



Climate Change Action

Increasing the Resilience of the Built
Environment

Our Climate Action

Increasing the Resilience of the Built Environment

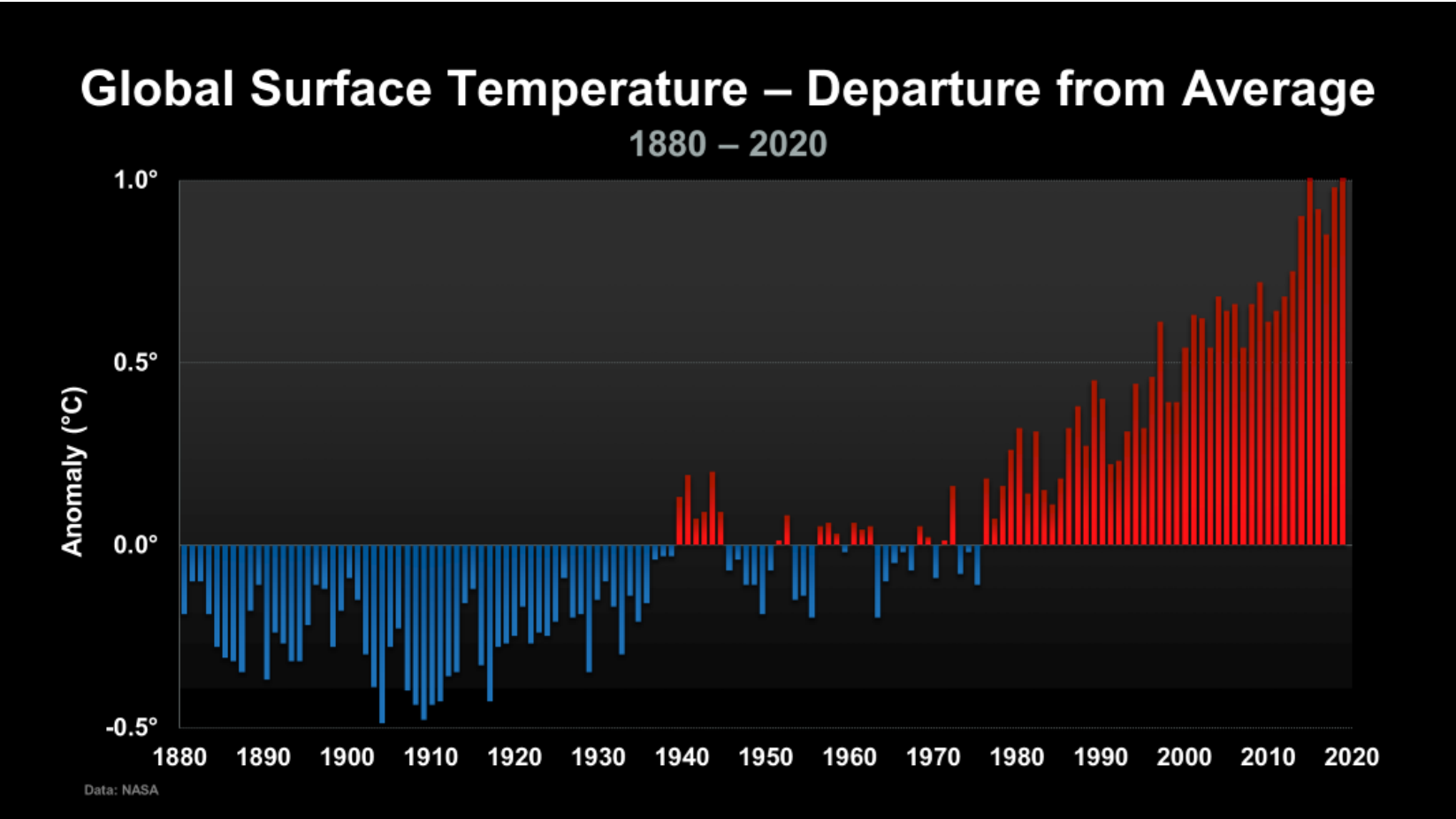
- The role of insurance – financial stability, recovery, covering residual risk
- Climate Change; an insurance industry perspective:
 - Our Public Statement
 - A warming climate, more catastrophe's, more damage
- ICA's Climate Action work – An insurable Australia
 - Project Resilience
- Strategic intent – affordable insurance, a resilient built environment

