Australian Government
Bureau of Meteorology

# Forewarned is Forearmed (FWFA)

Rainfall Probability of Exceedance &
Burst potential
Feedback Sessions

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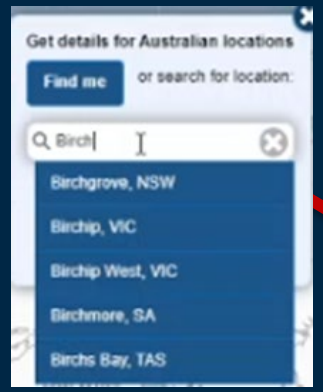
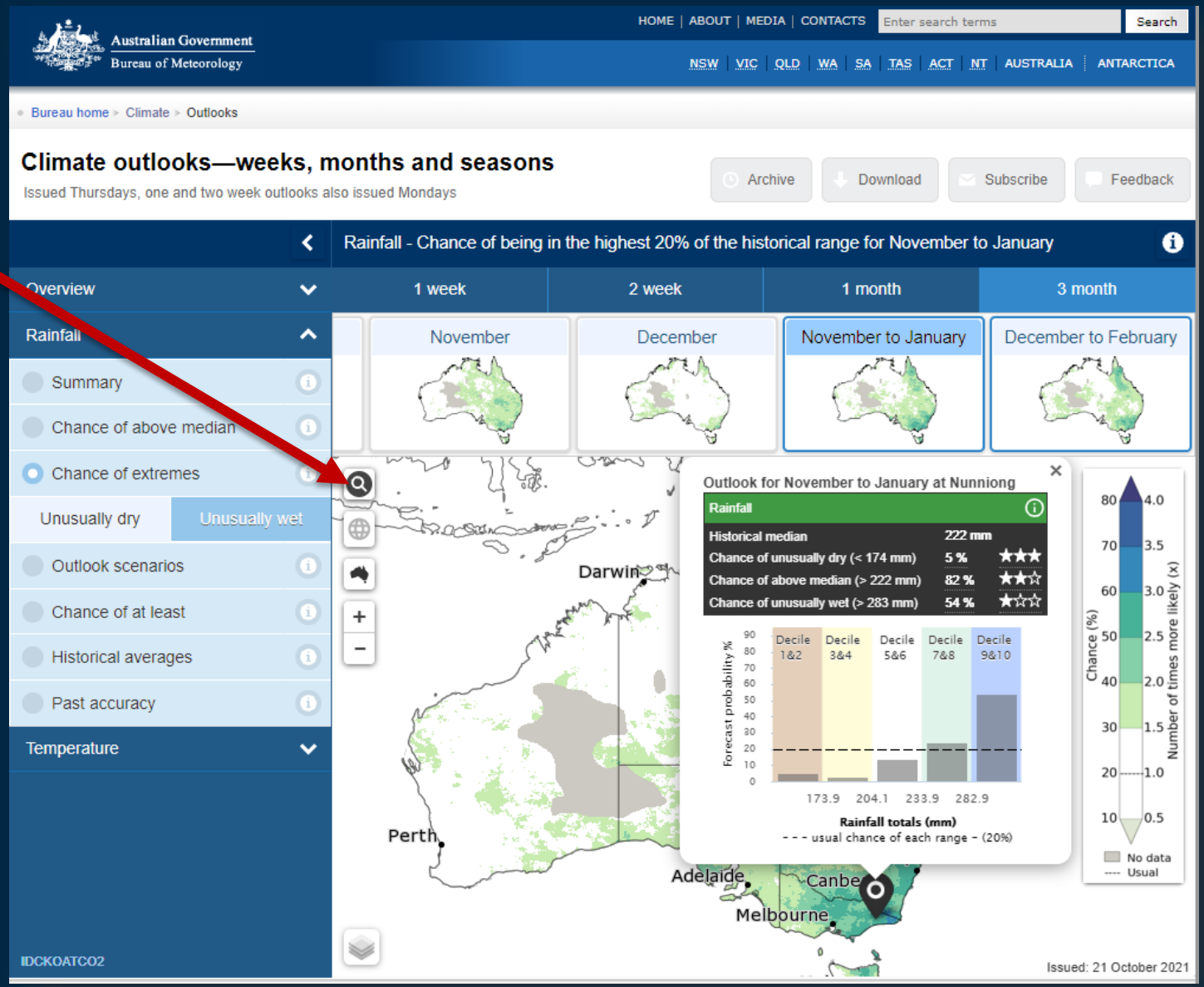
*Bureau of Meteorology*

