Summary of key issues

- During the week ending 12 February 2020 widespread rainfall was recorded across northern, eastern and western Australia. While the heavy storm rainfall along the eastern coast provided relief to some fire affected areas, it also resulted in extensive flooding across parts of New South Wales.

- Most of the summer cropping regions have recorded rainfall between 50 and 200 millimetres for February to date, which is between 25 and 100 millimetres above the February average. In contrast, while similar February to date rainfall totals have been recorded across northern Australia, monthly rainfall totals are currently tracking at between 25 and 200 millimetres below average for the month of February for much of tropical northern Australia.

- While the rainfall in cropping regions will support summer crops and provide a good base for winter cropping, several months of above average rainfall would be needed to provide a sustained recovery from current long-term deficiencies that persist across large areas of Australia.

- The rainfall outlook for March to May 2020 suggests that across most of Australia, there is no strong shift towards a wetter or drier than average three months. Parts of northern New South Wales, southern Queensland and northern Western Australia are slightly more likely to be drier than average. In contrast, parts of far northern Queensland are slightly more likely to be wetter than average.

- It was Australia's driest and warmest year on record in 2019, with particularly prolonged dry conditions across eastern and southern Australia. While above average January 2020 rainfall slightly eased deficiencies in parts of Australia, long-term rainfall deficiencies still persist across much of the country.

- Over the next eight days, rainfall totals of between 15 and 100 millimetres are forecast for parts of northern and eastern Australia.

- Across summer cropping regions, rainfall of between 10 and 50 millimetres is expected across much of Queensland and northern New South Wales during the next 8 days.

- Water storage levels in the Murray-Darling Basin (MDB) decreased between 5 February 2020 and 11 February 2020 by 40 gigalitres (GL). Current volume of water held in storage is 7,729 GL which represents 31 per cent of total capacity.

- Allocation prices in the Victorian Murray below the Barmah Choke decreased from $650 per ML on 6 February 2020 to $530 per ML on 13 February 2020.
1. Climate

1.1. Rainfall this week

During the week ending 12 February 2020 widespread rainfall was recorded across northern, eastern and western Australia. While the heavy storm rainfall along the eastern coast provided relief to some fire affected areas, it also resulted in extensive flooding across parts of New South Wales. These falls are likely to provide significant follow up moisture and benefit plant growth, build soil moisture levels and provide useful inflow to farm water storages across tropical northern Australia and large areas of eastern Australia.

In Australia’s summer cropping regions, rainfall totals of between 25 and 100 millimetres were recorded across much of Queensland and northern New South Wales. Heavier falls of between 150 and 200 millimetres were recorded across scattered parts of New South Wales and eastern Queensland during the week ending 12 January 2020.

Rainfall for the week ending 12 February 2020
Most of the summer cropping regions have recorded rainfall between 50 and 200 millimetres for February to date, which is between 25 and 100 millimetres above the February average. In contrast, while similar February to date rainfall totals have been recorded across northern Australia, monthly rainfall totals are currently tracking at between 25 and 200 millimetres below average for the month of February for much of tropical northern Australia.

While the rainfall in cropping regions will support summer crops and provide a good base for winter cropping, several months of above average rainfall would be needed to provide a sustained recovery from current long-term deficiencies that persist across large areas of Australia.

**Rainfall anomalies for the period 1 to 12 February 2020**
1.2. Temperature anomalies this week

For the week ending 11 February 2020, maximum and minimum temperatures were 2°C to 8°C above average across parts of south-western and northern Australia. In contrast, maximum temperatures were 2°C to 8°C below average across parts of south-eastern Australia. Average (-2°C to 2°C) minimum temperatures were recorded across the remainder of the country.

Note: Spatial temperature analyses are based on historical weekly temperature data provided by the Bureau of Meteorology. These temperature anomaly maps show the departure of the maximum and minimum temperatures from the average over the 1961 to 1990 reference period. For further information go to: http://www.bom.gov.au/jsp/awap/temp/index.jsp.
1.3. National Climate Outlook

The rainfall and temperature outlooks presented here show the likelihood, represented as a percentage, of experiencing wetter or drier (and warmer or cooler) than median climatic conditions for the given outlook periods. These climate outlooks are generated by ACCESS–S (Australian Community Climate Earth-System Simulator–Seasonal). ACCESS–S is the Bureau of Meteorology’s dynamical (physics-based) weather and climate model used for monthly, seasonal and longer-lead climate outlooks.

