



Gender & Disaster Australia

# Greater Brisbane

DISASTER CONTEXT

Socio-demographics from  
a gendered perspective





# Greater Brisbane



The Greater Brisbane statistical area.

From <https://www.abs.gov.au/census/find-census-data/community-profiles/2021/3GBRI>

The area covered by this map, and considered in this factsheet, is the Greater Capital City Statistical Area of Greater Brisbane. This was selected as most useful as it covers the entire city and includes the surrounding LGAs where there are flooding risks. Greater Brisbane includes five Local Government Areas (LGAs): Brisbane, Logan, Ipswich, Moreton Bay and Redland City. Where information is only available at the LGA level, Brisbane LGA is used as this LGA was heavily affected by the floods.





## INTRODUCTION

Brisbane, the capital of the state of Queensland, is located in the south east of the state and is situated on the banks of the Brisbane River. The Traditional Owners of the area are the Turrbal, Jagera and Yugara Peoples.<sup>1</sup>

The city of Brisbane sits on a floodplain and is the most flood impacted area in Australia.<sup>2</sup> There is no Disaster Management plan for the whole area; however, there is one for the Brisbane Disaster District, which comprises the LGAs of Brisbane and Redland City. The Brisbane Disaster District has been impacted by numerous disasters, including major floods (1975, 2011, 2022), storms (The Gap Storms, 2008) and bushfires (Mulgumpin fires 2019). Potential disasters listed in the plan include riverine flooding, severe thunderstorms, bushfires, heatwaves, tropical cyclones, earthquakes, and tsunamis. The Brisbane river's topography consists of a steep gradient, a hilly terrain and limited floodplains, which contribute to high flood velocities.<sup>3</sup> The costs of disaster reconstruction in the city of Brisbane between 2011 and 2020 were more than \$226 billion.<sup>4</sup>

In 2022, the rainfall in Greater Brisbane was significantly above average, and many locations experienced their wettest year on record. During the last week of February, the rainfall intensified and many locations broke daily rainfall records.<sup>5</sup> These weather events resulted in major flooding across south-east Queensland, firstly on the Mary River at Gympie, on the Sunshine Coast, on the Brisbane River and smaller creeks in Brisbane City (exceeding the peak height of the 2013 floods), on the Bremer River and smaller creeks at Ipswich, and on the Logan river at Waterford.<sup>6,7</sup> All the LGAs of Greater Brisbane were affected by the floods.<sup>8</sup>

Several studies have been conducted on floods in Brisbane since 2010, and particularly on the 2011 floods. In 2010-2011, the strongest La Niña pattern since 1974 caused major flooding across Queensland in the aftermath of Tropical cyclone Yasi, including significant flooding in Brisbane city and surrounding areas. Seventy-eight percent of Queensland was severely affected, 35 people died and more than 29,000 homes and businesses were damaged.<sup>9</sup>

A 2011 study (Van den Honert, Mc Aneney, 2011) examined the weather and climatic factors of the 2011 Brisbane flood, and the history of water releases from the Wivenhoe dam. The hydrologists appointed by the Insurance Council of Australia considered this flood to be a "dam released flood", suggesting that the release of water from the Wivenhoe dam was a major cause of the flood. The authors argue that it is necessary to deal with a history of poor land use planning and find good solutions for people who own homes in high risk areas for flooding, so they can be insured and potentially relocated outside of the flood zone.<sup>10</sup>

A qualitative and quantitative study (Box et al., 2013) conducted 7 months after the 2011 floods in four affected inner Western suburbs with a diverse population looked at residents' experience and analysis of the flood and how to articulate shared responsibility to reduce flood risk. The authors found that previous flood experience did not impact residents' preparedness. Social vulnerability was a factor in individuals' decision-making, as were poor risk awareness and assumptions about the roles of other stakeholders (local council, emergency services, insurance companies). The authors argue that there is a need for a better awareness of floods and actions that can be taken by individuals.<sup>11</sup>

1 [https://www.qra.qld.gov.au/sites/default/files/2020-08/2019\\_qld\\_bushfires\\_recplan\\_2019-20\\_lr.pdf](https://www.qra.qld.gov.au/sites/default/files/2020-08/2019_qld_bushfires_recplan_2019-20_lr.pdf) p.52

