



River Murray Flood Event Update

Consistent and above average rainfall into the Upper Murray Darling Basin Catchment during 2022 resulted in the River Murray flooding in South Australia from Spring 2022 into Summer 2023. While levels peaked at around the 1931 flood levels (190 GL-200 GL per day), this slow-onset event presented different challenges to River Murray councils and the community along the entire 637km of the river.



Source: Murray River Pix, Facebook

The SA State Emergency Service (SASES), as the Control Agency for flood, supported the community and other stakeholders in the Preparation and Response phases of the event and continue to support the Recovery stage. A local Incident Management Team and the State Control Centre were activated and staffed for around six months in total, from mid-August 2022 through to mid-February 2023.

Around 4,300 community members attended at least one of the 17 Community Meetings which SASES held to arm themselves with knowledge and awareness of the likely events to unfold. The community took an active role in their preparation and the SASES distributed over

369,508 sandbags and 2,274 tonnes of sand. 1,600 hrs were spent by the SASES in assessing and monitoring levees. People were encouraged to relocate early if they thought they were likely to be impacted. Emergency Alert messaging was sent out to properties that were identified as being at risk of flooding, and this was followed up with doorknocking of 4,400 properties.

Assistance was sought and received from interstate partners and key stakeholders within South Australia who all worked closely with the SASES throughout the event. Support was received from all local councils, with existing relationships in place from assurance planning through the Zone Emergency Management Committees. The SASES were able to provide a coordinated and strategic approach, making the best use of available resources to support the safety of the South Australian community.

The National Warning System was used, with the issuing of regular Watch and Act or Emergency Warning messages as needed. There were very few rescues required and overwhelmingly, the community heeded the safety warnings issued by the South Australian Police, SA Power Networks, SA Health and of course the SASES.

After the peak flows had passed through the river system between late December 2022 until mid-January 2023 the long task of cleaning up has begun and for many, this will be a lengthy process.

[Visit sa.gov.au](https://sa.gov.au) for further information on flood recovery

SASES would like to thank our partner emergency services agencies, state government agencies, local government, and private and community organisation partners for the outstanding efforts made by staff and volunteers in managing one of the most significant and complex events in the history of our organisation. This event has, and continues to see, an exemplar demonstration of collaboration in preparing, responding and recovering from flood and compounding disasters. We look forward to our continued collaboration to shape strong and resilient South Australian communities.

2022 SA Disaster wrap-up

While the River Murray Flood event will no doubt be remembered for years to come, 2022 started off as a busy year with a range of both rapid and slow-onset events having an impact on South Australian communities.



*Source: SAPN
Facebook*

SASES

There was a severe weather and flooding event in January 2022, in the Eyre and Western and Far North of South Australia. Recovery continues in some affected areas, even now, some 12 months on.

The SASES again were called in to assist with the potential failing of the Echunga Dam in the Adelaide Hills, in September 2022. Waterlogged ground threatened to collapse around the wall of the dam and flood the township. It was a timely reminder to all dam owners to regularly check their dam walls in hilly terrain around South Australia.

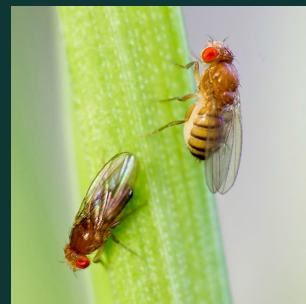
A severe storm in November 2022 saw a rapid escalation for requests for help from the SASES with hundreds of trees down and wide power outages. Isolated areas remained without power for many days

Primary Industries and Regions SA (PIRSA)

continued to have a busy year, after fruit fly outbreaks continued to be detected throughout 2022 despite hope in early 2022 that it was almost under control. Foot and Mouth Disease (FMD) was detected in cattle in Indonesia in 2022. FMD is currently regarded as one of the most economically and socially devastating livestock disease threats to Australia. The FMD threat continues, with plans in place to cover any impacts.

PIRSA were actively providing support to South Australian Beekeepers, with the detection of Varroa Mite interstate.

And in November 2022, the first case of human JE was detected in SA with potential impact on both animals and humans.