For further information, go to http://www.bom.gov.au/climate/ahead/about/

The El Niño–Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD) are currently neutral and expected to remain neutral until at least the end of autumn 2020. Likewise, the Southern Annular Mode (SAM) is currently neutral.

With these climate influences neutral, the likelihood of drier conditions has weakened somewhat. Abnormally warm sea surface temperatures in the western tropical Pacific Ocean and around Australia may also be contributing to some changes in weather patterns over the continent.

The latest rainfall outlook released by the Bureau of Meteorology suggests that during March there is no strong shift towards wetter or drier than average rainfall for much of Australia. Parts of north-western New South Wales, south-western Queensland, eastern Victoria, eastern South Australia and northern Western Australia are slightly more likely to be drier than average during March. In contrast, parts of far northern Queensland are slightly more likely to be wetter than average (Bureau of Meteorology ‘National Climate Outlook’, 6 February 2020).
The Bureau of Meteorology’s climate outlooks are given as a probability (or chance) of exceeding a specified rainfall or temperature threshold. In the case of the Bureau’s rainfall outlook, it is represented as the chance of rainfall being above median, expressed as a percentage. While this probabilistic forecast indicates that there is no strong shift towards a wetter or drier than average three months for much of Australia, several months of above average rainfall would be needed to ease current long-term deficiencies.

The rainfall outlook for March to May 2020 suggests that across most of Australia, there is no strong shift towards a wetter or drier than average three months. Parts of northern New South Wales, southern Queensland and northern Western Australia are slightly more likely to be drier than average. In contrast, parts of far northern Queensland are slightly more likely to be wetter than average (Bureau of Meteorology ‘National Climate Outlook’, 6 February 2019).

**Chance of exceeding the median rainfall March to May 2020**

![Map of Australia showing chance of exceeding the median rainfall for March to May 2020](image)
The temperature outlook for March to May 2020 indicates that daytime temperatures are more likely to be warmer than average for much of the country, with the exception of parts of southern Australia where the chances of warmer or cooler daytime temperatures are roughly equal. Nighttime temperatures are also likely to be warmer than average for much of Australia (Bureau of Meteorology ‘National Climate Outlook’, 6 February 2020).
1.4. Rainfall deficiencies

The rainfall deficiencies presented below are sourced from the Bureau of Meteorology’s monthly ‘Drought Statement’. As short to longer-term deficiencies become evident the Bureau of Meteorology monitors these events through their lifecycle – from emergence through to their dissipation – with the time-period of analysis each month increasing from a fixed starting point to the easing of the deficiencies.

For further information, go to http://www.bom.gov.au/climate/drought

It was Australia’s driest and warmest year on record in 2019, with particularly prolonged dry conditions across eastern and southern Australia. While above average January 2020 rainfall slightly eased deficiencies in parts of Australia, long-term rainfall deficiencies still persist across much of the country.

For the 12-month period ending January 2020, rainfall deficiencies have decreased in severity across parts of southern Queensland, Victoria, central Western Australia and the Northern Territory. Serious to severe rainfall deficiencies persist across much of New South Wales, parts of eastern and northern Victoria, south-eastern Queensland, most of South Australia, southern and eastern Western Australia and the Northern Territory and eastern Tasmania.

Serious to severe rainfall deficiencies continue to persist at longer timescales, with a slight decrease in severity across south-eastern Victoria, central Western Australia and the Northern Territory. For the 22-months starting in April 2018, serious to severe rainfall deficiencies are evident across much of New South Wales, South Australia and the Northern Territory, parts of eastern and northern Victoria, southern and south-eastern Queensland, and parts of north-eastern and south-western Western Australia and eastern Tasmania. (Bureau of Meteorology ‘Drought Statement’, 6 February 2019).

Rainfall deficiencies for the 12-month period 1 February 2019 to 31 January 2020
Rainfall deficiencies for the 22-month period 1 April 2018 to 31 January 2020
1.5. Rainfall forecast for the next eight days

Over the next eight days, rainfall totals of between 15 and 100 millimetres are forecast for parts of northern and eastern Australia. These falls will likely support summer crops and continue to build soil moisture across cropping regions in New South Wales and Queensland. In summer cropping regions, rainfall of between 10 and 50 millimetres is expected across much of Queensland and northern New South Wales during the next 8 days.