“A two degree world might be insurable, but a four degree world would certainly not be”

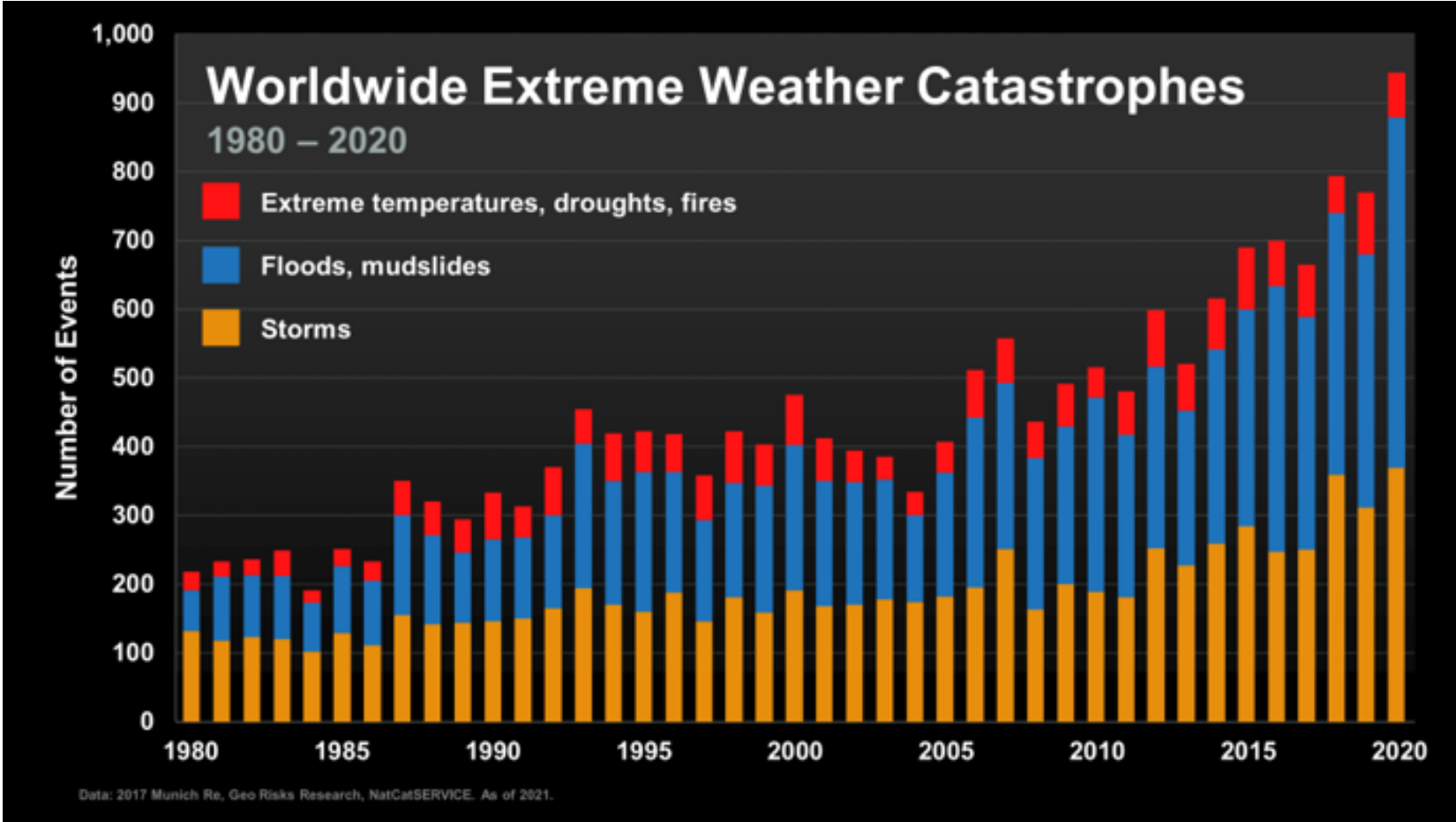
(Henri de Castries, AXA 2015)

