

# Psychology and Climate Change

Australian Psychological Society

Position Statement, Revised June 2020



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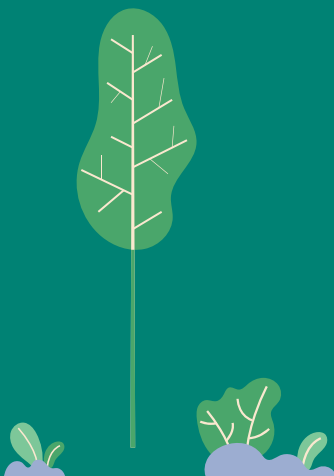
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*We acknowledge the Traditional Custodians of the lands and seas on which we work and live, and pay our respects to Elders, past, present and future, for they hold the dreams of Indigenous Australia.*

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# The Australian Psychological Society

The Australian Psychological Society (APS) is the largest national professional organisation for psychologists, with over 25,000 members across Australia. It seeks to help people achieve positive change so they can confidently contribute to the community.

Psychologists are experts in human behaviour and use evidence-based psychological interventions to prevent people from becoming unwell, improve human performance and productivity in the workplace, and assist people to overcome mental and physical illness and optimise their health and functioning in the community.

The APS has a long history of working collaboratively with the Australian Government, State and Territory governments and other agencies to help address major social, emotional and health issues for local communities and ensure healthcare is equitable and accessible to all members of the Australian community.

APS members have a broad range of expertise in human behaviour that enables them to undertake assessments and deliver evidence-based psychological interventions within the mental health service delivery sector but also more broadly in schools, correctional facilities, workplaces, welfare agencies and sporting organisations. They are familiar with the widespread impact of mental illness on individuals, their families, friends and carers, as well as the broader community and future generations. APS members also understand the range of individual, work, social, community, environmental and economic factors that contribute to poor mental health outcomes. They have a passionate commitment to system-level improvements that will help prevent mental illness from developing and also enable people experiencing mental illness to lead fulfilling and productive lives.

## Executive summary

The aim of this position statement is to articulate the many ways in which psychological knowledge and expertise is relevant to the urgent problem of climate change. It summarises the significant psychosocial and physical and mental health implications of the climate crisis, and shows how psychology trained professionals (including practitioners, academics and researchers, hereafter referred to as psychology professionals) have the expert scientific knowledge, skills and resources to help in climate change mitigation and adaptation by: helping individuals and communities to make changes in behaviour which will mitigate climate change and minimise its impacts; and to advocate for speedy action by government, businesses, and organisations, as a matter of urgency.

The APS accepts the consensus of Australian and international scientists that human activities, particularly since the mid 20th century, have resulted in a steep growth in greenhouse gas concentrations, causing substantial global warming and generating a high risk of catastrophic climate change. Its consequences are already being observed, such as in the bleaching of the Great Barrier Reef and the disastrous Australian bushfires in 2019-2020.

Climate change is regarded as the most serious global health threat of the 21st century, and has numerous impacts on both physical and mental health.

Psychology professionals can help build understanding of the behavioural and motivational factors associated with causes of climate change. They can also assist governments, communities and individuals to prepare for and reduce the risks of climate-related events such as floods and bushfires (environmental adaptation), and help individuals and communities adapt to their psychosocial impacts (psychological adaptation). They can also emphasise the importance of equity, justice and peace-building in responses to the challenges created by climate change.

To prevent catastrophic climate change, substantial and speedy changes at national, organisational, community and individual levels are needed. As experts in behaviour change, psychology professionals can contribute skills in understanding and addressing barriers to behavioural change, and motivating and supporting the needed changes.

The threat of climate change arouses deep feelings ranging from fear through anger to despair. Psychology professionals can provide guidance and support for coping and dealing with these feelings (APS, 2017; Burke et al., 2017; Macy & Johnstone, 2012). An important psychological insight is that taking action on climate change is a strong antidote to anxiety and builds self-efficacy and realistic hope (Sanson et al., 2019).

