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To Whom It May Concern,

Inquiry into the Paris Agreement

The Australian Psychological Society (APS) welcomes the opportunity to make a submission to the Joint Standing Committee on Treaties Inquiry with regard to the Paris Agreement (Paris, 12 December 2015) to limit global temperature increase to well below 2°C, and preferably below 1.5°C. Australia signed the Agreement, along with over 175 other countries, in an indication that the science of climate change is now accepted beyond debate. The next question is therefore how we are to proceed in identifying and meeting our commitments under the Treaty.

The APS supports the Australian Government's proposed treaty action to ratify the Paris Agreement by the end of 2016. As a developed country that is committed to implementing national policies to adapt to climate change, Australia is now in a position to advance its resolutions to reduce its carbon emissions and protect carbon sinks, in line with the Agreement and in the context of coordinated global action. Australia is among the most exposed and vulnerable developed countries in the world to climate change impacts because of its hot dry climate and environmental extremes (Chapter 25 IPCC, 2014; Steffen, 2014). Moreover, Australia's high per capita carbon emissions (Green Innovation Index, Henton et al., 2015) mean that without effective global climate action Australia faces increasing risks of severe negative impacts across environmental issues, economic performance, health and wellbeing, social behaviour, infrastructure, regional stability and other aspects of human existence.

In this submission, we wish to make a number of comments relating to the proposed treaty action that are within our area of expertise:

i) The importance of human health and wellbeing as a key consideration in the development of climate policies to meet Australia's Nationally Determined Contributions (NDCs).
ii) The important role that psychologists and other social and behavioural scientists can play in 'education, training, public awareness, public participation, and public access to information and cooperation at all levels on the matters addressed in this Agreement' (as stated in the Preamble to the Paris Agreement).

About the APS

The APS is the national professional organisation for psychologists, with over 22,000 members across Australia. Psychologists are experts in human behaviour and bring experience in addressing the many facets of human experience and functioning at individual, family and societal levels.

A number of convergent areas of psychological work and practice have focused on the challenges of global environmental change and global climate change for several decades. Environmental psychology, social psychology, health psychology, clinical psychology, disaster psychology, community psychology, and organisational psychology have made key contributions in addressing the human dimensions of climate change. While climate change poses new and daunting challenges, psychological research and findings in this complex area have substantially informed what we know about human dimensions of climate change.

i) The importance of human health and wellbeing as a key consideration in the development of Australia's climate policies to meet Australia's NDCs.

The preamble to the Paris Agreement includes a reference to the importance of health in considering climate change. Climate change is arguably the biggest health threat of the 21st Century (USGCRP, 2016; Costello et al., 2009). The impacts of climate change on human health and wellbeing are significant. First, climate change will increase the severity or frequency of health problems that are already affected by climate or weather factors; and second, it will create unprecedented or unanticipated health problems or health threats in places where they have not previously occurred.

There is a substantial body of scientific evidence highlighting the immediate and long-term risks that climate change poses to population health in Australia (McMichael et al., 2002; Bambrick et al., 2008; Hughes & McMichael, 2011;

Smith et al. 2014; Australian Academy of Science, 2015). Serious health risks include:

- heat-related illnesses and deaths,
- outbreaks of infectious diseases,
- impacts from food and water insecurity, occupational health impacts,
- and increased risk of respiratory and cardiovascular diseases, with the worst impacts being on children, the elderly, and marginalised groups.

Climate change also impacts on people's mental health and psychosocial wellbeing (Doherty, 2015; Doherty & Clayton, 2011; Gifford & Gifford, 2016; Clayton et al., 2014). There is a significant risk of mental health problems following extreme weather events that are more frequent and intense with climate change, as well as psychosocial stress associated with environmental damage and concern about climate change. There are also psychological impacts caused by climate change's more gradual impacts on the environment, human systems and infrastructure that flow on to affect food security, economic wellbeing, family wellbeing, community health (Clayton et al., 2014). These changes are happening now, and are almost certain to increase as the impacts of climate change become more obvious and ubiquitous. It is these present impacts and adaptation and coping challenges that are very appreciably influencing not only health and well-being but psychological adaptation and coping success.