# The new extreme climate outlooks




*Click on map OR search for your location*




Watch a demo

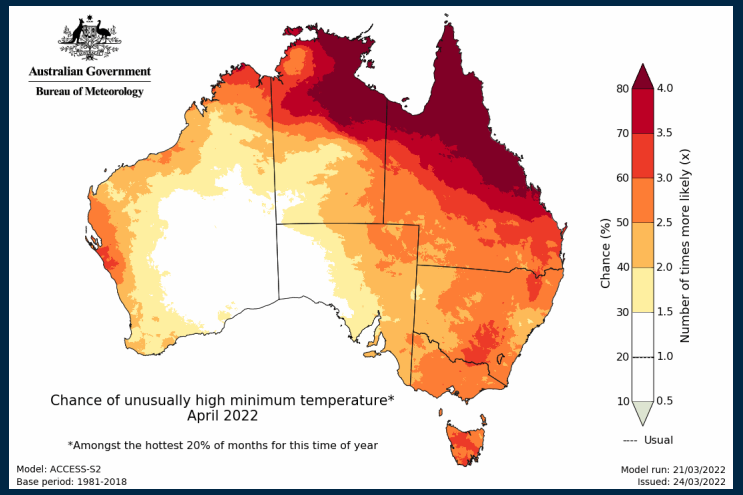

https://www.youtube.com/watch?v=0cJGtzk6HeU

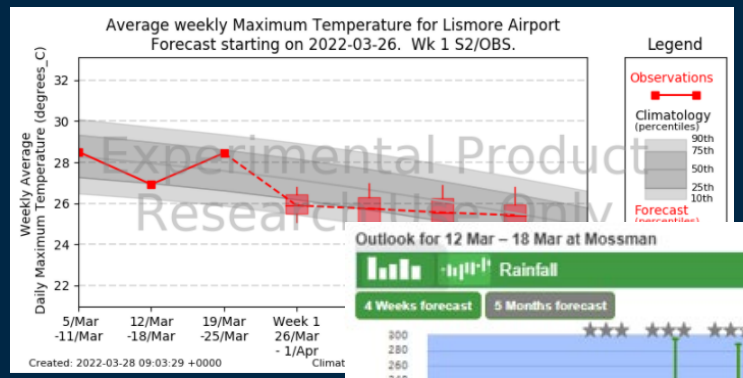
# Project release phases: 2021–22

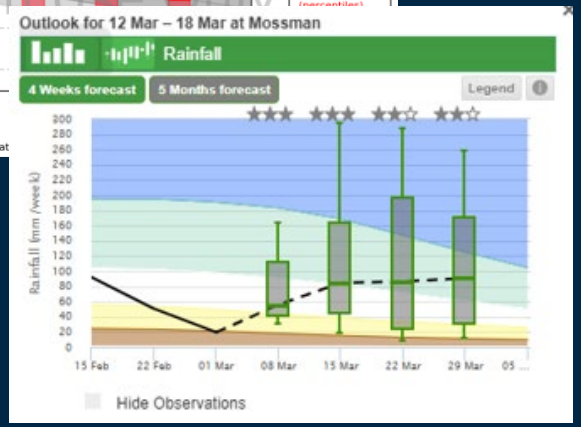

- Switch to ACCESS-S2 as operational model — October 2021 ✓
- Introduction of FWFA products #1 and #2 — October 2021 ✓
- Introduction of FWFA products #3, #4 and #5 — June 2022