The world is warming

The Insurance industry acknowledges the science; see our public statement

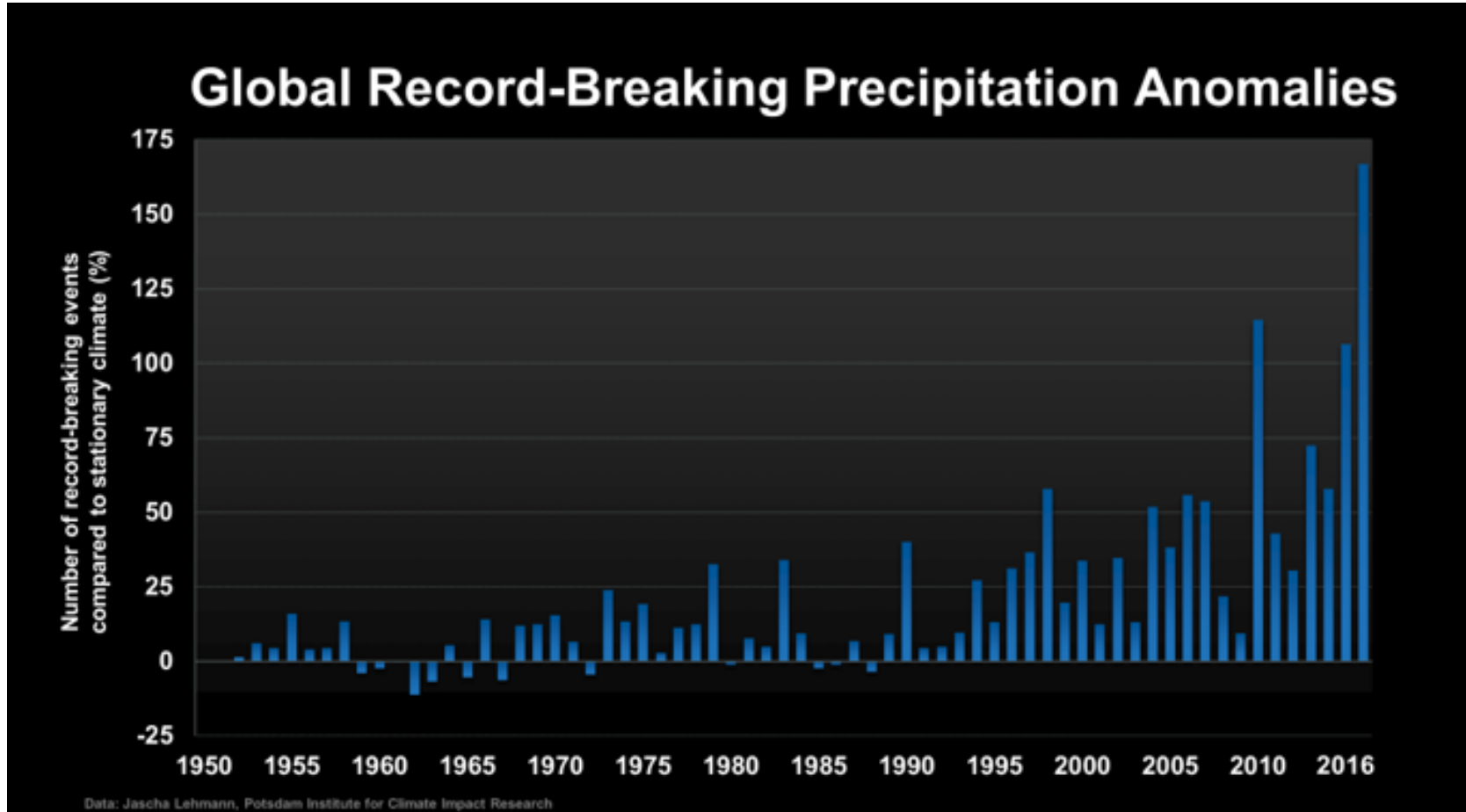


Worldwide Extreme Weather Catastrophes are increasing



Rainfall events are increasing

Greater precipitation leads to increased flooding





Industry Activity – All Catastrophe (CAT) Events

8 significant events nationally since Summer 2020

393k claims lodged with an acceptance rate of >98%

Average claim cost of \$18k with a total incurred value of \$7.27bn

Cyclone Seroja in April 2021 resulted in 4.7k claims for the Industry.

The estimate for this event is still being assessed and early estimates put it at circa \$112M.

\$7.27bn

Incurred

393K

Claims (Count)

CAT Summary

Label	Date	Claims (Count)	Paid	Outstanding	Incurred	Accepted Rate	ClosedRate	AveClaimCost
CAT 195 - Australian Bushfire Season (NSW, QLD, SA, Vic)	08-Nov-19	38,937	\$2,082M	\$229M	\$2,319M	99.4%	94.6%	\$60K
CAT 196 - SEQ Hailstorm (QLD)	17-Nov-19	30,910	\$471M	\$24M	\$498M	99.5%	94.3%	\$16K
CAT 201 - January Hailstorms (Vic, ACT, QLD, NSW)	19-Jan-20	132,161	\$1,365M	\$280M	\$1,681M	99.3%	90.8%	\$13K
CAT 202 - East Coast Storms and Flooding	10-Feb-20	102,414	\$855M	\$100M	\$974M	95.8%	89.0%	\$10K
CAT 204 - Halloween Hail Storm	31-Oct-20	40,774	\$381M	\$487M	\$976M	99.2%	56.5%	\$24K
CAT 211 - Perth Hills Bushfires	01-Feb-21	1,022	\$35M	\$50M	\$88M	99.7%	39.0%	\$86K
CAT 212 - Extreme Weather Event (NSW, Qld, Vic)	16-Mar-21	42,282	\$46M	\$391M	\$624M	98.8%	7.6%	\$15K