Australia's health sector is underprepared to deal with the health risks associated with climate change, and equally, to capitalise on the benefits of mitigation actions (CAHA, 2016). A recent global survey reveals that Australia lags behind comparable countries when it comes to protecting the health of its citizens from climate change (World Federation of Public Health Associations, 2015).

Many health organisations, professional societies, peak bodies, and health alliances have been advocating for health to be a key consideration in the development of climate policy, and how action on climate mitigation and adaptation protects wellbeing The Climate and Health Alliance, of which the APS is a founding member, has developed a Discussion Paper on a National Strategy for Climate, Health and Well-being. The framework presents six key action areas to protect health and wellbeing through climate mitigation and adaptation policies. http://caha.org.au/wp-content/uploads/2016/06/CAHA-Discussion-Paper-v04.pdf. For Australia to meet its obligations to protect health in the Paris Agreement, it will need to develop such a strategy that considers all climate policy under a health lens.

Just as health is essential to planning and assessing effective climate adaptation and mitigation actions, better health will be an outcome of effective climate change policies. The health co-benefits of mitigation adaptation actions were explicitly acknowledged in the Paris Agreement in a section on ENHANCED ACTION PRIOR TO 2020: "…Recognises the social, economic and environmental

value of voluntary mitigation actions and their co-benefits for adaptation, health and sustainable development". Thus, in addition to the critical importance of global action on limiting climate change, the Paris Agreement also acknowledges the direct co-benefits to each country as they engage in mitigation and adaptation.

There is a substantial body of evidence highlighting the potential for health 'co-benefits', i.e. avoided ill-health and productivity gains, associated with strategies to reduce greenhouse gas emissions, specifically in the sectors of household energy, food and agriculture, transportation and electricity generation (Haines et al., 2009). An evaluation of the health co-benefits of various mitigation policies for four European cities (Creutzig et al., 2012) found that such policies could improve air quality, reduce noise, decrease traffic-related injuries and deaths, increase levels of physical activity, decrease congestion, and provide fuel cost savings. Given the potential for co-benefits (and potential risk of unintended adverse health outcomes) associated with climate mitigation and adaptation strategies (Smith et al., 2014), comprehensive assessment of both the positive and negative health impacts of climate change policies is recommended (CAHA, 2016).

ii) The important role that psychologists and other social and behavioural scientists can play in the education, training, public awareness, public participation, and public access to information and cooperation.

As well as meeting carbon emission reduction targets, the Paris Agreement also explicitly affirms the importance of education, training, public awareness, public participation, and public access to information and cooperation at all levels on the matters addressed in this Agreement. It is widely accepted that technological developments alone will not achieve the carbon emission reductions required to meet the Paris Agreement. Significant and long term reductions will only be achieved at organisational, institutional, household and individual levels through changes in people's understanding, attitudes and behaviour at all levels of society.

Psychologists and other social and behavioural scientists provide an essential perspective for helping with this work of changing people's understanding, attitudes and behaviour around climate change and sustainability issues. These scientists have been substantially involved in collaborative, multi-disciplinary work on environmental issues in Australia and internationally. Psychological research has covered the whole spectrum of environmental problems, including behaviour change, barriers and incentives, communication and engagement, risk perceptions, persuasion, social norms, environmental dispute resolution, disaster preparedness and response, public understandings of climate change, and many other related areas. This not just about fostering pro-environmental

behaviours and lifestyles (e.g., McKenzie-Mohr & Smith, 2006), but an equally important and integral emphasis is on issue engagement and psychologically significant as well as environmentally significant actions and behaviours in response to climate change (e.g., Whitmarsh, O'Neill & Lorenzoni, 2011; Reser, Morrissey & Ellul, 2011).

