restore your spirits and connect with the very places that you are trying to protect.

This booklet is part of the APS 2016 Presidential Initiative looking at how the science of psychology can help us to understand and participate in solutions to the 'big issues' facing the world today.

For more information visit
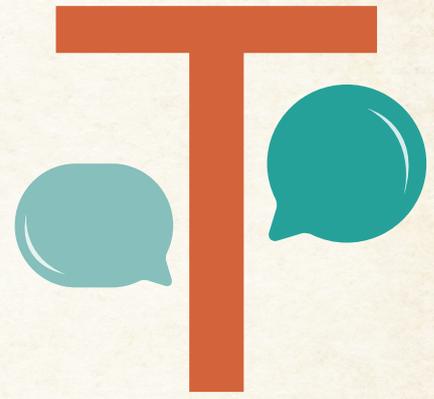psychology.org.au/public-interest/environment

The Climate Change Empowerment Handbook

ACTIVATE

8 Psychological strategies to tackle climate change

APS — Australian Psychological Society

A — Acknowledge feelings

C — Create social norms

T — Talk about it

I — Inspire positive visions

V — Value it

A — Act

T — Time is now

E — Engage with nature

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