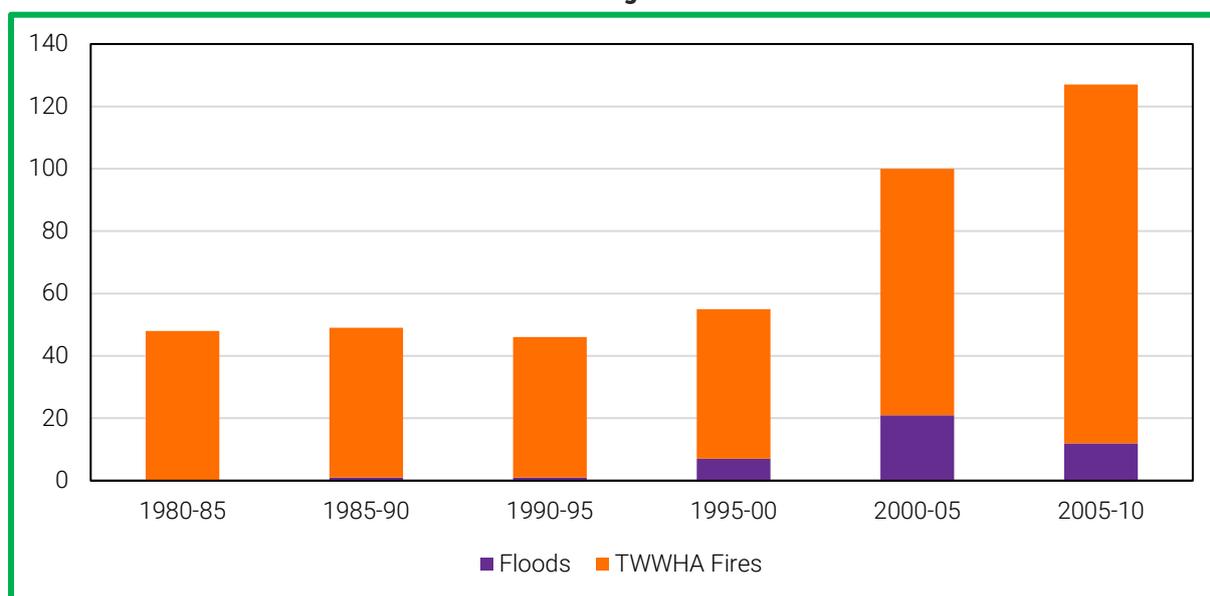


Extreme Weather Adaptation

Background

The rising heating of the climate system is causing an increase in heat waves,¹ floods,² droughts in some regions,³ and bushfires.⁴ These are already having devastating impacts on humans, with loss of life, agricultural land and settlements. The impact on plant and animal survival, and on ecosystem functioning is also profound and concerning. Figure 1.6.1 illustrates the increase in some extreme weather events in Tasmania, from 1980 to 2010.

Figure 1.6.1: Floods and TWWHA Fires 1980-2010^{5,6}



Community Resilience

As extreme weather events become more common, community resilience is critical for reducing their impact through planning and response.⁷ Easily accessible services are critical to resilience building.⁸ To do so, the National Bushfire and Climate Summit 2020 expert

¹ C J White, M R Grose, S P Corney, J C Bennett, G K Holz, L A Sanabria, K L McInnes, R P Cechet, S M Gaynor & N L Bindoff, [Climate Futures for Tasmania: extreme events technical report](#), Antarctic Climate and Ecosystems Cooperative Research Centre, 2010, p. 26.

² Ibid, p. 46.

³ Ibid, p. 53.

⁴ Ibid, p. 15.

⁵ Bureau of Meteorology, [Tasmanian Flood History](#), n.d.

⁶ J Styger, J Marsden-Smedley, and J Kirkpatrick, [Changes in Lightning Fire Incidence in the Tasmanian Wilderness World Heritage Area, 1980–2016](#), Fire, Vol 1 (3), p. 8.

⁷ J K Summers, L M Smith, L C Harwell, and K D Buck, [Conceptualizing holistic community resilience to climate events: Foundation for a climate resilience screening index](#), GeoHealth, Vol. 1, 2017.