Source: Shutterstock



Source: SA Water

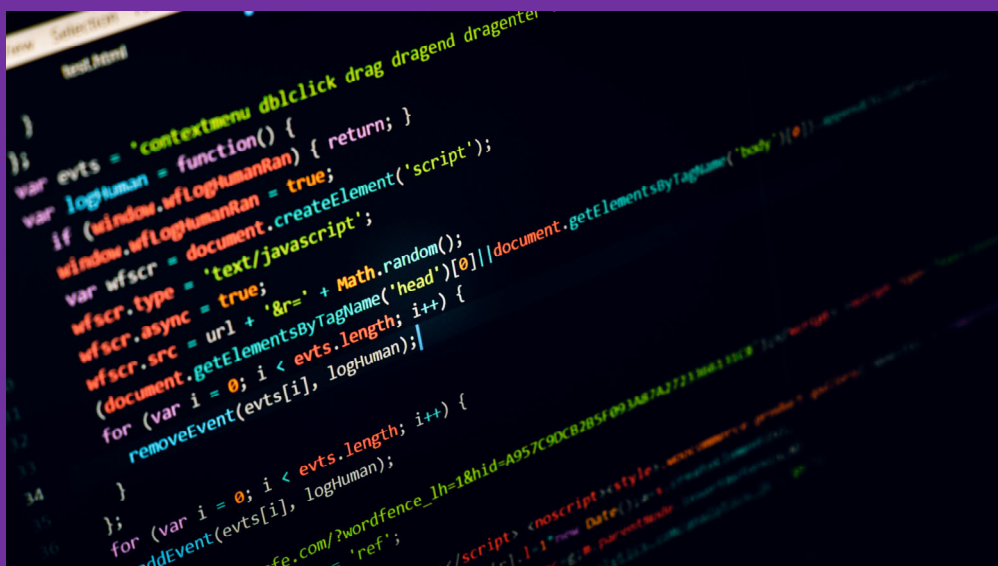
SA Health led the COVID 19 response again through 2022, with their attention also being turned to mosquito-borne viruses, such as Japanese encephalitis (JE), Ross River and Barmah Forest virus, amongst others.

SA Country Fire Service (SACFS) responded to a large fire in Coles, in the South East of South Australia, in January 2022. Sadly, a Senior fire fighter, Louise Hincks was killed on the fireground. The death of Louise was devastating to not only her family and friends, but to all those in the Emergency Services who knew her. Both SA Metropolitan Fire Service (SAMFS) and SACFS attended a fire at an important PIRSA Research Facility in Struan, near Naracoorte with the fire damage there topping over 5 Million dollars.



Source: GlamAdelaide

Department of Premier and Cabinet (DPC)



Source: Unsplash

In 2022, the world experienced a rise in malicious cyber activity, with cyber threats becoming more numerous and sophisticated. Cyber security professionals in both the public and private sectors have taken on an important role in protecting critical services and responding to modern threats. The Cyber Security Watch Desk collaborates closely with SA government agencies, federal government intelligence partners, cyber security teams in other states and territories, local government agencies, police, and private sector entities, all of whom work together to ensure that South Australia is cyber resilient.

Throughout 2022 the Watch Desk team worked with all their partners in the response to a range of Incidents and played a large role in the response to the Frontier Software incident, and the SA Government's response to the Optus and Medibank incidents. The team have also actively helped prevent countless more incidents from occurring, including preventing potentially catastrophic incidents within our frontline service agencies. These actions have saved the SA Government from incalculable financial and reputational damage, and more importantly helped ensure the security of our information, and the availability of the critical services delivered to the South Australian community.

Provided by Michael Billett, Deputy Director, Cyber Resilience & Engagement, Cyber Security, Office of the Chief Information Officer (OCIO), Department of the Premier and Cabinet

SA Declares Climate Emergency

2022 was a significant year for Climate Change, when on Jun 1, 2022, South Australia joined other jurisdictions around the world in declaring a climate emergency.



Source: SBS Australia

Grants for South Australia

South Australian Disaster Risk Reduction Grants - 2022-23 Approved Projects (Round 3)

South Australia's Disaster Risk Reduction Grants Programme has been introduced by SAFECOM with the objectives to strengthen resilience and enable communities to withstand, adapt to and continue to thrive in a changing environment.

