



Gender & Disaster Australia

Mid Murray

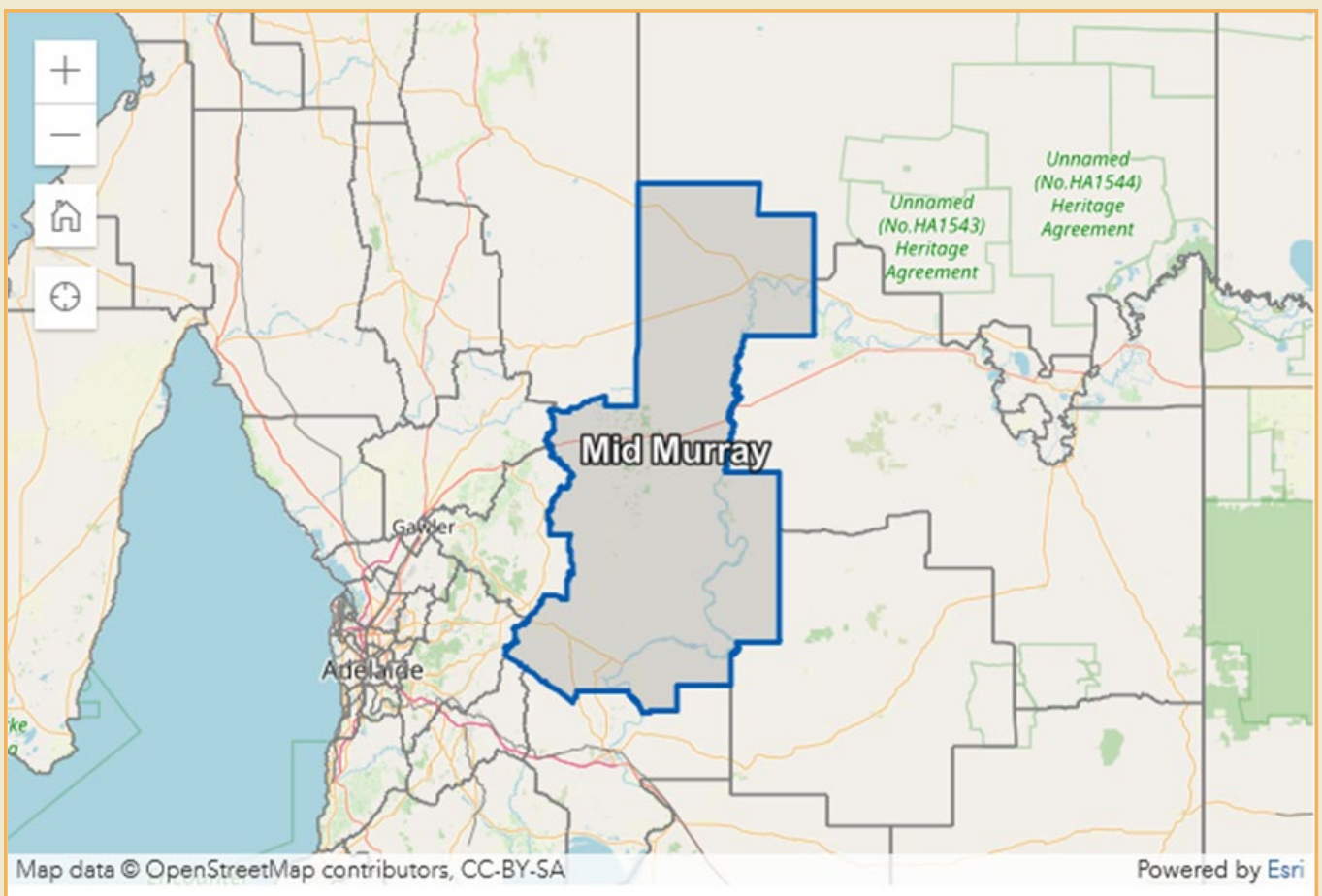
DISASTER CONTEXT

Socio-demographics from
a gendered perspective





Mid Murray



The LGA of Mid Murray. From <https://abs.gov.au/census/find-census-data/search-by-area>





INTRODUCTION

Mid Murray is an LGA located in South Australia, in the Murray and Mallee region and on a larger scale in the Murray-Darling Basin, which stretches from South-Australia to Queensland. 220 km of the Murray River flows through Mid-Murray LGA.¹