Research has delineated the major psychological responses to exposure to climate-related disasters, which include distress, disrupted sleep, grief, anger, and post-traumatic stress disorder. Psychologists are well-placed to deliver psychological first aid immediately after climate-related disasters, as well as support over the longer term such as community resilience programs.

In light of the urgency of the climate crisis and the importance of understanding and addressing its psychological, health and social dimensions, the position statement concludes with four broad recommendations:

- Governments, industries, organisations, psychology and other health professionals, and the public should recognise the urgency of the climate crisis, and develop effective strategies to mitigate climate change and minimise climate change impacts, and promote successful community adaptation and resilience. Particular attention should be given to equity and justice for marginalised and vulnerable groups in developing strategies.

- Governments and education providers should develop and implement national curricula on climate change, covering the science of climate change, its psychological and social dimensions, and solutions to it.
- Psychology professionals should collaborate with climate change scientists, social scientists, government, and other expert groups, to contribute to understanding and addressing the human behaviour drivers of climate change, as well as psychological dimensions of the response to climate change, its mitigation, and adaptation to it.
- Psychology professionals should bring their skills to bear in climate change advocacy, education and training, mitigation and adaptation.

The APS undertakes to assist and encourage the engagement of all psychology professionals with climate change issues, as researchers, academics, practitioners and students, and to seek to implement these recommendations. ■

# 1 Introduction

- 1.1** The aim of this position statement is to emphasise the urgency of climate change as a global problem with significant psychosocial, and physical and mental health implications, to advocate for government, businesses, and organisations, as well as individuals, to develop effective strategies to mitigate climate change and minimise its impacts, and to position psychology trained professionals including practitioners, academics and researchers (herein referred to as psychology professionals), as a professional group with expert scientific knowledge, skills and resources that can help in climate change mitigation and adaptation.
- 1.2** The APS has played a key role in stimulating a number of national and international initiatives by psychological associations around the world (e.g., American Psychological Association, British Psychological Society, Canadian Psychological Association, Order of Portuguese Psychologists) to communicate their deep concern at the gravity and urgency of the climate change crisis, and the need for psychology's active involvement and commitment in ongoing collaborative work at national and international levels to address the human causes and consequences of climate change. An important aspect of this concern and commitment is the drafting and endorsing of a clear statement of our position and concern about this profoundly important environmental and social issue.
- 1.3.** The position statement notes the contributions of psychological research to an understanding of the psychological dimensions of global climate change, including the social, organisational and political contributions to climate change, how people understand the risks of climate change, how they adapt to and cope with environmental threats, and how psychology professionals can assist in limiting climate change.
- 1.4.** The recommendations aim to assist and encourage psychology professionals to engage with climate change issues as researchers, academics, practitioners and students, and to foster the development of national and international collaborations with other individuals and associations.

## 2 Climate science underpinning the position statement

- 2.1.** The last few years have seen a dramatic increase in information and debate about causes, impacts and future projections regarding climate change. Important authoritative sources of information on the scientific understanding of human-induced climate change that inform and underpin this position statement include: Australian Academy of Science, 2015; Cook et al., 2013; CSIRO, 2018; IPCC 5th Assessment Report, 2014; Steffen et al., 2018; and USGCRP 4th National Climate Assessment, 2017, 2018.
- 2.2.** This APS position statement accepts the consensus of the Australian and international scientists that human activities, particularly since the mid-20th century, have resulted in a steep growth in greenhouse gas concentrations, causing substantial global warming and generating a high risk of catastrophic climate change.
- 2.3.** Consequences of climate change include rising global average temperatures, rising sea levels due largely to melting ice-caps and glaciers, increased frequency and intensity of extreme weather events (such as bushfires, heatwaves, hurricanes, floods, and droughts), ocean acidification, marked decreases in biodiversity, extinction of species of plants and animals, increased spread of infectious diseases, and broader changes in natural systems. Feedback loops exacerbate the effects of individual impacts. These consequences are already being observed (such as in the bleaching of the Great Barrier Reef and the disastrous Australian bushfires in 2019-2020). The high current level of atmospheric greenhouse gases means we are already locked into further global warming and climatic changes, even with urgent action to reduce emissions. All the changes above have deleterious impacts on human physical and mental health.