The assessment of all applications was completed by the independent panel appointed by the SAFECOM and assessment was based on criteria of alignment with the National Disaster Risk Reduction Framework, priority funding areas, collaboration, sustainability and risk and governance.

13 projects were selected as part of Round 3 with the total projects value of \$3,372,846.



**Government
of South Australia**

South Australian
Fire and Emergency
Services Commission

[View the successful projects for Round 3 here](#)

2023 Funding Opportunities

Future Drought Fund

The Australian Government - Department of Agriculture, Fisheries and Forestry Future Drought Fund helps farmers build drought resilience and assist in Australian communities to prepare for the impacts of drought.

The Productivity Commission is currently reviewing the effectiveness of the Future Drought Funds and seeking input from the public.

Follow this [link](#) to provide feedback on the importance and effectiveness of the Future Drought Fund.

[Drought Resilience Self – Assessment Tool](#) is a tool that assists Australian farmers in building and being aware of their drought and climate change resilience. The tool also provides support and resources to assist the farmer in ways to improve resilience in drought and climate change.

[More about the Future Drought Fund...](#)

NAB Foundation Community Grants program

The NAB Foundation Community Grants program is awarded to applicants with an aim to prepare communities for natural disasters, support long -term recovery and build resilience against future disasters and climate change.

The 2022 (2nd round) successful applicants in South Australia included:

- [Edithburgh Football Club and Sports Association](#)
- [Hills Environment Centre](#): *delivery of the Red Cross Climate Ready Communities workshops*
- [Mount Gambier & District State Emergency Service](#)
- [Mount Torrens CFS](#)
- [Rural Business Support](#): *two days of fire-ground farm tours and community mental health and wellbeing forum, opportunity to strengthen connections and peer support.*

- Uniting Communities: funds will provide training workshops for flood and bushfire impacted communities to strengthen mental health and wellbeing preparedness during disaster events.

The next round closes on **28 February 2023** and will be awarded in **April 2023**.

[More about the NAB Foundation Community Grants Program...](#)

Disaster Ready Fund (Round 1 2023-24)

The Australian Government – National Emergency Management Agency “Disaster Ready Fund” helps communities to protect themselves against impacts of natural hazards ([NEMA](#)).

SAFECOM has collated applications for South Australia for submission to NEMA, with applications closing on the 20th of February 2023.

The Disaster Ready Fund replaces the Emergency Response Fund, with the intention of shifting the Fund’s focus from recovery to disaster prevention.

[More about the Disaster Ready Fund...](#)

Stormwater Management Fund

This funding is to assist with capital works in relation to stormwater management projects.

Consideration for funding will be given to projects such as design of civil works, construction of civil works and land acquisition. Up to 50% of costs will be considered.

Applications close 5pm, 7th April 2023.

[More about the Stormwater Management Fund...](#)

Thriving Communities Program - PIRSA

The Department of Primary Industries and Regions South Australia have small grant opportunities for projects that build social capital through facilitating community group participation, a sense of belonging and equity of access. ([PIRSA](#))

Applications close on **June 30th 2023** or when funding is fully allocated, whichever happens first.

[More about the Thriving Communities Program...](#)

Conference Corner



There are a number of opportunities for collaboration, networking and new ideas in 2023. Explore the range of Conferences for the emergency management sector below:

- [Frontline Mental Health Conference](#) 6-7 March 2023, Gold Coast QLD
- [Industry Climate Change Conference 2023 \(DEW\)](#) 20-21 April 2023, Adelaide SA
- [Disaster and Emergency Management Conference 2023](#) 11-12 July 2023, Brisbane QLD
- [2023 Australian Disaster Resilience Conference](#) 23-24 August 2023, Gold Coast QLD
- [AFAC 2023](#) 22-25 August, Brisbane QLD ([Women and Firefighting Australasia joins AFAC23](#))
- [International Conference on Urban Disaster Mitigation, Land Use Planning and Management](#), 30-31 August 2023, Sydney NSW

Professional Development Opportunities

The following training is available through the Local Government Association of South Australia:

- [Audit and Risk Committees: General Overview](#)
 - [ChemAlert Search, Stock and Risk Assessment Program](#)
 - [Grant writing: a new approach](#)
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Podcasts and webinars



- [State of the Climate 2022 webinar](#) **recording:** A detailed review of the State of the Climate Report by the CSIRO and Bureau of Meteorology.
- [Building Capability in Person-Centred Emergency Preparedness](#) **webinar recording:** The University of Sydney and supported by the Australian Government and Resilience NSW take a look at the implementation of Person-Centred Emergency Preparedness (P-CEP). P-CEP is the process taken by people with a disability to create an emergency plan that works for their needs in an emergency.