Meeting the goal of the Paris Agreement to limit warming to below 1.5^{o}c will require fundamental changes in behaviour and lifestyle and will only be possible if people understand and take collective responsibility for reducing energy consumption in the light of climate change issues and changes in the supply and security of different energy sources. This requires active engagement with the public around energy issues as well as other sustainability issues.

Social and behavioural science can contribute enormously to understanding how people respond to and engage with climate policies and adopt different behaviours as the world moves towards a zero emissions economy. For example:

1) Identifying barriers that get in the way of helping people to develop more pro-environmental behaviours, then finding ways of removing barriers in order to make a desired behaviour easier to perform:
    - Offering people a roof clearance service (that they actually had to pay extra for) at the same time as offering subsidies for roof insulation was three times more successful at getting people to insulate their roofs, than the subsidised insulation alone (Halpern, 2015).
    - Many people are reluctant to swap their car for a bike as a way of getting to work because they are worried about their personal safety or theft of their bikes. Removing some of these barriers through dedicated bike lanes, and offering safe bike storage at workplaces, can make it easier for people to choose to cycle to work.

2) Identifying incentives that encourage people to develop more pro-environmental behaviours like choosing active or public transport, reducing air travel in organisations.
    - Public transport programs based on behavioural insights have been introduced into organisations to incentivise increased public transport usage and decrease car use. For a nominal yearly fee businesses were able to offer free or reduced cost public transport to employees which included a guaranteed free taxi ride home if they had to work late or in an emergency. This aspect was designed to both mitigate the concerns (barriers) about the availability of public transport in unforeseen circumstances which were identified during public consultation as well as provide

incentives. http://www.toolsofchange.com/en/case-studies/detail/10

3) Understanding cognitive biases that influence how people behave. Much of human behaviour relies on people taking mental shortcuts or heuristics, so understanding these shortcuts, and designing programs around how people generally think and behave can greatly increases uptake of the desired behaviour.
   - People's behaviour is largely driven by entrenched habits. However there are particular times when people are more open to the suggestion of alternative options. For example, moving house is a time when people are more open to suggested alternatives to driving to work, before their new habits have formed.
   - Another example of a timely intervention is providing information to consumers just before the moment of purchase. Most people would rather buy appliances that use less energy and cost less to run. When labels have information comparing energy efficiency and likely running cost over the product's lifespan, people tend to buy slightly more expensive but more energy efficient products (Halpern, 2015).
   - Furthermore, when the information provided is easy to understand and attractive (i.e. attracts their attention *and* is seen as desirable), this increases uptake even more.
   - People are more sensitive to the prospect of losing something than to the prospect of saving something of equal value (Yates, 1982). People were much more willing to insulate their water heaters when they were presented the information in terms of how much money would be wasted by not insulating, that when the information was presented in terms of how much money could be saved.

4) Understanding social norms and their influence on people's behaviour.
   - When it comes to persuading people to conserve energy, the message that 'everybody else is doing it' works better than trying to appeal to people's sense of responsibility, desire to save money, or even their hope of safeguarding future generations. 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, & Griskevicius, 2008).
   - Social norms have a particularly strong impact on recipients under conditions of uncertainty - they look outside, to others, for evidence of how to act. So when a new green product is introduced, or a new report on depletion of environment, or new laws related to pro-environmental action, the unfamiliar conditions

will make people especially attentive and responsive to information about how others are dealing with it. This also means that leaders lose great persuasive leverage if they fail to marshal and employ such information in their communications precisely at these times.

- People are around 8 times more likely to litter when the environment that they are in is already littered, than in a clean environment (See http://www.communitychange.com.au/ for many more examples of how to change littering behaviour).

5) Designing and implementing effective, persuasive communications, media coverage, and educational materials concerning environmental problems and what can be done about them.
   - A large literature in risk communication shows that people are more likely to heed risks they see as relevant, personal and salient, so linking climate change to things they care about, like health or security is important, and showing them that the threats are 'here and now' is more likely to be effective (e.g., CRED, 2014).
   - Using trusted communicators to talk about climate change. Most people value and highly respect the views of scientists and academics, while having very little faith in journalists or politicians; People are also likely to listen to and be influenced by the views of people they know and trust and they feel are like them, so finding local communicators can be effective too (Marshall, 2015).