CAT 213 Cyclone Seroja	01-Apr-21	4,614	\$0M	\$112M	\$112M	100.0%	0.0%	\$24K
Total		393,114	\$5,234M	\$1,672M	\$7,271M	98.3%	77.3%	\$18K

Project: Minderoo Foundation The Fire and Flood Resilience Blueprint

Minderoo Foundation: The Fire and Flood Resilience Blueprint ICA partnering with Minderoo on developing more Resilient Communities

Following the devastating fires experienced in Australia in 2019-20, the Minderoo Foundation established the Fire and Flood Resilience Blueprint. A Blueprint with three streams of activity: response, recovery and resilience. The ICA is leading the Resilient Communities Stream/Mission.

Observations/ Objectives

Minderoo launched the Resilient Communities Mission in April 2020 and developed a partner network as part of the overarching Fire and Flood Resilience Blueprint. The goal is to lift Australia's 50 most vulnerable communities to be on par with Australia's 50 most resilient communities by helping communities to access the support and resources to mitigate their disaster risk and bounce back stronger by 2025.

As the climate changes, many communities will face more frequent fires and floods, and the effects of these will be even more widespread. Across Australia, the resilience of communities to disaster is highly varied. Around one-third of Australia's population lives in highly resilient regions while nearly one-half of Australia's population live in regions that have a low-to-moderate level of disaster resilience.