- [Phoenix Australia: Responder Assist Podcast](#) Phoenix Australia has partnered with the Mental Health Professional Network to develop a number of podcasts on mental health and emergency workers.
- [Extreme Heat and Human Health – Sydney Talks Podcast and Presentation](#) In this Sydney Ideas event, experts from the University's Heat and Health Research Incubator discuss the latest research and provide us with some pretty cool solutions.

New Release EM Publications



Global Risks Report 2023, World Economic Forum

The Global Risks Report highlights Climate Change mitigation, adaptation, and extreme weather as key risks in the global context.

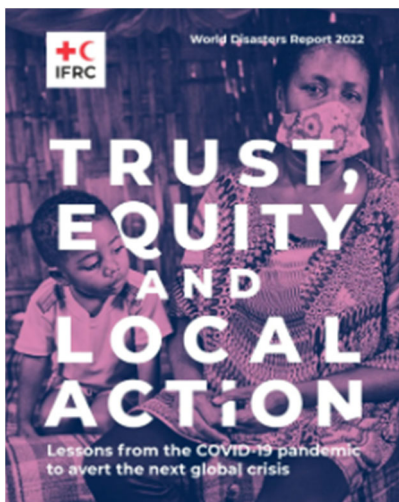
Understanding the Black Summer bushfires through research, Natural Hazards Research Australia

Natural Hazards Research Australia has produced a new report covers different issues, knowledge gaps and key findings from research conducted on the Black Summer bushfires (2019-2020 bushfire season).



World Disasters Report 2022, International Federation of Red Cross and Red Crescent Societies

A report focused on preparedness, considering the inadequacies found in preparedness with the COVID-19 pandemic (IFRC)



Recovery Exercising Toolkit on the Knowledge Hub - AIDR

AIDR recently released the Recovery Exercising Toolkit. The Toolkit can be used to support exercise management programs to include a recovery exercise component whenever exercises are conducted. The Barossa Zone, South Australia was one of three areas selected in Australia to run a pilot program which resulted in this toolkit.

Australian Mid-term review of the Sendai Framework, National Emergency Management Agency

2022-2023 marks the halfway point of the implementation of the Sendai Framework for Disaster Risk Reduction 2015-



2030 (Sendai Framework), UN Member States were asked to undertake a national midterm review of the Sendai Framework to “assess progress on integrating disaster risk reduction into policies, programmes and investments at all levels, identify good practice, gaps and challenges and accelerate the path to achieving the goal of the Sendai Framework and its seven global targets by 2030.”² The findings of all national midterm reviews will be consolidated into a global midterm review report. (NEMA)

2023 Survey on living with Disabilities and Disasters, United Nations Office for Disaster Risk Reduction

This survey is open until 3rd March 2023 to capture people living with a disability (or their caregivers) and their thoughts on living with a disability in a disaster.

New University of Newcastle research project video – Improving Local Resilience to Floods in the Hunter Region, University of Newcastle, Australia

The new *Guide to Climate Projections for Risk Assessment and Planning in SA 2022* in South Australia provides a summary of the changes in climate that are projected to occur in South Australia over the coming 80 years. The Guide draws on information from a range of sources, primarily NARCIIM, the CSIRO, Bureau of Meteorology, IPCC and the Goyder Institute for Water Research.