Total forecast rainfall (mm) for the period 13 February to 20 February 2020
2. Water

2.1. Water markets – current week

Water storage in the Murray–Darling Basin (MDB) decreased by 40 gigalitres (GL) between 5 February 2020 and 11 February 2020. The current volume of water held in storage is 7,729 GL, which represents 31% of total capacity. This is 24% or 2,375 GL less than at the same time last year. Water storage data is sourced from the BOM.

Water storages in the Murray-Darling Basin, 2013–2020

<table>
<thead>
<tr>
<th>Region</th>
<th>$/ML</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW Murray Above</td>
<td>578</td>
</tr>
<tr>
<td>NSW Murrumbidgee</td>
<td>590</td>
</tr>
<tr>
<td>VIC Goulburn-Broken</td>
<td>530</td>
</tr>
<tr>
<td>VIC Murray Below</td>
<td>530</td>
</tr>
</tbody>
</table>

Allocation prices in the Victorian Murray below the Barmah Choke decreased from $650 per ML on 6 February 2020 to $530 per ML on 13 February 2020. Binding trade limits, maturing almond trees and dry seasonal conditions, have left the catchments below the Barmah Choke exposed to high water prices. Prices in other catchments in the southern Murray-Darling Basin remain lower (see table).

Surface water trade activity, Southern Murray–Darling Basin

The trades shown reflect estimated market activity and do not encompass all register trades. The price is shown for the VIC Murray below the Barmah choke. Historical prices (before 1 July 2019) are ABARES estimates after removing outliers from BOM water register data. Prices after 1 July 2019 and prior to the 30 October 2019 reflect recorded transaction prices as sourced from Ruralco. Prices after the 30 October 2019 are sourced from Waterflow. Data for volume traded is sourced from the BOM water register. Data shown is current at 13 February 2020.

To access the full, interactive, weekly water dashboard, which contains the latest and historical water storage, water market and water allocation information, please visit http://www.agriculture.gov.au/abares/publications/weekly_update/weekly-update-130220

11 | ABARES Weekly Australian Climate, Water and Agricultural Update • 13 February 2020
### 3. Commodities