⁸ J K Joseph, D Anand, P Prajeesh, A Zacharias, A G Varghese, A P Pradeepkumar, an K R Baiju, [Community resilience mechanism in an unexpected extreme weather event: An analysis of the Kerala floods of 2018, India](#), International Journal of Disaster Risk Reduction, Vol. 49, 2020, p. 7.

roundtable recommended the establishment of community resilience hubs in vulnerable areas.⁹

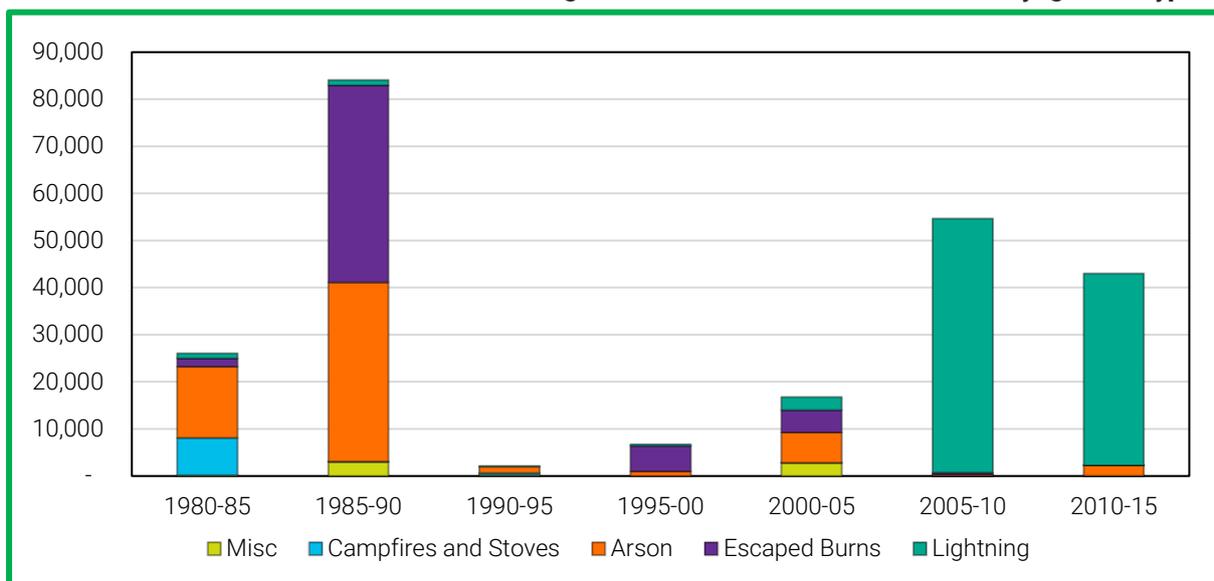
Community Resilience Hubs

We will fund the establishment and operation of community resilience hubs around Tasmania. They will be resourced to provide advice and links to services to assist with disaster preparation and recovery.

Bushfire

Figure 1.6.2 illustrates the changes in the ignition source of fires in the TWWHA since 1980. Prior to 2000, human-induced ignitions were the most common cause of fire. Following successful education and policies these fires have substantially declined. The incidents of dry lightning ignitions, however, have significantly increased. These are now by far the most prevalent cause of fires in the TWWHA.¹⁰

Figure 1.6.2: TWWHA Hectares Burned by Ignition Type¹¹



High buttongrass fuel loads contribute to TWWHA bushfire risk, and areas of buttongrass are able to support a fire as soon as four years after a burn.¹² At 2014, the majority of buttongrass moorland had not recorded any fire within the previous 50 years.¹³ In 2015, Parks and Wildlife Services did not have any budget allocation to undergo their buttongrass fuel reduction burn

⁹ G Mullins, S Bradshaw, and A Pearce, [Australian Bushfire and Climate Plan: Final report of the National Bushfire and Climate Summit 2020](#), Emergency Leaders for Climate Action and the Climate Council of Australia Ltd, 2020, p. 30.

¹⁰ Ibid pp. 6-7.

¹¹ J Styger, J Marsden-Smedley, and J Kirkpatrick, [Changes in Lightning Fire Incidence in the Tasmanian Wilderness World Heritage Area, 1980–2016, Fire, Vol 1 \(3\)](#), p. 8.

¹² Ibid, pp. 6-7.

¹³ Department of Primary Industries, Parks, Water and Environment, [Fire Management in the Tasmanian Wilderness World Heritage Area](#), Evaluation Report, Nov 2015, p. 12.

program, despite the program existing for that purpose.¹⁴ No subsequent evaluation report about this fire prevention activity has been published.

Buttongrass Fuel Reduction Burn

We will fully fund DPIPWE to develop, maintain, and implement a comprehensive buttongrass fuel reduction regime for the Tasmanian Wilderness World Heritage Area. The regime will include funding for staff with expertise in Aboriginal cool burning practices.