Spotlight on Disaster

Western Australia Ex-Tropical Cyclone Ellie Jan-2023

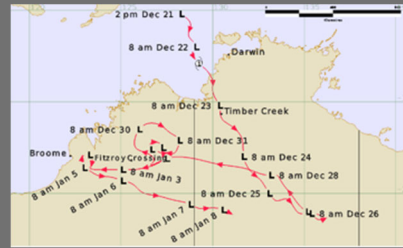
Cyclone Ellie met land near the Kimberley region of the Northern WA coast on December 22 as a Category 1 cyclone.

Heavy rains of around 250 to 300 mm were experienced in the Kimberley area with thunderstorms and flooding for several days. With the slow movement of the cyclone

People were isolated and many roads, bridges and infrastructures were significantly damaged. Transportation was interrupted, especially the truck service and longer detours have to be taken for trucks.

in southwestern directions, heavy rain started in the townships of Broome, Roebuck Plains, Damper Peninsular and Diamond Gorge. These towns also received around 300 mm of rainfall.

With the heavy rainfall, the Fitzroy River increased to around 15 m heavily flooding the Fitzroy crossing area. The downstream areas of the river such as Noonkanbah, Looma and Willare were also flooded, exceeding the 2002 flood level.



*Path of Ex-Tropical Cyclone Ellie -
BOM WA*



Source: NT News

Türkiye and Syria earthquake

(6 Feb 2023)

The early-February 6 catastrophe had a moment magnitude of 7.8 out of 10, followed by a second quake of a 7.5 magnitude. Many buildings have collapsed and gas pipeline damage has resulted in fires. Search and rescue operations are ongoing, with specialist teams arriving to offer international support. The response in this region is challenging due to conflicts between the border of Turkey and Syria.



Risk

The death toll is set to pass 37,000 due to building collapse and fires associated with gas pipeline damage. There are numerous reasons why this disaster leads to a greater degree of destruction. First, the shallow depth of the earthquake centres contributed significantly to the devastation. The timing of the first and largest earthquake is the second factor when most people would have been asleep with little opportunity to escape from home at 4.17am local time. Third, the earthquakes occurred in a densely populated area. Furthermore, in Syria, years of civil war have significantly degraded the building infrastructure, making the region less resilient to the effects of seismic shaking.

State of the Emergency Services

Local emergency services were first on the scene, pulling survivors from the collapsed buildings, despite freezing temperatures at night. Search and rescue operations are ongoing. Australia has sent search teams to the Turkish earthquake zone with a group of 72 fire and rescue specialists, mostly from New South Wales.

Response

According to Ilan Kelman as a disaster researcher in conflicting zone, the response in this region is challenging due to conflicts between the border of Turkey and Syria. This situation not only impedes disaster response, but also frequently make a barrier to reduce the risk of earthquake impacts. For example, only one crossing from Turkey into Syria is currently open for UN aid, though the organisation hopes to open two more soon. However, history has shown that if countries with conflicting diplomatic relationship increase their constructive collaboration in response time, they can occasionally pay dividends in further disaster prevention.

Prevention vs. Response in Earthquake Response

Although regional, national and international aid are invaluable in response time, prevention measures are always more useful. In response to earthquakes, it may take at least 24 hours for any level of search-and-rescue team to be on site and active. This is particularly argued in international aids context, which is costly, estimated cost per post-earthquake life saved by international search-and-rescue teams is US\$1 million (£830,000). Thus, long-term pre-cautionary actions are more effective in peoples' lives than taking any measurement during and in the aftermath of disaster.

Flood Hazard Mapping and Assessment Project Update

Public consultation is now open on the Flooding Hazards Mapping Update Code Amendment – the first step in a wider project to introduce new and updated flood hazard mapping into SA's Planning and Design Code (the Code).

The Flooding Hazards Mapping Update Code Amendment is the first step in a three-stage [Flood Hazard Mapping and Assessment Project](#) which is being undertaken to deliver more consistent and contemporary mapping of riverine and flash flood hazards across South Australia.



The Code Amendment is focused exclusively on the **Hazards (Flooding – Evidence Required) Overlay**, in the Planning and Design Code, which was applied as a precautionary

measure to areas where flood mapping was not available prior to the implementation of the Code in March 2021.

This Code Amendment proposes to:

- **reduce** the extent of Hazards (Flooding - Evidence Required) Overlay in 12 local government areas and several Outback Areas
- **apply** the Hazards (Flooding - Evidence Required) Overlay to a portion of the Port Adelaide Enfield Council area.