2 [https://www.qra.qld.gov.au/sites/default/files/2019-04/Plan%20-%20Brisbane%20River%20Strategic%20Floodplain%20Management%20Plan%20%28April%202019%29\\_2.pdf](https://www.qra.qld.gov.au/sites/default/files/2019-04/Plan%20-%20Brisbane%20River%20Strategic%20Floodplain%20Management%20Plan%20%28April%202019%29_2.pdf)

3 <https://www.police.qld.gov.au/sites/default/files/2023-01/BrisbaneDDMP.pdf>

4 [https://www.qra.qld.gov.au/sites/default/files/2020-08/2019\\_qld\\_bushfires\\_recplan\\_2019-20\\_lr.pdf](https://www.qra.qld.gov.au/sites/default/files/2020-08/2019_qld_bushfires_recplan_2019-20_lr.pdf)

5 <http://www.bom.gov.au/climate/current/annual/qld/archive/2022.brisbane.shtml>

6 <http://www.bom.gov.au/climate/current/annual/qld/archive/2022.brisbane.shtml>

7 <http://www.bom.gov.au/climate/current/statements/scs76.pdf>

8 <https://www.disasterassist.gov.au/Pages/disasters/current-disasters/Queensland/se-qld-rainfall-flooding-22-28-february-2022.aspx>

9 Fitzgerald, G., Toloo, G., Baniahmadi, S., Crompton, D., & Tong, S. (2019). Long-term consequences of flooding: a case study of the 2011 Queensland floods. *The Australian Journal Of Emergency Management*, 34(1), 35-40.

10 Van den Honert, R. C., & McAneney, J. (2011). The 2011 Brisbane floods: causes, impacts and implications. *Water*, 3(4), 1149-1173.

11 Box, P., Bird, D., Haynes, K., & King, D. (2016). Shared responsibility and social vulnerability in the 2011 Brisbane



A more recent study (Fitzgerald et al., 2019) focuses on the long-term health effects of the 2011 floods for people who were living in affected areas six years later. The results confirmed that flood victims may experience worse health outcomes than the general population and were more likely to score their health negatively than people who were not impacted. They also had higher reported rates of trauma, injury and mental illness. More than a quarter said that they still experience some adverse health effects from the disaster. The authors point out that when people are not satisfied with recovery operations and perceive injustice in insurance and compensation arrangements, their health issues may be aggravated, and they recommend early recognition and intervention to reduce secondary effects.<sup>12</sup>

Finally, Irajifar et al. (2016) examined the impact of urban form (land use, population density, building type and diversity) on the reconstruction progress in the months after the 2010 floods in Brisbane and Ipswich. The results showed that population density is positively correlated to disaster resilience. The progress of reconstruction increases from low, medium to high densities, but does not show the same behaviour in very low and very high densities. It suggests that medium-high density is the most resilient type of area in urban contexts similar to Brisbane or Ipswich. The authors also note that median family income is the variable with the greatest impact on resilience, more than any of the built environment variables.<sup>13</sup>



## DISASTER BACKGROUND

Kinds of disasters affecting this region: tropical cyclones, bushfires, floods, severe thunderstorms, heatwaves, earthquake, tsunami

Event name	Hazard type(s)
Brisbane Flood, 1974 <sup>14</sup>	Flood
November 2010 Queensland floods 2010/2011 <sup>15</sup>	Flood
Queensland Floods, 2011 <sup>16</sup>	Flood
Cyclone Oswald, 2013 <sup>17</sup>	Flood
Queensland bushfires, 2019 <sup>18</sup> (Ipswich, Redland and Brisbane)	Bushfire
Queensland floods, February and March 2022 <sup>19</sup>	Flood

flood. *Natural hazards*, 81, 1549-1568.

12 Fitzgerald, G., Toloo, G., Baniahmadi, S., Crompton, D., & Tong, S. (2019). Long-term consequences of flooding: a case study of the 2011 Queensland floods. *The Australian Journal Of Emergency Management*, 34(1), 35-40.

13 Irajifar, L., Sipe, N., & Alizadeh, T. (2016). The impact of urban form on disaster resiliency: A case study of Brisbane and Ipswich, Australia. *International Journal of Disaster Resilience in the Built Environment*, 7(3), 259-275.