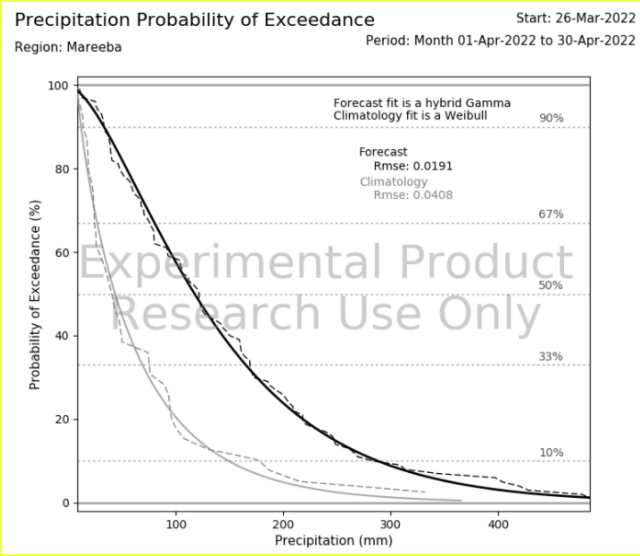
CLIMATE OUTLOOKS
now forecasting climate extremes

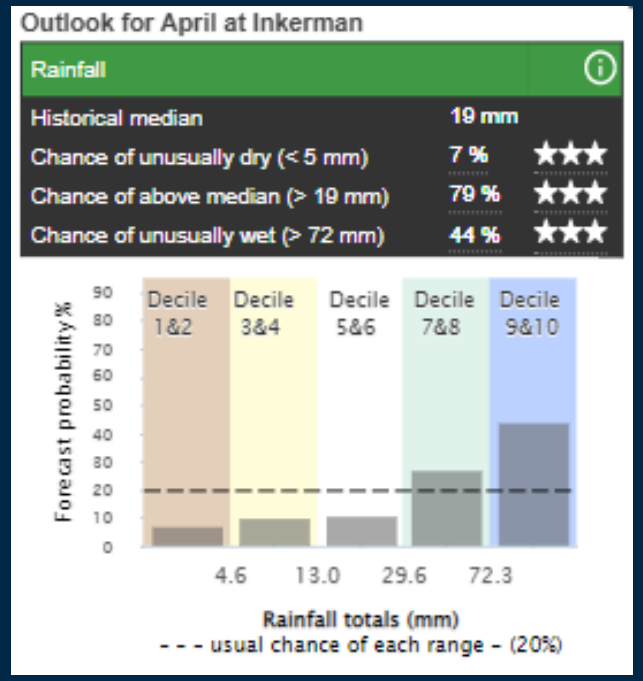
# Our FWFA Portfolio of five operational products