## 3 Climate change as a serious global health threat

- 3.1.** Climate change is regarded as the most serious global health threat of the 21st century (Costello et al., 2009; USGCRP, 2016; WHO, 2018). Even the 2020 COVID-19 pandemic (though influenced by climate change, like other infectious diseases (UNEP, 2016)) is likely to have less far-reaching and less long-lasting impacts than climate change. The major threats, both direct and indirect, come from extreme temperatures, changing patterns of disease, water and food insecurity, extreme weather events (e.g., bushfires, heatwaves, droughts, floods and cyclones), intra- and inter-state conflict, damage to shelter and human settlements, and forced migration (Sanson & Burke, 2019).
- 3.2.** The main categories of risks to physical health in Australia include: deaths and injuries associated with extreme weather events, health impacts of temperature extremes, increases in vector-borne, food-borne and water-borne infectious diseases, and risks from poor water quality, diminished food production, and increased urban air pollution (Australian Academy of Science, 2015; Hughes & McMichael, 2011; WHO, 2018).
- 3.3.** Mental health and psychosocial consequences of climate change arise from the direct impacts of extreme weather events, disruptions to the social, economic and demographic determinants of mental health (e.g., from disrupted livelihoods, increased costs of basic services, conflict over scarce resources, increased threat of violence, and forced migration), and emotional stresses and mental health problems in response to perceptions/fears of climate change, family stresses and media exposure to the negative consequences of climate change (Clayton et al., 2017).
- 3.4.** The most severe impacts of climate change will fall on the most vulnerable and disadvantaged communities who have played the smallest part per capita in contributing to the rise in greenhouse gases. Variations in vulnerability to climate change impacts are evident across nations and communities, and also across social class, age, and gender, with women, children, older people, and future generations more vulnerable (Hayes et al., 2018; Palinkas & Wong, 2020; Sanson et al., 2019).

## 4 Psychology's contribution to dealing with climate change

- 4.1.** Psychology professionals have been substantially involved in collaborative, multi-disciplinary work on environmental issues in Australia and internationally for decades. Key articles by eminent psychologists have been published over the last few years stressing psychology's essential role in addressing climate change and associated environmental threats (e.g., Chapman et al., 2018; Clayton, 2019; Clayton et al., 2016; Clayton & Manning, 2018; Hayes et al., 2018; Sanson et al., 2019; van Lange et al., 2018; van der Linden et al., 2015).
- 4.2.** There is strong consensus among psychology professionals and other scientists that human motivations and behaviours constitute core causal factors with respect to climate change (e.g., Clayton, 2019; De Matteis, 2019; Mann et al., 2017). In essence, climate change is caused by the ways that humans, since the mid-20th century, have produced and consumed energy, travelled, grown food, consumed goods, and treated the natural environment.
- 4.3.** Psychology professionals have important contributions to make to climate change science, through:
- helping to conceptualise and understand the human social, organisational and political contributions to climate change (e.g., consumption patterns) and the psychological (e.g., motivation, ability) and contextual drivers of these (e.g., social and cultural norms, power relations);
  - building and sharing knowledge and understanding of how individuals and communities understand and perceive the risks of climate change, and strategies for changing these beliefs, attitudes and perceptions;
  - sharing knowledge about how governments, organisations and individuals can change their behaviour to reduce emissions and overexploitation of resources (mitigation);
  - helping governments, communities and individuals to understand the need to prepare for and reduce the risks of climate-related events such as floods and bushfires (environmental adaptation);
  - helping individuals and communities adapt to the psychosocial impacts of climate change, including helping people to manage the distress of facing the threat of climate change, and cope in the aftermath of climate-related disasters (psychological adaptation);
  - helping individuals and communities to peacefully resolve conflicts arising from climate change impacts such as resource shortages and forced relocation;
  - assisting individuals and organisations to face the reality of the climate crisis, and supporting them to take responsibility for acting to reduce the threat;
  - helping organise fair and sustainable laws and regulations for equitable sharing of limited resources, locally, nationally and globally; and
  - of central importance, advocating to governments, policy-makers, decision-makers, industries, etc. about the critical need for fast and widespread action in order to protect human health and wellbeing.