The traditional Owners of the Lower Lakes, Murray Mouth and Coorong and along the River Murray as far north as Mannum are the The Ngarrindjeri Nation, composed of 18 Laklinyeris (tribes). The traditional name of the Murray river in this region is Murrundi. To the Ngarrindjeri people, Murrundi is a living body and they are part of its existence.²

The local economy is dominated by agricultural production.³ The South Australian part of the Murray Mallee region is known as the food bowl of South Australia, producing 99% of the State's citrus and 96% of its nuts.⁴ Another important industry is hospitality, tourism and leisure activities on the Murray, such as boating, fishing, canoeing and water skiing.⁵

Disasters affecting Mid Murray include floods, droughts, bushfires, extreme heat and extreme storms. Primary and secondary economic production are closely tied to climatic conditions.⁶

The Murray River regularly experiences flooding. Historically, the most severe flood on record took place in 1956,⁷ peaking at 341 gigalitres per day. Homes and infrastructure were damaged, with negative consequences on business and agriculture.⁸ The most recent flood occurred in November 2022 to January 2023, and is profiled in detail below. SA Emergency Services Minister Joe

Szakacs said that this flood is likely to be the most significant natural disaster in the state's history.⁹ In late December 2022 the floods peaked at 185-190 gigalitres per day, more than ten times the average flow for that time of year.¹⁰

Good river flows are important to the mid-Murray region, as it is crucial for irrigation, water supply, navigation and to keep the river healthy.¹¹ It is expected that the Murray and Mallee zone will be impacted by reduced flows down the Murray by 2030. During the 2001-2009 drought, also called the "Millennium drought"¹² or "Big drought", industries and communities were impacted by low water levels, a decline in water quality and riverbank collapses.¹³ From January 2017 to December 2020,¹⁴ the South Australian part of the Murray Darling Basin was affected by rainfall deficiency.¹⁵ By 2070, It is expected that Southern Australia's Murray and Mallee zone will be 15% drier, 1.9°C warmer, that sea levels will have risen by 26cm, and there will be an 11% decline in rainfall.¹⁶

Extreme storms (thunderstorms or synoptic storms) are the most common natural hazard in South Australia, particularly in spring and summer.¹⁷ In September 2016, an extreme storm caused extensive power outages and flooding, costing businesses \$367 million. In November 2016, a storm caused \$74 million of damage to the agricultural sector in the Murray Riverland.¹⁸ In December 2016, a storm caused \$200 000 worth of damage, bringing down trees and creating minor flooding.¹⁹

1 <https://www.mid-murray.sa.gov.au/council/council-information>

2 <https://www.environment.sa.gov.au/topics/river-murray/about/traditional-owners>

3 <https://www.mid-murray.sa.gov.au/council/economic-development>

4 https://safecom-files-v8.s3.amazonaws.com/current/docs/murray_mallee_zone_emergency_management_plan.pdf

5 <https://www.environment.sa.gov.au/topics/river-murray/about/sa-mid-murray>

6 <https://www.mid-murray.sa.gov.au/council/economic-development>

7 <https://www.waterconnect.sa.gov.au/Content/Publications/DEW/DEWNR-TR-2015-57.pdf>

8 https://safecom-files-v8.s3.amazonaws.com/current/docs/murray_mallee_zone_emergency_management_plan.pdf

9 <https://indaily.com.au/news/2023/01/16/river-murray-flood-most-significant-natural-disaster-in-sa-history/>

10 <https://www.abc.net.au/news/2022-12-28/river-murray-peak-reached-in-renmark/101812016>

11 <https://www.environment.sa.gov.au/topics/river-murray/about/sa-mid-murray>

12 <https://www.environment.sa.gov.au/topics/river-murray/current-dry-conditions/millennium-drought>

13 <https://www.environment.sa.gov.au/topics/river-murray/about/sa-mid-murray>

14 <http://www.bom.gov.au/climate/drought/knowledge-centre/previous-droughts.shtml>

15 <https://www.mdba.gov.au/sites/default/files/pubs/bp-eval-2020-BOM-trends-and-historical-conditions-report.pdf>

16 https://safecom-files-v8.s3.amazonaws.com/current/docs/murray_mallee_zone_emergency_management_plan.pdf

