

Australia's largest hailstorm disaster

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The 14th of April, marked the 20th anniversary of the Sydney 1999 hailstorm. The storm is considered to have been Australia's most expensive insured natural disaster with insurers paying out claims to the tune of 5.5 billion dollars in today's terms. But such a hailstorm cannot be regarded as a once-in-a-lifetime event.

The storm occurred outside the typical "storm season" usually taken to occur between September and March. It forced a rethink on how the season should be defined.

The storm pelted thousands of homes and vehicles in Sydney's eastern suburbs with cricket ball and grapefruit-sized hailstones, along with heavy rain and strong winds. The hail was estimated to have weighed some 500,000 tones. Over 100,000 people were affected: one person died and several were injured and attended hospitals. But the real story that emerged was one of the damage caused and the disruption to lives that resulted.



Some 24,000 homes, 70,000 vehicles, 60 schools and 23 aircraft were damaged. The financial scale of the disaster surpassed more recent extreme events such as Queensland's 2011 floods and the Black Saturday Bushfires of 2009 in Victoria. Severe storms, especially those that bring large hail, are among Australia's most costly forms of natural perils.

Peril	Total loss in today's terms (AUD \$ Millions) 1966-2017
Cyclone	25354
Hail	24607
Flood	13658
Bushfire	11170
Storm	9475
Earthquake	4652

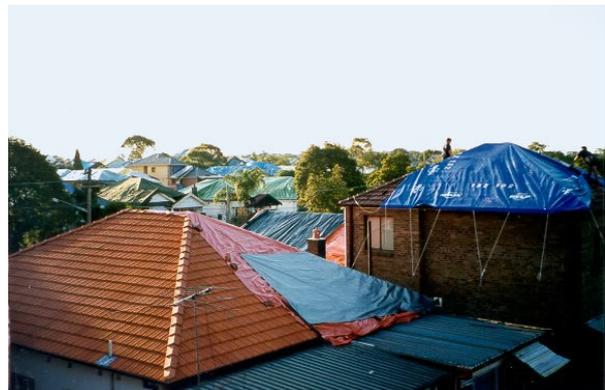
Source: Risk Frontiers

Where large hailstones fell there was substantial damage to roofing tiles and building windows. In the worst hit areas of Rosebery and Kensington almost every dwelling in entire street blocks had been damaged. Some hailstones were confirmed to have had diameters of more than nine centimetres.

Damaged roofs and windows resulted in heavy rainwaters entering homes, with much water damage to home contents. In the most extreme cases ceilings collapsed under the weight of saturated insulation batts. Hailstones punched holes through pergolas and outdoor furniture, shredding gardens. Vehicles too suffered dents to body work and broken windows; about one third of the insurance payout went to cover this kind of damage.

Some motorists became trapped in floodwaters. Days after the storm, some elderly people were found in a state of shock still living in their homes.

Many homes were rendered uninhabitable and some remained so for months thanks to delays to repairs due to the scale of the event: many people had to be given emergency shelter for long periods at public expense.



The construction industry was placed under stress and interstate resources were needed to meet the demand. An unusually wet and windy autumn and winter slowed the emergency response and the completion of repairs.

The State Emergency Service (SES) as the lead agency for storm response in NSW formed the front line in working with households to effect temporary building repairs. SES Volunteers from across the nation travelled to help and were supported by crews from the then NSW Fire Brigades, Rural Fire Service, Volunteer Rescue Association and many other organisations. At the peak of the response some 3000 personnel were deployed in the field. In all some 44,000 calls for help were attended involving around 20,000 properties, requiring 12,450 personnel in all to deal with.

Severe hailstorms have always been a feature of Sydney's climate, and the costs associated with the worst of them have been huge. The hailstorm that hit Sydney in December 2018 led to losses that have now surpassed one billion dollars, and those that struck the Blacktown-Baulkham Hills area over the summer of 2007-08 were of similar impact in terms of insured costs. Severely consequential hailstorms were also experienced in Auburn and nearby in 1990 and on the upper north shore in 1991. One of the most damaging occurred in January 1947.

Though the influence of climate change on hailstorms in Australia is uncertain with only few projection studies undertaken, increases in wealth and the size of Sydney and other capital cities mean that metropolitan areas are more exposed to severe storm events. Since 1999



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Greater Sydney has grown by over 1.3 million people with the number of dwellings increasing around 30%.

With increasing exposure will come increased loss activity but thankfully models exist to assess hailstorm risk on a national scale. For those with access, the likelihood of the April 1999 Sydney insured loss, or similar, is easily quantifiable.

Risk Frontiers offers a national hail loss model for Australia. Contact us at info@riskfrontiers.com