# 5 People's risk appraisals and understanding of climate change

- 5.1.** How people perceive, appraise and understand environmental problems is critical because these processes affect how concerned people are, and how motivated they are to take action.
- 5.2.** Psychology professionals are uniquely positioned to explore how people's levels of knowledge about climate change, their cognitive and emotional responses to that knowledge, and their social contexts combine to affect their sense of risk and their willingness to take action to reduce it (Burke et al., 2017; Clayton et al., 2017; Slovic et al., 2004).
- 5.3.** Psychology can contribute to our understanding about effective means of communication about the climate crisis which reaches the desired audience and motivates action to address the challenge (APA, 2008; Burke et al., 2017; Gifford, 2011; van der Linden et al., 2015). It can also assist the public to understand the impacts of media portrayals of the climate crisis, and support better discernment of media particularly regarding misinformation, denial, and fear arousal.

## 6 Psychological contributions to understanding behaviour change

- 6.1.** To successfully address the climate crisis, behavioural changes which are both top-down (e.g., government leadership, legislative change) and bottom-up (e.g., individual and community actions), and are needed. Psychological knowledge is valuable in the design, implementation and evaluation of pro-environmental campaigns and activities at individual, community and societal levels.
- 6.2.** At a government and societal level, psychology professionals can offer expertise in decision-making that will help policy-makers ensure that effective climate policies are developed and turned into effective actions, and understand how truthful and open communication with the public can lead to trust and acceptance of the need for behavioural change (Eckersley, 2020; Steg & Vlek, 2009; Swim et al., 2011).
- 6.3.** Psychology professionals also have expertise in understanding the impacts of broader physical, geophysical and social environments, including infrastructure and landscaping, on our sense of community, feeling of 'ownership' of a place and our subsequent behaviours (Gifford, 2008). They can advise on how to measure and modify aspects of these environments to achieve sustainable change (Curnow & Spehr, 2006).
- 6.4.** Barriers to action include structural barriers, socio-cultural barriers, socio-cultural norms (e.g., 'people like me don't do X'), and economic disincentives (e.g., the perceived high costs of environmentally responsible behaviours like installing solar panels). There are also significant psychological barriers including ignorance, uncertainty, mistrust, denial, avoidance, lifetime habits, perceived risks, conformity, and conflicting goals and aspirations, and the wish to avoid distressing feelings associated with thinking about the climate crisis (Gifford, 2011; Lacroix & Gifford, 2018; Swim et al., 2009).
- 6.5.** Psychology professionals have a long history of work in motivating behaviour change (e.g., Fishbein & Ajzen, 1975; McKenzie-Mohr, 2011; Prochaska & DiClemente, 1984).
- 6.6.** Motivating change includes a range of strategies to help people to overcome barriers (Burke et al., 2017; Clayton, 2009; Harre, 2011; McKenzie-Mohr, 2011). People need to know what actions they can take, and why these will really make a difference. Both the public and policy makers need to be aware of the relative efficacy and utility of particular actions for mitigating climate change (Gardner & Stern, 2008). Psychology professionals can identify and promote strategies which directly address people's concerns, and psychologically significant responses that lead to feelings of efficacy, responsibility, and realistic hope.
- 6.7.** At an individual level, psychology professionals contribute valuable knowledge about the numerous and often interacting factors that stimulate change in individuals' behaviour, including risk perceptions and understandings, threat appraisals, coping responses, beliefs in self-efficacy and collective efficacy (the belief that their actions, and collective group actions, can make a difference), and social norms (Burke et al., 2017; Lacroix & Gifford, 2018; Steg & Vlek, 2009; Swim et al., 2011).