17 https://safecom-files-v8.s3.amazonaws.com/current/docs/murray_mallee_zone_emergency_management_plan.pdf

18 https://safecom-files-v8.s3.amazonaws.com/current/docs/murray_mallee_zone_emergency_management_plan.pdf

19 https://safecom-files-v8.s3.amazonaws.com/current/docs/murray_mallee_zone_emergency_management_plan.pdf



Extreme heat is defined as an event of three or more days of high maximum and minimum temperatures that are unusual for a location. From 13-17 January 2014, South Australia was affected by extreme heat with the Bureau of Meteorology recording the first five-day period above 42°C for the region.²⁰ During the disaster, 38 people died and 294 heat-related emergencies were reported at hospitals. The heat also caused infrastructure damage (temporary loss of electricity on January 14 for more than 5000 people).²¹

South Australia has on average six to seven serious fires every 10 years. The 2014 Complex bushfires in the Riverland burnt 128.495ha, destroying one house and one property.²²

As of April 2023, it is too early for academic literature on the social impacts of the 2022 floods to have been published. However, a number of studies were conducted on the Millennium drought. Alexandra and Rickards (2021) explored the policy responses to drought in the Murray-Darling Basin. The authors explain that for Indigenous people whose land is located within the basin, the consequences of their loss of access to ancestral territories has been worsened by droughts. Historically, in times of drought, farmers have received occasional access to more land and water, and in the 20th century subsidies have been normalised, helping secure colonial occupation. This historical process established the enduring colonial regime that enables the territorialisation of the lands and waters. The authors found that the policy responses to the Millennium drought, which focused on giving funding while increasing water transfer through markets, did not resolve the issues, instead increasing power imbalances, reinforcing historical patterns of ownership and further marginalising Indigenous peoples.²³ Askew and Sherval (2012) also observe that the government provided assistance from a crisis management approach, whereas more holistic and long-term support including mental health support would have been more appropriate.²⁴

Alston's (2006) research on women living on drought-stricken farms, conducted in rural New South Wales, is also likely to be relevant to South Australia. Alston points out that farm women have to take care of the family and the community, while working on the farm and in a paid job to allow the man to continue to farm; activities that expanded significantly during the Millennium drought. Women are more likely to be involved in farm-work during a drought, and to be aware of financial needs, as they usually are the ones keeping the books. Women often see themselves and are seen by others as subordinates to the needs of the family and the farm. The dominance of this discourse in Australian agriculture and policy circles allows for an uncritical acceptance of these roles for women and leaves no room for women's efforts in working for the farm's survival to be acknowledged. The Australian farm family is a gendered institution that reproduces a gendered division of labour and power.²⁵

Another study (Daghagh Yazd et al., 2020) explored the negative social and ecological impacts of climate change to physical health and work productivity in the Murray-Darling Basin. Rural areas can be more affected by mental health issues, as suicide rates for the farmer population is up to two times higher than for the general population. The research examines the effect of water scarcity on farmers' mental health in the Murray Darling Basin, from 2001 to 2015. The authors found that there is a link between climate variability and mental health for people living in rural areas: weather uncertainty exacerbates stress, worsens mental health and is correlated with higher suicide rates.²⁶

Finally, Proudley (2008) analysed the fire that took place in January 2005 in Wangary, a rural location on the Eyre Peninsula of South Australia, as a case study to explore factors influencing decisions made within families when threatened by bushfires. The Wangary fire caused extensive

20 <https://knowledge.aidr.org.au/resources/health-heatwave-south-eastern-australia/>

21 https://safecom-files-v8.s3.amazonaws.com/current/docs/murray_mallee_zone_emergency_management_plan.pdf

22 https://safecom-files-v8.s3.amazonaws.com/current/docs/murray_mallee_zone_emergency_management_plan.pdf

23 Alexandra, J. and Rickards, L. (2021). "The contested politics of drought, water security and climate adaptation in Australia's Murray-Darling Basin". *Water Alternatives* 14(3): 773-794

24 Askew, L.E., Sherval, "Short-term Emergency or Recurring Climatic Extreme : A Rural Town Perspective on Drought Policy and Programs", *Australian Journal of Public Administration*, Vol 71, No 3, pp 209-302.

25 Alston, M. (2006), "'I'd Like to Just Walk Out of Here': Australian Women's Experience of Drought". *Sociologia Ruralis*, 46: 154-170.