Air Quality

The North West of Tasmania has some of the cleanest air in the world.¹⁵ Our State's high proportion of renewable energy also contributes to air pollutants being lower than in other jurisdictions. Climatic conditions, however, can result in localised air quality that is worse than highly industrialised areas.¹⁶

The practice of 'logging burns', undertaken by Forestry Tasmania after clear-felling a coupe, make no contribution to community safety and produce extremely high volumes of smoke pollutants. These have serious health consequences for people with respiratory and cardiac conditions.

There is little that can be done to mitigate local airshed environments, but Tasmania can stop the unnecessary practice of logging burns, and instead conduct necessary bushfire prevention burns with appropriate public health guidance for people who may be affected.

Planned Burns Air Quality Risk Assessment

We will develop and introduce a contemporary air quality risk assessment framework to guide planned burn activities. We will end the practice of native forest logging fires. We will establish public health guidelines for communicating bushfire prevention burns, and supporting at-risk individuals and communities.

Extreme Heat

Heatwaves are currently quite uncommon in Tasmania. They are, however, likely to increase in frequency in the future.¹⁷ Tasmania is expected to see an increase in heatwaves to an average of two a year by the end of the century, four times more frequent than during 1961-1990.¹⁸

¹⁴ Ibid, p. 16.

¹⁵ Cradle Coast NRM, [Cleanest Air in the World Fact Sheet](#), n.d.

¹⁶ O'Connor, T, [Global air quality tracker shows parts of Tasmania worse than big cities](#), ABC News.

¹⁷ Department of Health and Human Services, [Heatwave Ready Tasmania](#), 2018.

¹⁸ C J White, M R Grose, S P Corney, J C Bennett, G K Holz, L A Sanabria, K L McInnes, R P Cechet, S M Gaynor & N L Bindoff, [Climate Futures for Tasmania: extreme events technical report](#), Antarctic Climate and Ecosystems Cooperative Research Centre, 2010, p. 26.

The heating climate may cause fewer winter fatalities in temperate climates,¹⁹ like Tasmania.²⁰ Between 2008 and 2017, seven Tasmanians died from exposure to excessive natural heat, and fourteen Tasmanians died from exposure to excessive natural cold. Nationally, 190 died from heat and 177 cold.²¹

Tasmania is fortunate in that if we address the increased risk from heat exposure, we may be in a position to decrease deaths from extreme temperature exposure overall.

The 2019 National Construction Code, enacted into Tasmanian law by the *Building Act 2016*, requires new residential builds to be a minimum of 6 stars under the Nationwide House Energy Rating Scheme (NatHERS), as well as providing standards for aged care facilities.²²

Energy Efficiency Standards

We will introduce mandatory disclosure of NatHERS ratings on building sales to incentivise upgrades for existing properties.

We will also set a policy of expedient renovation of public housing properties allocated to vulnerable tenants to meet a 6-star energy rates, improving energy and thermal efficiency, and lowering the cost of living.

We will also introduce progressive energy efficiency improvement standards for established aged-care facilities.

Flooding

Modelling of the Derwent, Forth, Huon, and Mersey rivers in 2011 projected significant increases in flood frequency and intensity (for flood events under 72 hours) from all but the Derwent River throughout the century.²³

As the climate emergency has escalated, increasing pressure is being put on infrastructure designed to obstruct flooding. Increasingly, jurisdictions are instead focussing on restoring natural flood basins.²⁴

In Tasmania there have been increasing calls for natural solutions and planning innovations to better protect from flood events.^{25,26}

Restoring Flood Basins

We will introduce a program of restoration of flood basins, including wetlands, in flood prone areas. This will include an incentive scheme with grants for private landowners.

¹⁹ World Health Organisation, [Climate Change and Health](#), 2018.

²⁰ Australian Building Codes Board, [Climate Zone Map: Tasmania](#).

²¹ Australian Bureau of Statistics, [Causes of Death, Australia, 2017](#), Cat. 3303.0, 2018.

²² Consumer, Building and Occupational Services, [Energy efficiency for new homes](#).

²³ K A S Brown, F L N Ling, K A Robinson, C J White, J Peterson, and N West, [Investigating detailed impacts of climate change on flood inundation: a case-study from Tasmania](#), 19th International Congress on Modelling and Simulation, Perth, Australia, 2011.

²⁴ V Prahalad, [Talking Point: Leaving Tassie's floodplains to nature can be better than walls, levees](#), The Mercury, Nov 2016.

²⁵ Ibid.

²⁶ J Byrne, D Kendal, K I Booth, E Pharo, [What city planners can learn from Hobart's floods](#), University of Tasmania, 2018.