Minderoo is an enabler, the foundation works with the key partners within industry, government, philanthropy, and research to lift national resilience. We expect the ICA's project work will be leveraged and amplified where it align with Minderoo's missions. The Fire and Flood Resilience Blueprint, and the first Mission (Fire Shield) launched on the 15th of September 2020



Project category

Industry Collaboration



Relationship/partnership

Minderoo Foundation

<https://www.minderoo.org/fire-and-flood-resilience/>



Time frame

December 2021.

Resilient Communities mission underway



Completion rate



Commitment/contribution

Active partner in the delivery of the full blueprint



Success metric

More Resilient Communities – detailed and specific mission-based metrics will follow

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Resource: Climate Ready homes

Where we Build, What we Build: Climate Ready homes

Southern and Hills Local Government Association: Where we Build, What we Build project

A project designed to increase the resilience of housing in a changing climate. The project has been in existence since 2018.

Observations/ Objectives

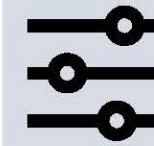
Southern and Hills Local Government Association's Where we Build, What we Build project is a project designed to increase the resilience of housing in a changing climate. The project has been in existence since 2018. The project has now completed its technical phase and has provided some excellent evidence to underpin an adaptation effort for homes in the target region, and across Australia.

The project has proven that the economic benefits of climate-ready homes outweigh the costs for both new builds and retrofits. Some key messages include: Building houses to a beyond compliance specification (the project Climate Ready specification), makes economic sense. Over a 50-year period, the net present value of immediately retrofitting the region's housing stock to a climate-ready standard is estimated at over \$72 million. Over \$46 million of this value is in the District Council of Mount Barker area.

Click here to read the [full project report](#)

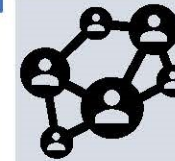


Southern & Hills
Local Government Association



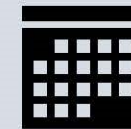
Project category

Southern and Hills Local Government Association <https://www.lga.sa.gov.au/southern-and-hills-lga>



Relationship/partnership

National Flood Information Database (NFID)



Time frame

Technical phase complete
Project to continue until July 2022



Completion rate



Commitment/contribution

Climate hazard and resilience maps, which can continue to be used in the future to assess the resilience of homes to natural hazards. Understanding costs and benefits of delivering new or retrofitted climate resilient homes.



Success metric

Always live, always current.

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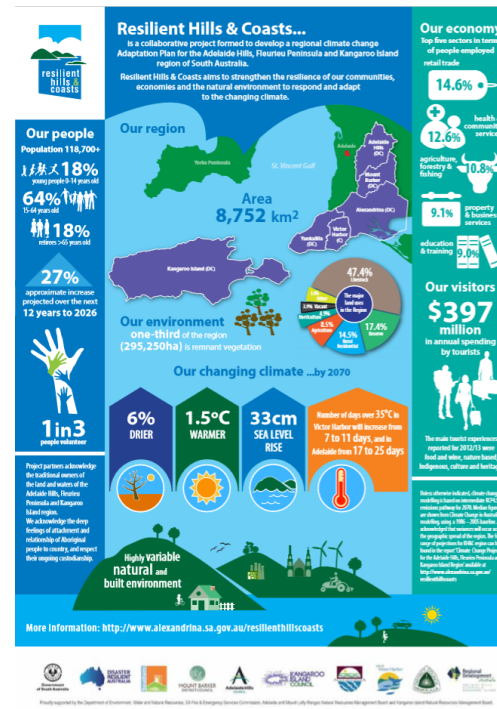
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Where we build, What we build: A collaborative project in the Adelaide and Fleurieu Peninsula Region – The region aims to, “remain livable, affordable and resilient in the changing climate, by better managing climate risks.”



Where we build. What we build.