14 <https://knowledge.aidr.org.au/resources/flood-brisbane-river-queensland-1974/>

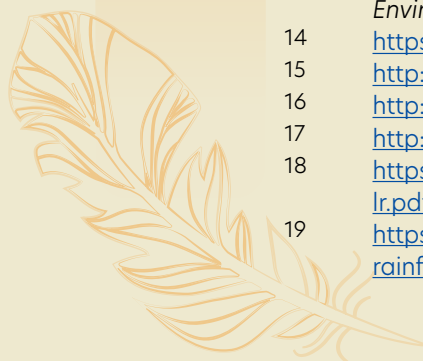
15 <http://hardenu.org/be-aware/your-area/brisbane>

16 <http://hardenu.org/be-aware/your-area/brisbane>

17 <http://hardenu.org/be-aware/your-area/brisbane>

18 [https://www.qra.qld.gov.au/sites/default/files/2020-08/2019\\_qld\\_bushfires\\_recplan\\_2019-201r.pdf](https://www.qra.qld.gov.au/sites/default/files/2020-08/2019_qld_bushfires_recplan_2019-201r.pdf)

19 <https://www.disasterassist.gov.au/Pages/disasters/current-disasters/Queensland/se-qld-rainfall-flooding-22-28-february-2022.aspx>





Recent major disaster: South East Queensland floods, February and March 2022

- Fatalities in South East Queensland: 13<sup>20</sup>
- Injuries and mental health in South East Queensland:
  - o 200 injuries estimated<sup>21</sup>
  - o Over 500,000 people estimated to have been directly affected in some way<sup>22</sup>
  - o Over 22,000 psychological first aid visits were made to support affected populations in the aftermath of the disaster<sup>23</sup>
- People displaced:
  - o Evacuation and temporary housing cost approximately \$4 million in South East Queensland<sup>24</sup>
  - o On 17 March 2022, thousands of people in Queensland were still homeless as a consequence of the floods<sup>25</sup>
- Properties and infrastructure affected:
  - o In the Greater Brisbane area: 23,400 properties in 177 suburbs were impacted (almost double the impact of the 2011 floods)<sup>26</sup>
  - o In South East Queensland, Schools, TAFE colleges and universities were closed and/or damaged.<sup>27</sup> Six schools remained closed until the commencement of Term 2<sup>28</sup>
  - o Over 1400 km of roads were damaged or closed in South East Queensland<sup>29</sup>
  - o 19 Brisbane ferry terminals were damaged, six requiring major repairs<sup>30</sup>
  - o In South East Queensland:
    - Over 180,000 energy customers lost power.<sup>31</sup> On March 17 2022, 2000 homes in Brisbane remained without power<sup>32</sup>

20 [https://www.qra.qld.gov.au/sites/default/files/2022-07/dae\\_report\\_-\\_south\\_east\\_queensland\\_rainfall\\_and\\_flooding\\_event\\_-\\_8\\_june\\_2022.pdf](https://www.qra.qld.gov.au/sites/default/files/2022-07/dae_report_-_south_east_queensland_rainfall_and_flooding_event_-_8_june_2022.pdf)

21 [https://www.qra.qld.gov.au/sites/default/files/2022-07/dae\\_report\\_-\\_south\\_east\\_queensland\\_rainfall\\_and\\_flooding\\_event\\_-\\_8\\_june\\_2022.pdf](https://www.qra.qld.gov.au/sites/default/files/2022-07/dae_report_-_south_east_queensland_rainfall_and_flooding_event_-_8_june_2022.pdf)

22 [https://www.igem.qld.gov.au/sites/default/files/2022-10/PROTECTED%20SEQ%20Rainfall%20and%20Flooding%20Reviewreduced\\_0.pdf](https://www.igem.qld.gov.au/sites/default/files/2022-10/PROTECTED%20SEQ%20Rainfall%20and%20Flooding%20Reviewreduced_0.pdf)

23 [https://www.qra.qld.gov.au/sites/default/files/2022-07/dae\\_report\\_-\\_south\\_east\\_queensland\\_rainfall\\_and\\_flooding\\_event\\_-\\_8\\_june\\_2022.pdf](https://www.qra.qld.gov.au/sites/default/files/2022-07/dae_report_-_south_east_queensland_rainfall_and_flooding_event_-_8_june_2022.pdf)