# 7 Adaptation to, and coping with, climate change threats and impacts

- 7.1.** Adaptation to climate change is an ongoing process that includes preparation for, and responses to, both the physical and psychosocial impacts of climate change.
- 7.2.** Psychology professionals can support efforts of governments, individuals and communities to prepare for climate-related disasters, psychological and situational preparedness, engaging in disaster risk mapping and avoidance (e.g., identifying flood- or fire-prone buildings or places and protecting them, stockpiling food and water resources if shortages are predicted) (e.g., APS Tip sheet on psychological preparation for natural disasters, 2018).
- 7.3.** The psychological impacts of climate change include emotional and cognitive reactions to the knowledge that it poses an existential threat to our future lives, as well as those resulting from directly experiencing climate-related disasters or indirectly witnessing detrimental environmental change (e.g. seeing coral bleaching in the media).
- 7.4.** Research shows widespread emotional reactions to awareness of the threat of climate change in both adults and children. Emotional responses include fear and anxiety, depression, sense of loss and sadness, anger and frustration (at inaction by national leaders, and, for children, at inaction by the current adult generation), a sense of helplessness, and despair and hopelessness (APS, 2017; Sanson et al., 2019). Psychology can provide guidance and support for coping and dealing with these feelings (APS, 2017; Burke et al., 2017; Macy & Johnstone, 2012). An important psychological insight is that taking action on climate change is a strong antidote to anxiety and builds self-efficacy and realistic hope (Sanson et al., 2019).
- 7.5.** Humans have an innate desire to connect with nature and derive psychological benefits from this nature connection. Nature-based clinical interventions provide accessible, cost-effective ways to improve psychological wellbeing (Bhullar & Snell, 2018).
- 7.6.** Research has delineated the major psychological responses to exposure to climate-related disasters. These include shock, distress, disrupted sleep, grief, anger, depression, anxiety, and post-traumatic stress disorder. Psychologists are well-placed to deliver psychological first aid immediately after climate-related disasters, as well as support over the longer term (APS, 2014; APS and Australian Red Cross, 2013; Burke & Mathews, 2020).
- 7.7.** At a community level, generosity and compassion are frequent initial responses after disasters, but these can give way to more negative responses over time. Family and community disruption are common after disasters, including an increase in family violence and community aggression, increased substance use, and conflicts over scarce resources, and more general disruptions to the social, economic and environmental determinants of wellbeing in individuals and communities (Clayton et al., 2017; Fritze et al., 2008). Psychological support includes psychological first aid approaches and community resilience programs (Chapman et al., 2018). Psychology professionals can also help support peace-building within communities, so they can more effectively and peacefully deal with conflicts arising from climate change.

## 8 The APS position

As noted above, the APS accepts the scientific consensus that human-caused climate change poses an existential threat to human civilisation, demanding urgent action at global, national, community and individual levels. The APS also acknowledges the significant psychosocial implications of climate change, including its current and future impacts on the physical and mental health of all human beings.

**8.1** In relation to climate change and health, the APS acknowledges that:

- Climate change involves serious and irreversible harm to the environment and to human health and psychosocial wellbeing;
- The main mental health consequences of climate change arise from the direct impacts of extreme weather events on individuals, families and communities, disruptions to the social, economic and demographic determinants of mental health (e.g., from disrupted livelihoods, increased costs of basic services, and forced migration), and emotional stresses and mental health problems in response to awareness of the threat that it poses;
- Measures to mitigate climate change will also directly benefit physical and mental health;
- Governments, businesses, and organisations should recognise the urgency of the climate crisis and associated environmental problems, and develop and implement effective policies to speedily reduce greenhouse gas emissions and drawdown the excess gases already in the atmosphere;
- Strategies to mitigate climate change and to promote community adaptation and resilience should be fair and just, and should observe the human rights of vulnerable people and communities (e.g., children, Indigenous Australians, migrant populations, those who lose their jobs in the transition out of fossil fuels);
- Individuals, businesses and organisations, including psychology and other health professionals, should be informed about, and take measures to reduce, their own greenhouse gas emissions ('carbon footprint') by making appropriate changes to consumption patterns.