Building Climate Ready Homes

The Where We Build, What We Build Project

This project aims to encourage building or retrofitting of homes that are climate-ready, by demonstrating that the benefits of doing so outweigh the costs. The Where We Build, What We Build project was undertaken in the Adelaide Hills and Fleurieu Peninsula region. One of the goals of the region is to remain livable, affordable and resilient in the changing climate, by better managing climate risks. The project is an initiative of Resilient Hills & Coasts, delivered by Edge Environment. It was jointly funded by the Commonwealth and South Australian Governments under the South Australian Disaster Resilience Grant Program, and the Insurance Council of Australia.

The benefits of building or retrofitting a home to be climate ready outweigh the costs. This climate ready home specification will provide increased resilience against flood, bushfire and extreme heat compared with traditional houses.

Why increase the resilience of a home?
 Baseline building compliance is inadequate to ensure a home is climate resilient. Housing is often poorly sited, designed and constructed to account for flood, bushfire and extreme heat.

Vulnerable housing imposes higher living costs and reduces community resilience. It can attract higher insurance premiums and energy bills and have reduced thermal comfort. For example, the economic analysis shows that building a Climate Ready Home instead of a Contemporary Home will save over \$36,000. By retrofitting a Lightweight 50s House, homeowners can realise benefits valued at up to \$76,000. This includes upfront, maintenance and operational costs, insurance savings and reduced disruption.

Construction vulnerabilities

- Materials - current residential designs do not always consider the resilience of materials.
- Assembly - current assembly of building elements do not always consider high exposure to more than one hazard and assembly methods for one hazard may be incompatible with other hazards.

Examples of construction vulnerabilities:

- Inadequate ventilation of wall cavities can lead to deterioration and mould growth; however, gap openings more than 1.5mm can allow ember entry.
- A concrete slab on ground is preferred for bushfire, while for flooding a raised slab is preferred.
- Fibre cement is recommended when retrofitting wall cladding. Flooding can damage fibre cement. However, replacement costs can be reduced with horizontal installation.
- Materials that get damaged in flooding scenarios like glasswool are used as insulation due to lack of material resilience knowledge.

Actions of the Sea

Developing the insurance industry's understanding of actions of the sea in the context of sea level rise in Australia.

The understanding of the key issues will inform risk management decisions including future mitigating actions that may drive better outcomes for communities exposed to ongoing sea level rise.

Observations/ Objectives

The ICA's Climate change Action Committee (CCAC) agrees that damage from Actions of the Sea is likely to increase in a climate changed future, therefore the CCAC intends to better understand the insurance industry's current position and future options regarding this complex hazard via a tender project to gain a stronger understanding.

The understanding of the key issues will inform risk management decisions including future mitigating actions that may drive better outcomes for communities exposed to ongoing sea level rise.

ICA members require answers to the following two key questions:

1. What are the key issues and recommendations concerning risk awareness and risk taking due to coastal erosion, inundation, and sea level rise for the insurance industry?
2. A Data Study: What future data requirements does the ICA have regarding Actions of the Sea and sea level rise to provide a consistent basis for risk management and decision making?



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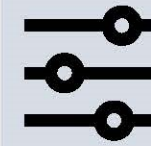
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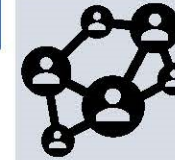
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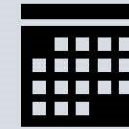
Project category

Climate resilient built environment



Relationship/partnership

The ICA has engaged [Baird Australia](#) to complete the study. Baird has elected to partner with [Rhelm](#) on the delivery



Time frame

Consultant to deliver final report and analysis including presentation of key Recommendation by end April 2021



Completion rate



Commitment/contribution

The ICA Data and Knowledge subcommittee will work with the selected consultant to produce a report with recommendations for members and a public facing report.



Success metric

To develop an Insurance Industry Position Statement regarding the current status of the issues associated with Actions of the Sea and what that means with ongoing sea level rise.

Project: Physical Risk Mitigation Infrastructure SECCCA – Asset Vulnerability

Victorian SECCCA Financing Physical Risk Mitigation Infrastructure Victorian South East Councils Climate Change Alliance - Asset Vulnerability Assessment

Establishing a path for private finance investment into Physical Risk Mitigation Infrastructure – Protecting Australian Assets in a Climate Changed Future.