24 [https://www.qra.qld.gov.au/sites/default/files/2022-07/dae\\_report\\_-\\_south\\_east\\_queensland\\_rainfall\\_and\\_flooding\\_event\\_-\\_8\\_june\\_2022.pdf](https://www.qra.qld.gov.au/sites/default/files/2022-07/dae_report_-_south_east_queensland_rainfall_and_flooding_event_-_8_june_2022.pdf)

25 <https://www.9news.com.au/national/australia-floods-update-thousands-left-homeless-by-queensland-flooding-disaster/ff7479b5-78fa-4b94-9657-e7faef21dcd9>

26 <https://www.brisbanetimes.com.au/national/queensland/brisbane-flood-review-recommends-engineering-solutions-more-buybacks-20220510-p5ajzs.html>

27 [https://www.igem.qld.gov.au/sites/default/files/2022-10/PROTECTED%20SEQ%20Rainfall%20and%20Flooding%20Reviewreduced\\_0.pdf](https://www.igem.qld.gov.au/sites/default/files/2022-10/PROTECTED%20SEQ%20Rainfall%20and%20Flooding%20Reviewreduced_0.pdf)

28 [https://www.qra.qld.gov.au/sites/default/files/2022-07/dae\\_report\\_-\\_south\\_east\\_queensland\\_rainfall\\_and\\_flooding\\_event\\_-\\_8\\_june\\_2022.pdf](https://www.qra.qld.gov.au/sites/default/files/2022-07/dae_report_-_south_east_queensland_rainfall_and_flooding_event_-_8_june_2022.pdf)

29 [https://www.igem.qld.gov.au/sites/default/files/2022-10/PROTECTED%20SEQ%20Rainfall%20and%20Flooding%20Reviewreduced\\_0.pdf](https://www.igem.qld.gov.au/sites/default/files/2022-10/PROTECTED%20SEQ%20Rainfall%20and%20Flooding%20Reviewreduced_0.pdf)

30 [https://www.qra.qld.gov.au/sites/default/files/2022-07/dae\\_report\\_-\\_south\\_east\\_queensland\\_rainfall\\_and\\_flooding\\_event\\_-\\_8\\_june\\_2022.pdf](https://www.qra.qld.gov.au/sites/default/files/2022-07/dae_report_-_south_east_queensland_rainfall_and_flooding_event_-_8_june_2022.pdf)

31 [https://www.qra.qld.gov.au/sites/default/files/2022-07/dae\\_report\\_-\\_south\\_east\\_queensland\\_rainfall\\_and\\_flooding\\_event\\_-\\_8\\_june\\_2022.pdf](https://www.qra.qld.gov.au/sites/default/files/2022-07/dae_report_-_south_east_queensland_rainfall_and_flooding_event_-_8_june_2022.pdf)

32 <https://www.9news.com.au/national/australia-floods-update-thousands-left-homeless-by-queensland-flooding-disaster/ff7479b5-78fa-4b94-9657-e7faef21dcd9>





- 20,000 households made a claim for an Essential Services Hardship Assistance Grant for loss of an essential service, such as electricity<sup>33</sup>

- Other notable facts:
  - The Brisbane Council's SMS emergency alert system was found to be inadequate, as it was slow and only reached 14% of the residents<sup>34</sup>
- Insurance statistics:<sup>35</sup>
  - The Insurance Council of Australia received 50,494 claims for Brisbane and estimated the total cost at \$6 billion<sup>36</sup>
  - On February 26, 2023, a year later, 11,328 Brisbane insurance claims were yet to be settled



## ECONOMIC DISADVANTAGE

- 10 out of the 40 least advantaged Statistical Area 2 (SA2) locations in Queensland are in Greater Brisbane.<sup>37</sup> Those with the least advantage are: Logan Central, Riverview, and Inala - Richlands.
- The LGA of Brisbane is ranked: <sup>38</sup>
  - 490 out of 544 LGAs in Australia (where 544 is most advantaged)
  - in the 9th decile (out of 10, where 10 is most advantaged)
  - in the 90th percentile (out of 100, where 100 is most advantaged)