26 Daghagh Yazd, S., Wheeler, S. A., & Zuo, A. (2020). "Understanding the impacts of water scarcity and socio-economic demographics on farmer mental health in the Murray-Darling Basin". *Ecological Economics*, 169, 106564-. <https://doi.org/10.1016/j.ecolecon.2019.106564>



destruction, including 77 000 ha of agricultural land and forest, 93 homes, over 46 000 livestock. Seven women and children died, six of whom were fleeing in their cars. The study found that a significant number of women interviewed were home alone with children on the day of the fire. Despite most of the men being volunteer firefighters, most families did not have a fire plan, and the last minute decision to leave or stay was in most cases made by the women. It also found that men did not necessarily subscribe to the recommended advice to stay inside the home or were not aware of the policy "prepare, stay and defend or leave early".²⁷

DISASTER BACKGROUND

Kinds of disasters affecting this region/town: floods, droughts, bushfires, extreme heat and extreme storms.

Recent major disaster: November 2022 to January 2023 floods

- Fatalities: 0
- People displaced:
 - On November 21, 2022, Police Commissioner Grant Stevens declared the River Murray floods a Major Emergency.²⁸
 - Large numbers of people living close to the river in the town of Bowhill were affected.²⁹
 - On November 30, 700 homes had been disconnected by the South Australian Power Networks.³⁰
 - By December 6500 people from Murraylands and Riverland LGA needed emergency accommodation.³¹
 - By December 24, authorities had door-knocked over 5000 properties in the region, encouraging people to be prepared to evacuate.³²
 - Some residents who requested to evacuate were taken to emergency accommodation, and 25,000 beds were available across the region.³³
 - At 1.30am on December 29, State Emergency Services SA issued an emergency warning urging people living in the Mary Ann Reserve in Mannum to evacuate.³⁴ The Mid Murray Council listed alternative accommodation options for residents who had been forced to move, at sporting clubs or using storage areas.³⁵
 - Emergency relief centres were opened in Mannum in December 2022 and in Murray Bridge in January 2023, providing support services (emergency personal hardship grants, emergency accommodation, counseling, food relief, etc.).³⁶

²⁷ Proudley, M. (2008) "Fire, families and decisions" *Australian Journal of Emergency Management*, 23(1), 37-43.

²⁸ <https://www.ses.sa.gov.au/public/download.jsp?id=192458>

²⁹ <https://indaily.com.au/news/2022/11/21/river-murray-community-concerns-rise-along-with-water/>

³⁰ <https://www.abc.net.au/news/2022-11-30/owners-miss-out-on-flood-protection-south-australia-mannum/101713478>

³¹ <https://www.abc.net.au/news/2022-12-06/levee-going-up-in-mannum-another-breached-renmark/101737176>

³² <https://www.theguardian.com/australia-news/2022/dec/24/south-australia-floods-thousands-of-murray-properties-expected-to-be-inundated-as-river-peaks>

³³ <https://www.theguardian.com/australia-news/2022/dec/24/south-australia-floods-thousands-of-murray-properties-expected-to-be-inundated-as-river-peaks>

³⁴ <https://www.news.com.au/national/south-australia/mannum-locals-urged-to-evacuate-as-floods-threaten-homes/news-story/fd1e100a996383f5c37c6847da5491fc>

³⁵ <https://indaily.com.au/news/2022/11/21/river-murray-community-concerns-rise-along-with-water/>

³⁶ <https://www.premier.sa.gov.au/media-releases/news-items/emergency-relief-centre-to-open-in-murray-bridge>



- o In April 2023, four pop-up recovery centres were opened across the Mid Murray council.³⁷
- Properties and infrastructure affected:
 - o On the January 3 2023, in South Australia:³⁸
 - 3190 disconnections had been operated by South Australian Power Networks.
 - 119 roads were closed
 - 3400 properties (including 393 primary residencies) were flooded
 - Stormwater infrastructure failures in Mannum had led to flooding behind the levee
 - Agricultural and private levees had fallen over
 - o Federal and South Australian governments announced an assistance package of \$126 million³⁹ to fund property assessments and power connection efforts, to provide small business recovery grants, to help primary producers and to clean up the river.⁴⁰