Public consultation will be open for 8 weeks from 22 February to 21 April 2023.

The second and third stages of the Flood Hazard Mapping and Assessment Project will seek to further address the potential impacts to our safety and natural and built environments, in South Australia, by investigating how hazards arising from flood risk can be minimised.

New detailed flood studies and flood hazard mapping have been undertaken and this mapping will be used to prepare new flood hazard overlays, which will be included in the Code.

This will result in more contemporary and accurate mapping that better reflects the level of flood hazard that exists throughout the State and ensure that flood hazard policies are not unnecessarily applied in areas that are not subject to flood risk and therefore a flood overlay is not required. The proposed changes will provide greater certainty when assessing new developments and will be used to inform proposed rezonings, regional planning and emergency management.

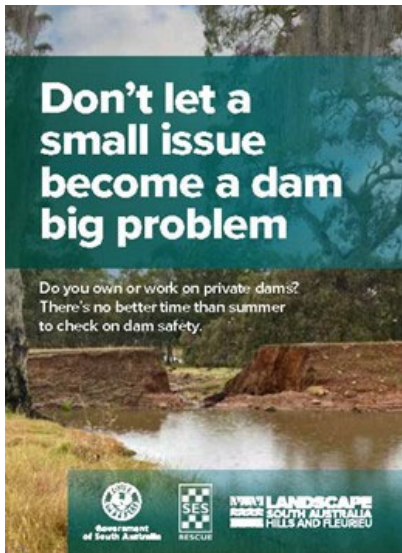
The State-wide Flood Hazards Code Amendment will be led by the State Planning Commission and will be released for public consultation in mid to late 2023.

Please refer to the Hazard Mapping Project webpage on the PlanSA Portal for information, regarding the Project:

https://plan.sa.gov.au/our_planning_system/programs_and_initiatives/hazard_mapping_project.

[Learn more and have your say on the proposed Code Amendment](#)

Dam Management Education and Awareness Project



A significant number of dams failed or threatened to fail during the wet winters of 2022. Dam failure can have flood impacts downstream, and these incidents (failure or threat of failure) for example the Echunga dam emergency event, often create disruption to communities and require a response from the South Australian State Emergency Service (SASES) and other agencies.

Following the 2022 Echunga dam emergency incident, the Department for Environment and Water (DEW) has worked together with South Australian State Emergency Services (SASES), and the Hills and Fleurieu Landscape Board to identify potentially high failure consequence dams in the Onkaparinga and Angas River catchments.

DEW and SASES with the Fleurieu Landscape Board have also developed maps and updated dam safety and maintenance communication and education materials. In late February 2023, targeted education and awareness activities in the Onkaparinga and Angas River catchments will commence.

To support targeted landholder, contractor, and local government staff engagement, new dam management factsheets have been created. These factsheets provide information about approval processes for changes to dams, and basic information and links to support effective dam management. They will form part of an upgrade to the resources and content found on the DEW website.

The identified landholders will be mailed letters, accompanied by postcards, to provide them with the information, tools, and resources related to dam management. There are also planned drop-in dam management information sessions in Strathalbyn and Woodside in March 2023 to support private dam landholders with dam management in these high risk catchments.

Further information on Dam Management in South Australia can be found here: <https://www.environment.sa.gov.au/topics/flood/learn-about-flooding/private-dams>

New Emergency Management Program Officer

We are very pleased to introduce Mina Hosseinpourtehrani who started on the 23rd of January in the Emergency Management Program Officer (EMPO) role with the South Australian State Emergency Service.

Mina has completed her Ph.D in Disaster Management and a MSc in Flood Risk Management and has worked as a consultant for projects in Australia and overseas.

Mina will be working with Eastern Adelaide, Western Adelaide, Adelaide Hills, Fleurieu and Kangaroo Island and Eyre and Western Zones.



Mina can be contacted at mina.hosseinpourtehrani@eso.sa.gov.au or 0427 567 343.

Contact us

Do you have a question or feedback? Would you like to contribute to the next edition of EM News?

Contact us at ses.emergencymanagement@eso.sa.gov.au



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