## HOUSING AFFORDABILITY AND HOMELESSNESS

- Housing affordability in the Greater Brisbane:
  - Median rent: \$380/week (QLD: \$365/week|Aus: 375/week)<sup>39</sup>
  - Renter households where rent payments are greater than 30% of household income: 31.5% (QLD: 32.3% | Aus: 32.2)<sup>40</sup>
  - For a household on the median income for the Greater Brisbane region (around \$95,000)<sup>41</sup>, rental accommodation is classed as "very affordable" for three postcodes, "acceptable" for 29 postcodes, "unaffordable" for 19 postcodes, and "severely unaffordable" for two postcodes. The remaining postcodes were classed "moderately unaffordable" or data was not available.<sup>42</sup>

<sup>33</sup> [https://www.qra.qld.gov.au/sites/default/files/2022-07/dae\\_report\\_-\\_south\\_east\\_queensland\\_rainfall\\_and\\_flooding\\_event\\_-\\_8\\_june\\_2022.pdf](https://www.qra.qld.gov.au/sites/default/files/2022-07/dae_report_-_south_east_queensland_rainfall_and_flooding_event_-_8_june_2022.pdf)

<sup>34</sup> <https://www.brisbanetimes.com.au/national/queensland/brisbane-flood-review-recommends-engineering-solutions-more-buybacks-20220510-p5ajzs.html>

<sup>35</sup> <https://www.brisbanetimes.com.au/national/queensland/one-year-on-from-brisbane-floods-11-300-insurance-claims-yet-to-be-settled-20230224-p5cngj.html>

<sup>36</sup> [https://insurancecouncil.com.au/wp-content/uploads/2023/09/20897\\_ICA\\_Cat-Report\\_Print-2023\\_RGB\\_Final\\_Spreads.pdf](https://insurancecouncil.com.au/wp-content/uploads/2023/09/20897_ICA_Cat-Report_Print-2023_RGB_Final_Spreads.pdf)

<sup>37</sup> <https://www.dote.org.au/queensland>

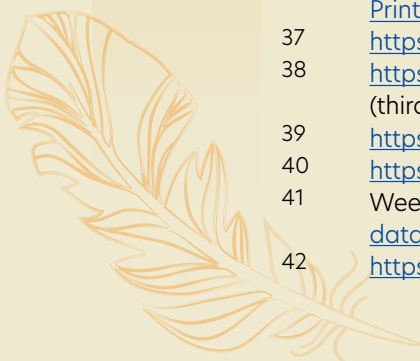
<sup>38</sup> <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/2033.0.55.0012016?OpenDocument> (third data cube LGA Indexes, SEIFA 2016)

<sup>39</sup> <https://abs.gov.au/census/find-census-data/quickstats/2021/3GBR1>

<sup>40</sup> <https://abs.gov.au/census/find-census-data/quickstats/2021/3GBR1>

<sup>41</sup> Weekly income x 52; weekly income data available at: <https://abs.gov.au/census/find-census-data/quickstats/2021/3GBR1>

<sup>42</sup> <https://sgsep.com.au/projects/rental-affordability-index>





- Homelessness:<sup>43</sup>
  - o In 2021-22, 6,569 people accessed Specialist Homelessness Services in the LGA of Brisbane, equating to 0.53% of the population, or 53 per 10,000
  - o 2794 of these were men (45 per 10,000) and 3775 were women (60 per 10,000)

### MENTAL HEALTH



- Mental health conditions (any): 10.1% (QLD: 9.6% | Aus: 8.8)<sup>44</sup>
- In Statistical Area 3 Brisbane Inner, there were 64 deaths by suicide between 2017 and 2021.<sup>45</sup>
- Age-standardised suicide rate (2017-2021) for Statistical Area 4 (SA4)<sup>46</sup> Brisbane Inner City, the state of Queensland, and Australia as a whole:<sup>47</sup>

Area	SA4 Brisbane Inner City	Queensland	Australia
Age-standardised suicide rate per 100,000 population	13	15.6	12.6
Rate for males	19	24.3	19.2
Rate for females	7.1	7.2	6.1

### GENDER EQUALITY



#### Lone parent status<sup>48</sup>

- Lone-parent families (Greater Brisbane): 16.7% (QLD: 16.8% | Aus: 15.9%) - 80.3% female-led (QLD: 80.0%|Aus: 80.4%)

#### Mothers' index<sup>49</sup>

- Brisbane is ranked 2nd out of 74 LGAs in QLD, where 1 is the 'best place for a mother to live'.