ECONOMIC DISADVANTAGE

- Mid Murray LGA is ranked:⁴¹
 - o 106 out of 544 LGAs in Australia (where 544 is most advantaged)
 - o in the 2nd decile (out of 10, where 10 is most advantaged)
 - o in the 20th percentile (out of 100, where 100 is most advantaged)



HOUSING AFFORDABILITY AND HOMELESSNESS

- Housing affordability
 - o Median rent: \$201/week (SA: \$300/week | Aus: \$375)⁴²
 - o Renter households where rent payments are greater than 30% of household income: 34.1% (SA: 30.5% | Aus: 32.3%)⁴³
 - o For a household on the median income for Mid Murray (around \$50,000), rental accommodation is classed “unaffordable” for postcode 5238 (Mannum), and “severely unaffordable” for postcode 5353 (Cambrai, Sedan)⁴⁴

³⁷ <https://www.premier.sa.gov.au/media-releases/news-items/pop-up-recovery-centres-setting-up-across-mid-murray-council>

³⁸ <https://www.youtube.com/watch?v=Biba8P2pQQw>

³⁹ <https://7news.com.au/news/sa/federal-and-state-governments-announce-126-million-assistance-package-for-sa-river-murray-floods-c-9338334>

⁴⁰ <https://www.youtube.com/watch?v=Biba8P2pQQw>

⁴¹ <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/2033.0.55.0012016?OpenDocument> (third data cube LGA Indexes, SEIFA 2016)

⁴² <https://abs.gov.au/census/find-census-data/quickstats/2021/LGA44210>

⁴³ <https://abs.gov.au/census/find-census-data/quickstats/2021/LGA44210>

⁴⁴ <https://sgsep.com.au/projects/rental-affordability-index>, using postcodes 5238 and 5353 (only data available)



- Homelessness (before the 2022 floods):
 - o In 2021-22, 90 people accessed Specialist Homelessness Services in Mid-Murray,⁴⁵ equating to 0.98% of the population, or 98 per 10,000.⁴⁶
 - o 46 of these were men (95 per 10,000) and 44 were women (102 per 10,000)

MENTAL HEALTH

- Mental health conditions (any): 11.5 % (SA: 9.8 % | Aus: 8.8%)⁴⁷
- In Statistical Area 3 Murray and Mallee, there were 52 deaths between 2017 and 2021.⁴⁸
- Suicide rate for Statistical Area 3 (SA3)⁴⁹ Murray and Mallee, compared to the Statistical Area 4 (SA4)⁵⁰ South Australia-South East in which it sits, the state of South Australia, and Australia as a whole.⁵¹

Area	SA3 Murray and Mallee	SA4 South Australia-South East	South Australia	Australia
Age-standardised suicide rate per 100,000 population	15	17.4	12.7	12.6
Rate for males	n/a	27.3	19.6	19.2
Rate for females	n/a	7.2	6.1	6.1

⁴⁵ <https://www.aihw.gov.au/reports/homelessness-services/shsc-data-cubes/contents/specialist-homelessness-services-collection-shsc-data-cubes>

⁴⁶ Calculation: Number of people divided by the population of the LGA of Mid Murray (available here: <https://abs.gov.au/census/find-census-data/quickstats/2021/LGA44210>), multiplied by 100 for the percentage and 10,000 for the rate.

⁴⁷ <https://abs.gov.au/census/find-census-data/quickstats/2021/LGA44210>

⁴⁸ Data table: 2021 National Mortality Database - Suicide, available at: <https://www.aihw.gov.au/suicide-self-harm-monitoring/data/data-downloads>

⁴⁹ SA3 and SA4 areas can be found here: <https://ssearch.com.au/australian-sa-printable-maps/>

⁵⁰ SA3 and SA4 areas can be found here: <https://ssearch.com.au/australian-sa-printable-maps/>

⁵¹ Data table: 2021 National Mortality Database - Suicide (table 10 for SA4 and 11 for SA3), available at: <https://www.aihw.gov.au/suicide-self-harm-monitoring/data/data-downloads>



GENDER EQUALITY

*Lone parent status*⁵²

- One-parent families (Mid Murray LGA): 14.2% (SA:16.6 % |Aus:15.9%) - 74.6 % female-led (SA:79.0 % |Aus:80.4%)

*Mothers' index*⁵³

- Mid Murray LGA is ranked 67 out of 69 LGAs in SA where 1 is the 'best place for a mother to live'.