**8.2** In relation to psychological contributions to climate change, the APS considers that:

- Human motivations and behaviours constitute core causal factors with respect to environmental problems;
- Profound changes in many facets of human behaviour are required to bring about speedy action to prevent catastrophic climate change;
- Psychology professionals possess expert knowledge, skills and resources that can contribute to:
  - understanding the psychological dimensions of the global climate crisis;
  - understanding the human behavioural contributions to climate change;
  - understanding how people perceive the risks of climate change and how they can be motivated to take action;
  - pro-environmental behaviour change;
  - measuring and modifying aspects of the environment to achieve sustainable change;

- the design, implementation and evaluation of pro-environmental campaigns and activities at an individual and societal level;
  - models of decision making that will help policy-makers understand how the public will respond once policies are put into place;
  - effective communication of climate policies to ensure they are turned into effective actions;
  - helping individuals and communities to cope with emotional responses to the threat of climate change; and
  - effective education and training for children and adults on the importance of pro-environmental behaviours and climate change mitigation and adaptation.
- Psychology as a profession and discipline, and its professional organisation, the APS, have a social and moral responsibility to play an active and leading role in climate change mitigation and adaptation, to advocate strongly for speedy policy action, and to contribute expertise to relevant local, state, national and international dialogues.
  - The APS has responsibility for its environmental footprint, including greenhouse gas emissions, resource use and waste production, and will take action accordingly, by estimating emissions, setting targets for greenhouse gas emission reductions, adopting sustainability measures, and ensuring public and transparent reporting on its activities and progress on these efforts.

## 9 Recommendations

In light of the urgency of the climate crisis and the importance of understanding and addressing its psychological, health and social dimensions, the APS recommends that:

- 9.1.** Governments, industries, organisations, psychology and other health professionals, and the public recognise the urgency of the climate crisis, and develop effective strategies to mitigate climate change and minimise climate change impacts, and promote successful community adaptation and resilience. The significantly greater impacts of climate change on marginalised groups (e.g., Indigenous Australians, migrant populations) and vulnerable people (e.g., older people, children) should be given particular attention.
- 9.2.** Governments and education providers develop and implement national curricula on climate change, which include the science of climate change, its psychological and social dimensions, and solutions to it.
- 9.3.** Psychology practitioners, researchers and educators collaborate with climate change scientists, social scientists, government, and other expert groups, to contribute to understanding and addressing the human behaviour drivers of climate change, as well as psychological dimensions of the response to climate change, its mitigation, and adaptation to it.
- 9.4.** Psychology practitioners, researchers and educators bring their skills to bear in climate change advocacy, education and training, mitigation and adaptation.

The APS undertakes to assist and encourage the engagement of all psychology professionals with climate change issues, as researchers, academics, practitioners and students, and to seek to implement the recommendations above.



# Glossary

<b>Climate</b>	The composite or generalisation of weather conditions of a region, as temperature, pressure, humidity, precipitation, sunshine, cloudiness, and winds, throughout the year, averaged over a series of years (Macquarie Dictionary, 2020).
<b>Climate change</b>	Any changes in climate over time, whether due to natural variability or as a result of human activity (IPCC, 2007). This includes changes in temperature, precipitation, wind, atmosphere, oceans and natural water supplies, snow and ice, land surface and biosphere.
<b>Anthropogenic, or human-caused, climate change</b>	The changes in climate currently being experienced as a result of human activity creating excess greenhouse gases in the atmosphere, caused particularly by mining and use of fossil fuels, deforestation and agricultural practices.
<b>Climate crisis/ climate emergency</b>	A state in which immediate action is needed to reduce, halt or reverse climate change, and thus avoid or minimise the environmental damage caused by it (Macquarie Dictionary, 2020).
<b>Mitigation</b>	Efforts to decrease the severity of impending natural and human disasters associated with escalating climate change and other environmental threats, such as reducing greenhouse gas emissions.
<b>Adaptation</b>	(1) structural changes that people and communities make to address the physical impacts of climate change; (2) psychological responses that people make to climate change threats, including how they appraise and understand risks, how they feel about the threats, and how they behave and respond to the threats.

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