6) Understanding the complex emotions and reactions that people experience when faced with serious environmental threats.
   - People can feel anxious, distressed, helpless, pessimistic, guilty, angry, and stressed, amongst other feelings (Clayton et al., 2014). How people respond to these feelings is thus very important. People can react in many unhelpful ways –minimise the threat, distract themselves, blame the authorities for the disaster, put faith in silver bullet solutions, put the onus on others like the government or other countries to solve the problem, or become helpless, hopeless, and resigned to the disaster. Knowing how people are feeling and responding, and finding ways of helping them to manage these feelings means that they can then properly accept the reality of climate change and not avoid it. Psychologists call this a skill of self-regulation and it is an important part of climate adaptation and coping.

7) Developing theories on disaster preparedness and response, and educating the public on the best ways to physically and psychologically prepare for extreme weather events.
   - Psychological research shows that the best disaster preparedness messages are those that provide clear, concise and truthful

communications, specific guidance, through multiple media, across different, linked, trusted organisations and across time, with continual repetition of key preparedness messages.

- Teaching people psychological preparedness (how to anticipate and identify their thoughts and feelings in a disaster pending situation, and practice strategies for managing their anxiety) can help people to stay calmer, more in control, and make better decisions about staying safe in an extreme weather disaster (Morrissey & Reser, 2003).

The USA's Obama administration has already been using psychological science in its climate change policies, having set up a Social and Behavioural Sciences Team that assists with climate-related projects as well as advising on other policies. The British Government also established a Behavioural Insights Team (BIT, or 'Nudge Team') under David Cameron's leadership, which, since 2010, has been helping government to identify the best ways to encourage people to adopt new behaviours that can save lives, promote health, save the government money, and improve community wellbeing (Halpern, 2015). The BIT unit uses psychological insights to help design policy and programs using a simple tool called the EAST framework to help prompt changes in people's behaviour: If you want to encourage a behaviour, you should think about making it *Easy, Attractive, Social and Timely*. The British Government's BIT unit has been an enormous success. Designing policy around behavioural insights has led to better outcomes and easier services for the public to use, and has also saved money.

There exist five decades of social science research addressing the relative efficacy of differing intervention strategies and government policies to do with engaging and influencing the public on sustainability issues (e.g., Steg & Vlek, 2009; Swim et al., 2011). Incorporating behavioural and social science expertise in Australia's climate policy and other public policy-making is a valuable way of improving the efficiency and effectiveness of government and critically important for helping Australia reduce carbon emissions, meet our NDCs, and play our art in restoring a safe climate.

Conclusion

As psychologists we are concerned not just about the environmental risks and impacts of climate change, but also about its serious psychosocial and mental health consequences. The individual and collective psychosocial impacts will ultimately manifest themselves in terms of a greatly altered and diminished quality of life as well as environmental quality, and in the myriad psychological and social costs of living under the shadow of an ongoing environmental stressor such as climate change. We strongly encourage the Australian Government to ratify the Paris Agreement, as they have indicated they will, and

to develop strong climate policies that can move Australia rapidly onto an emissions reduction trajectory that is in line with the science of limiting temperature increase to below 1.5°C. This will likely involve the expertise of behavioural and social scientists who can assist in the development of effective policies, and the public engagement of people across all levels of society to change their behaviour and lifestyle in order to reduce emissions and restore a safe climate.

We would be very pleased to meet with the relevant Ministers and Department heads entrusted with the responsibility of implementing Australia's commitments to the Paris Agreement, to discuss some of the ways that insights from psychology can assist in this crucial process. Please don't hesitate to contact us for further information, on 03 8662 3327.

Yours sincerely,

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