<table>
<thead>
<tr>
<th>Selected World Indicator Prices</th>
<th>Week ended</th>
<th>Unit</th>
<th>Latest price</th>
<th>Price week prior</th>
<th>Weekly change</th>
<th>Price 12 months prior</th>
<th>Year on year change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Dollar – AUD/USD Exchange Rate</td>
<td>12-Feb</td>
<td>A$/US$</td>
<td>0.67</td>
<td>0.67</td>
<td>0% ●</td>
<td>0.71</td>
<td>-6% ↓</td>
</tr>
<tr>
<td>Wheat – US no. 2 hard red winter wheat, fob Gulf</td>
<td>11-Feb</td>
<td>US$/t</td>
<td>232</td>
<td>231</td>
<td>&lt;1% ↑</td>
<td>241</td>
<td>-4% ↓</td>
</tr>
<tr>
<td>Coarse Grains – US no. 2 yellow corn, fob Gulf</td>
<td>12-Feb</td>
<td>US$/t</td>
<td>171</td>
<td>171</td>
<td>0% ●</td>
<td>173</td>
<td>-1% ↓</td>
</tr>
<tr>
<td>Canola – Rapeseed, Europe, fob Hamburg</td>
<td>26-Nov</td>
<td>US$/t</td>
<td>423</td>
<td>423</td>
<td>0% ●</td>
<td>423</td>
<td>0% ●</td>
</tr>
<tr>
<td>Cotton – Cotlook ‘A’ Index</td>
<td>13-Feb</td>
<td>USc/lb</td>
<td>76.9</td>
<td>77.3</td>
<td>&lt;1% ↓</td>
<td>81.2</td>
<td>-5% ↓</td>
</tr>
<tr>
<td>Sugar – Intercontinental Exchange, nearby futures, no.11 contract</td>
<td>13-Feb</td>
<td>USc/lb</td>
<td>15.4</td>
<td>14.7</td>
<td>5% ↑</td>
<td>12.8</td>
<td>20% ↑</td>
</tr>
<tr>
<td>Wool – Eastern Market Indicator</td>
<td>06-Feb</td>
<td>Ac/kg clean</td>
<td>1,577</td>
<td>1,548</td>
<td>2% ↑</td>
<td>1,944</td>
<td>-19% ↓</td>
</tr>
<tr>
<td>Wool – Western Market Indicator</td>
<td>06-Feb</td>
<td>Ac/kg clean</td>
<td>1,709</td>
<td>1,683</td>
<td>2% ↑</td>
<td>2,094</td>
<td>-18% ↓</td>
</tr>
<tr>
<td>Selected domestic crop indicator prices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milling Wheat – ASW1, track quote, Port Adelaide, SA</td>
<td>04-Feb</td>
<td>A$/t</td>
<td>335</td>
<td>342</td>
<td>-2% ↓</td>
<td>349</td>
<td>-4% ↓</td>
</tr>
<tr>
<td>Feed Wheat – General purpose, Sydney, NSW</td>
<td>07-Jan</td>
<td>A$/t</td>
<td>442</td>
<td>447</td>
<td>-1% ↓</td>
<td>455</td>
<td>-3% ↓</td>
</tr>
<tr>
<td>Feed Barley – Sydney, NSW</td>
<td>07-Jan</td>
<td>A$/t</td>
<td>385</td>
<td>382</td>
<td>&lt;1% ↑</td>
<td>438</td>
<td>-12% ↓</td>
</tr>
<tr>
<td>Grain Sorghum – Sydney, NSW</td>
<td>07-Jan</td>
<td>A$/t</td>
<td>467</td>
<td>477</td>
<td>-2% ↓</td>
<td>432</td>
<td>8% ↑</td>
</tr>
<tr>
<td>Selected domestic livestock indicator prices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef – Eastern Young Cattle Indicator</td>
<td>06-Feb</td>
<td>Ac/kg cwt</td>
<td>623</td>
<td>580</td>
<td>7% ↑</td>
<td>475</td>
<td>31% ↑</td>
</tr>
<tr>
<td>Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic</td>
<td>06-Feb</td>
<td>Ac/kg cwt</td>
<td>629</td>
<td>600</td>
<td>5% ↑</td>
<td>352</td>
<td>79% ↑</td>
</tr>
<tr>
<td>Lamb – Eastern States Trade Lamb Indicator</td>
<td>06-Feb</td>
<td>Ac/kg cwt</td>
<td>829</td>
<td>809</td>
<td>2% ↑</td>
<td>633</td>
<td>31% ↑</td>
</tr>
<tr>
<td>Pig – Eastern Seaboard (60.1–75 kg), average of buyers &amp; sellers</td>
<td>24-Jan</td>
<td>Ac/kg cwt</td>
<td>429</td>
<td>430</td>
<td>&lt;1% ↓</td>
<td>323</td>
<td>33% ↑</td>
</tr>
<tr>
<td>Goat – Eastern States (12.1–16 kg)</td>
<td>10-Feb</td>
<td>Ac/kg cwt</td>
<td>883</td>
<td>883</td>
<td>0% ●</td>
<td>588</td>
<td>50% ↑</td>
</tr>
<tr>
<td>Live cattle – Light steers ex Darwin to Indonesia</td>
<td>08-Feb</td>
<td>Ac/kg lwt</td>
<td>340</td>
<td>340</td>
<td>0% ●</td>
<td>340</td>
<td>0% ●</td>
</tr>
<tr>
<td>Live sheep – Live wether (Muchea WA saleyard) to Middle East</td>
<td>09-Dec</td>
<td>$/head</td>
<td>105</td>
<td>140</td>
<td>-25% ↓</td>
<td>108</td>
<td>-3% ↓</td>
</tr>
<tr>
<td>Indicator</td>
<td>Week ended</td>
<td>Unit</td>
<td>Latest price</td>
<td>Price week prior</td>
<td>Weekly change</td>
<td>Price 12 months prior</td>
<td>Year on year change</td>
</tr>
<tr>
<td>-------------------------------</td>
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</tr>
<tr>
<td>Global Dairy Trade (GDT) weighted average prices a</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dairy – Whole milk powder</td>
<td>04-Feb</td>
<td>US$/t</td>
<td>3,039</td>
<td>3,233</td>
<td>-6% ↓</td>
<td>3,027</td>
<td>&lt;1% ↑</td>
</tr>
<tr>
<td>Dairy – Skim milk powder</td>
<td>04-Feb</td>
<td>US$/t</td>
<td>2,907</td>
<td>3,036</td>
<td>-4% ↓</td>
<td>2,534</td>
<td>15% ↑</td>
</tr>
<tr>
<td>Dairy – Cheddar cheese</td>
<td>04-Feb</td>
<td>US$/t</td>
<td>4,302</td>
<td>4,048</td>
<td>6% ↑</td>
<td>3,565</td>
<td>21% ↑</td>
</tr>
<tr>
<td>Dairy – Anhydrous milk fat</td>
<td>04-Feb</td>
<td>US$/t</td>
<td>4,626</td>
<td>4,821</td>
<td>-4% ↓</td>
<td>5,579</td>
<td>-17% ↓</td>
</tr>
</tbody>
</table>