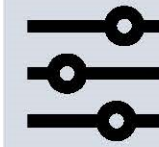
Part 2 of a 7- part project

Observations/ Objectives

Many Australian communities have been developed in hazard prone areas, and the majority will become more exposed in a climate changed future. This project focuses on proving a path for private investment/finance to deliver physical risk mitigation infrastructure such as levees and dams to protect Australian assets.

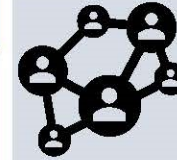
There has been discussion about Resilience bonds, but there are no actual examples. From the Roma, Launceston, and other project examples the ICA knows that physical risk mitigation infrastructure reduces the risk to exposed communities and reduces premium, therefore improving affordability.

This project is proving a path for private finance investment into Physical Risk Mitigation Infrastructure. By collaborating with Local Governments through a Climate Change Alliance we are forging process and projects to ultimately deliver infrastructure assets that will protect private property and commensurately address insurance affordability in the project areas. We intend that this project to be an exemplar and paves a way for similar projects across Australia.



Project category

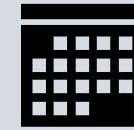
Customer knowledge



Relationship/partnership

Victorian South East Councils Climate Change Alliance (SECCCA).

<https://www.seccca.org.au/>



Time frame

The project commenced in July 2019. (Asset Vulnerability is part 2 of a series of projects to achieve the ultimate goal)



Completion rate



Commitment/contribution

Climate Change Special Risks Role; Strategic input, contribution to project working group, hazard data and financial contribution from ICA.



Success metric

Private property included in Council's Asset Vulnerability Assessments. Information available to conduct cost benefit analysis for physical risk mitigation infrastructure.



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<http://www.insurancecouncil.com.au/about-us>

Physical Risk Mitigation Infrastructure

Physical Risk Mitigation Infrastructure refers to any type of structure that protects assets and the community from the risks of damage or loss from extreme natural hazard events, including but not limited to flooding, storms and bushfire:

Launceston Levee System upgraded in 2014

Cost \$58M

Avoided Losses from 2016 Floods \$216M
(BNHCRC, 2018)



Project: Transforming the Australian housing sector

Partnering with the GBCA to help transform the Australian housing sector Green Star for Homes, Resilience rating tool

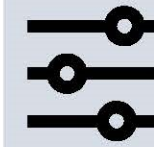
The Green Homes Standard is an opportunity to ensure Australian homes are built for the future, ready to adapt to challenges while being part of the global response to the threat of climate change.

Observations/ Objectives

The Insurance industry is in the midst of dealing with a series of catastrophes; but we recognise the importance of keeping our heads up, and taking action to address future risks, particularly those likely to be exacerbated by Climate Change.

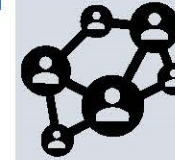
One of the main streams of the ICA's Climate Change Action Plan is Climate Resilient Homes and we are delighted to be partnering with the Green Building Council of Australia (GBCA) to create a third-party certification, Green Star for Homes, that will include a Resilience rating.

The ICA recently signed on as a supporting partner of the Green Building Council's "Future Homes" initiative, following the launch of the Green Star for Homes strategy in May. This proposes a standard for new single-family homes, underpinned by three pillars: health, resilience and net zero energy. The draft standard was released for public consultation in August 2020.



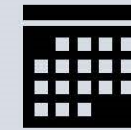
Project category

Industry collaboration



Relationship/partnership

Green Building Council of Australia
<https://new.gbca.org.au>



Time frame

In development



Completion rate



Commitment/contribution

Green Building Council of Australia partnership contribution to the Future Homes initiative



Success metric

Green Star Homes Standard improved regulatory settings, minimum criteria for sustainable homes of the future.

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