Strengthening Australia's resilience to extreme weather events

Impact Case Study

July 2013

Preparing and protecting people and infrastructure from severe weather

thechallenge

Extreme weather events have an **enormous social and economic cost** for Australia. In the last four years, hundreds of lives have been lost as a result of bushfires, heatwaves, floods and cyclones. Insurance claims, infrastructure repair, and lost productivity have cost the economy tens of billions of dollars. To improve preparedness for and recovery from extreme events, Australia needs better predictions of extreme weather, sophisticated advance warning systems and approaches that ensure rapid and low cost recovery.

theresponse

CSIRO and the Bureau of Meteorology (BoM) have developed a cutting edge capability known as ACCESS, which has **dramatically increased the accuracy** of Australia's weather forecasts. CSIRO's insights into high intensity fire behaviour and technologies to assist in early warning are used by fire and emergency management agencies to reduce the likelihood and impact of catastrophic fires.

CSIRO is working closely with urban planners, the property and insurance industries, and local government, to minimise the impacts of inundation in vulnerable coastal areas. CSIRO also identified more resilient construction materials and designed a range of facilities from housing to major transport infrastructure that are less vulnerable to extreme events.

theengagement

CSIRO is working in partnership with governments, industry, and the community to help Australia better prepare for and respond to extreme events. By mobilising expertise in engineering, design, agriculture, digital technology, marine and atmospheric science, hydrology and social and economic research, CSIRO is delivering practical options and solutions. CSIRO also plays a key role in connecting its partners to world class expertise through national and global relationships with other knowledge intensive organisations.

theimpact

Every day the CSIRO-BoM ACCESS model delivers a **10 fold improvement** in our nation's weather forecasts.

Enhanced local government planning and zoning from CSIRO research has resulted in an estimated **saving of $200 million** for coastal communities. CSIRO's work on wind design standards for all new housing reduces the risk of damage by 50-80 per cent. In Brisbane this results in **avoided costs in excess of $1 billion**.

CSIRO's Emergency Situation Awareness software is being used by emergency managers in New South Wales, Victoria and Queensland; saving lives by providing rapid awareness of incidents and swift recovery from damage.

Some benefits of our science do not have a monetary value: the impact of new protective measures for fire trucks was demonstrated in the 2009 Victorian bushfires when twelve fire trucks were engulfed by flames, but emerged safely with **no loss of life**.

Contact us

FOR FURTHER INFORMATION
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