a Global Dairy Trade prices are updated twice monthly on the first and third Tuesday of each month.
3.1. Selected world indicator prices

- **World wheat indicator price**
  - US No. 2, hard red winter wheat, fob Gulf
  - Week ended 11 February 2020

- **World coarse grains indicator price**
  - US corn No. 2, fob Gulf
  - Week ended 12 February 2020

- **World canola indicator price**
  - Europe fob Hamburg
  - Week ended 26 November 2019

- **World cotton indicator price**
  - Cotlook ‘A’ index
  - Week ended 13 February 2020
3.2. Global Dairy Trade (GDT) weighted average prices

- Whole milk powder price
  - 4 February 2020

- Skim milk powder price
  - 4 February 2020

- Cheddar cheese price
  - 4 February 2020

- Anhydrous milk fat price
  - 4 February 2020
3.3. Selected domestic crop indicator prices

- Grain sorghum indicator price
  Sydney, NSW
  Week ended 7 January 2020

- Feed barley indicator price
  Sydney, NSW
  Week ended 7 January 2020

- Feed wheat indicator price
  General Purpose, Sydney, NSW
  Week ended 7 January 2020

- Milling wheat indicator price
  ASW1, track quote, Port Adelaide, SA
  Week ended 4 February 2020
3.4. Selected domestic livestock indicator prices

- Eastern Young Cattle Indicator
  - Week ended 6 February 2020

- Eastern States Trade Lamb Indicator
  - Week ended 6 February 2020

- Mutton indicator price in Victoria
  - (18–24 kg fat score 2–3)
  - Week ended 6 February 2020

- Pig indicator price Eastern Seaboard
  - (60.1–75 kg)
  - Week ended 24 January 2020
### 3.5. Selected fruit and vegetable prices – week ended 7 February 2020

#### Weekly wholesale prices for blueberry, pineapple (smoothleaf), watermelon (seedless) & banana (cavendish)

#### Weekly wholesale prices for kiwifruit (hayward), strawberry, apple (royal gala) & avocado (hass)

#### Weekly wholesale prices for onion (brown), cauliflower, potato (white, brushed) & tomato (field gourmet)

#### Weekly wholesale prices for broccoli, lettuce (iceberg), pumpkin (grey bulk) & bean (round stringless)
4. Data attribution

Climate
Bureau of Meteorology

Water
New South Wales

Queensland
- Sunwater: www.sunwater.com.au
- Seqwater: http://seqwater.com.au

South Australia
- South Australian Department of Environment, Water and Natural Resources: www.environment.sa.gov.au

Victoria
- Goulburn–Murray Water: www.g-mwater.com.au

Commodities
Fruit and vegetables
- Datafresh: www.freshstate.com.au

Pigs
- Australian Pork Limited: www.australianpork.com.au

Dairy

World wheat, canola
- International Grains Council

World coarse grains
- United States Department of Agriculture

World cotton
- Cotlook: www.cotlook.com/

World sugar
- New York Stock Exchange - Intercontinental Exchange

Wool

Milling wheat
- ProFarmer

Domestic wheat, barley, sorghum
- The Land: hardcopy or online at www.theland.farmonline.com.au/markets

Domestic canola
- The Weekly Times: hardcopy

Cattle, beef, mutton, lamb, goat and live export