*Unpaid care*⁵⁴

- Unpaid domestic work
 - o 1715 men did more than 5 hours of unpaid domestic work per week compared to 2302 women⁵⁵
- Unpaid assistance to a person with a disability
 - o 445 men compared to 628 women provided unpaid assistance⁵⁶
- Unpaid childcare
 - o 620 men compared to 865 women provided childcare (whether for their own child or other children)⁵⁷

Violence against women

- South Australia does not release crime statistics disaggregated by gender. South Australia Police also does not gender its offence descriptions; i.e., there is no specific offence for sexual assault, for family violence, or for breaching an intervention order.⁵⁸ This makes it very difficult to establish the extent to which crime is committed against women in particular areas of South Australia.
- However, it does publish a list of family and domestic abuse related offences on an annual basis, which is organised by postcode.⁵⁹

⁵² <https://abs.gov.au/census/find-census-data/quickstats/2021/LGA44210>

⁵³ The mothers' index consists of composite scores from five different indicators relating to maternal wellbeing (maternal health, children's wellbeing, educational status, economic status and socio-economic disadvantage), with each indicator given equal weighting. Scores were sorted from low to high and ranked from 1 to 69 (1 being the best place for a mother to live) to give the overall Mothers Index rank for each LGA in SA. <https://apo.org.au/node/63692>

⁵⁴ https://www.abs.gov.au/census/find-census-data/community-profiles/2021/LGA44210/download/GCP_LGA44210.xlsx

⁵⁵ https://www.abs.gov.au/census/find-census-data/community-profiles/2021/LGA44210/download/GCP_LGA44210.xlsx sheet G24

⁵⁶ https://www.abs.gov.au/census/find-census-data/community-profiles/2021/LGA44210/download/GCP_LGA44210.xlsx sheet G25

⁵⁷ https://www.abs.gov.au/census/find-census-data/community-profiles/2021/LGA44210/download/GCP_LGA44210.xlsx sheet G26

⁵⁸ https://www.police.sa.gov.au/_data/assets/pdf_file/0007/39688/GENERAL-OFFENCE-DESCRIPTIONS-2021.pdf

⁵⁹ <https://data.sa.gov.au/data/dataset/crime-statistics/resource/5f4ffc63-7002-4f46-9b1d-def426a5c2ec> filtered by postcodes.



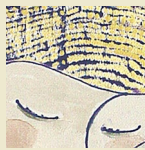
- In 2021-22, there were 72 family and domestic abuse related offences in postcodes within the Mid Murray LGA. This included 4 serious assaults resulting in injury, 2 other acts intending to cause injury, 43 serious assaults not resulting in injury, 8 common assaults, 12 counts of other property damage, 1 count of unlawful entry with intent, 2 counts of theft, 2 counts of threatening behaviour, 1 count of serious criminal trespass - residence, and 1 count of abduction/harassment/other offences.

DEMOGRAPHIC INFORMATION⁶⁰

	Mid Murray LGA	South Australia	Australia
Median age	54	41	38
Indigenous status	2.5%	2.4%	3.2%
Both parents born in Australia	66.7%	51.0%	45.9%
Non-English language used in household	3.0%	19.0%	24.8%
With university education	7.5%	22.7%	26.3%
Year 10 as highest qualification	15.4%	9.4%	10.0%
Part-time workers	36.6%	35.0%	31.2%
Unemployed	6.0%	5.4%	5.1%
Personal income	\$512/week	\$734/week	\$805/week
Household income	\$918/week	\$1,455 /week	\$1,746/week
Rate of people on Disability Support Pension per 10,000 population ⁶¹	583	368	296

⁶⁰ Unless otherwise indicated data from this table comes from: <https://abs.gov.au/census/find-census-data/quickstats/2021/LGA44210>

⁶¹ Data from this row comes from: <https://data.gov.au/data/dataset/dss-payment-demographic-data> - Data: Expanded DSS Benefit and Payment Recipient Demographics - March 2021, calculated by dividing number of DSP recipients listed in spreadsheet in footnote by population of LGA (<https://abs.gov.au/census/find-census-data/quickstats/2021/LGA44210>) state (<https://abs.gov.au/census/find-census-data/quickstats/2021/4>), and country (<https://abs.gov.au/census/find-census-data/quickstats/2021/AUS>) multiplied by 10,000



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