#### Unpaid care<sup>50</sup>

- Unpaid domestic work

<sup>43</sup> Data cube: SHSC geographical location of client—LGA. Available here: <https://www.aihw.gov.au/reports/homelessness-services/shsc-data-cubes/contents/specialist-homelessness-services-collection-shsc-data-cubes>

<sup>44</sup> <https://abs.gov.au/census/find-census-data/quickstats/2021/3GBRI>

<sup>45</sup> Data table: 2021 National Mortality Database - Suicide (table 11 for SA3), available at: <https://www.aihw.gov.au/suicide-self-harm-monitoring/data/data-downloads>

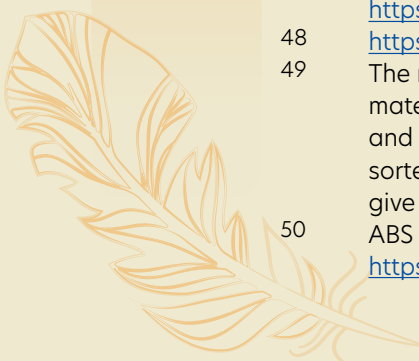
<sup>46</sup> SA3 and SA4 areas can be found here: <https://sosearch.com.au/australian-sa-printable-maps/>

<sup>47</sup> Data table: 2021 National Mortality Database - Suicide (table 10 for SA4), available at: <https://www.aihw.gov.au/suicide-self-harm-monitoring/data/data-downloads>

<sup>48</sup> <https://abs.gov.au/census/find-census-data/quickstats/2021/3GBRI>

<sup>49</sup> 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 74 (1 being the best place for a mother to live) to give the overall Mothers Index rank for each LGA in QLD. <https://apo.org.au/node/63692>

<sup>50</sup> ABS General Community Profile for Greater Brisbane, Tables G24-G26, available here: <https://www.abs.gov.au/census/find-census-data/community-profiles/2021/3GBRI>





- o 402,854 men did more than 5 hours of unpaid domestic work per week compared to 599,733 women
- Unpaid assistance to a person with a disability
  - o 92,480 men compared to 142,737 women provided unpaid assistance
- Unpaid childcare
  - o 242,762 men compared to 324,943 women provided childcare (whether for their own child or other children)



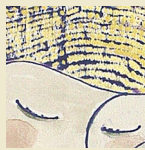
## DEMOGRAPHIC INFORMATION FOR GREATER BRISBANE COMPARED TO QUEENSLAND AND AUSTRALIA<sup>51</sup>

	Greater Brisbane	Queensland	Australia
Median age	36	38	38
Indigenous status	3.0%	4.6%	3.2%
Both parents born in Australia	47.8%	53.4%	45.9%
Non-English language used in household	20.3%	15.6%	24.8%
With university education	27.0%	21.9%	26.3%
Year 10 as highest qualification	10.3%	11.9%	10.0%
Part-time workers	29.2%	30.5%	31.2%
Unemployed	5.5%	5.4%	5.1%
Personal income	\$842/week	\$787/week	\$805/week
Household income	\$1,849/week	\$1,675/week	\$1,746/week
Rate of people on Disability Support Pension in Brisbane LGA per 10,000 population <sup>52</sup>	211	309	296

<sup>51</sup> Unless otherwise stated, all data in this table comes from: <https://abs.gov.au/census/find-census-data/quickstats/2021/3GBR>

<sup>52</sup> <https://data.gov.au/data/dataset/dss-payment-demographic-data> DSS Demographics - March 2021; calculated by dividing number of DSP recipients listed in spreadsheet DSS Demographics - March 2021 by population of LGA (<https://abs.gov.au/census/find-census-data/quickstats/2021/310>) state (<https://abs.gov.au/census/find-census-data/quickstats/2021/3>) and Australia (<https://abs.gov.au/census/find-census-data/quickstats/2021/AUS>), multiplied by 10,000





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