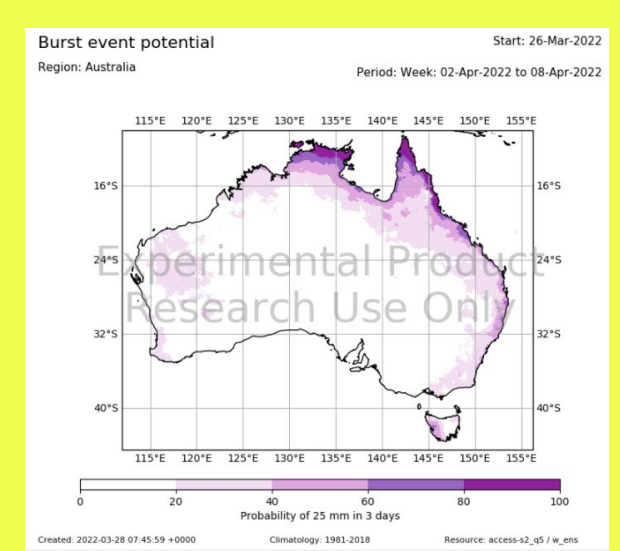


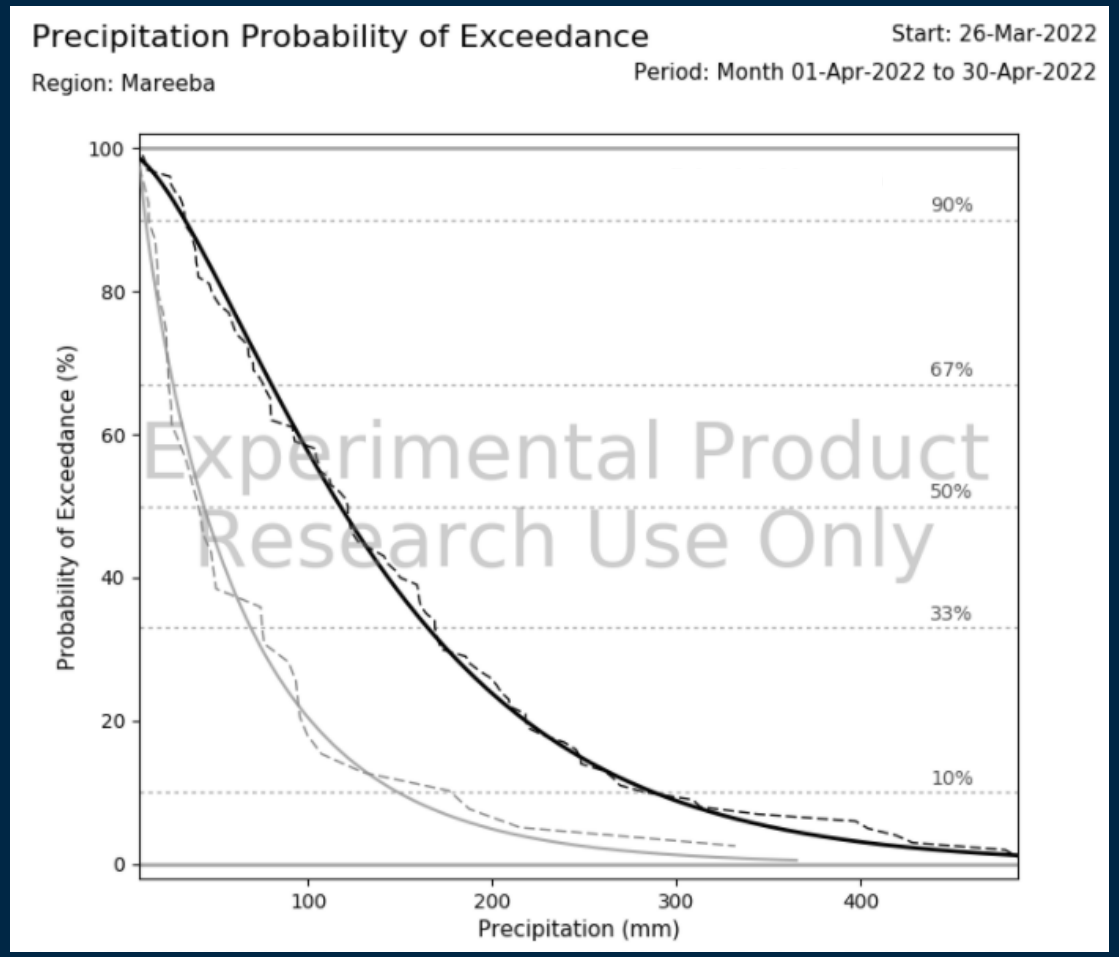
# Operational Product #4: Probability of exceedance curves

- Available for rainfall
- Location-specific
- Available for weeks, fortnights, months, seasons ahead

- Allows selection of probability or threshold of interest
- Allows comparison to 'usual' (climatology)

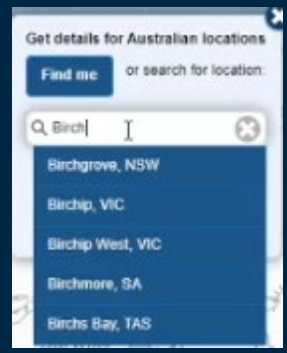
- Shows the 'complete information' from the forecast
- Useful to drill down for more detailed information

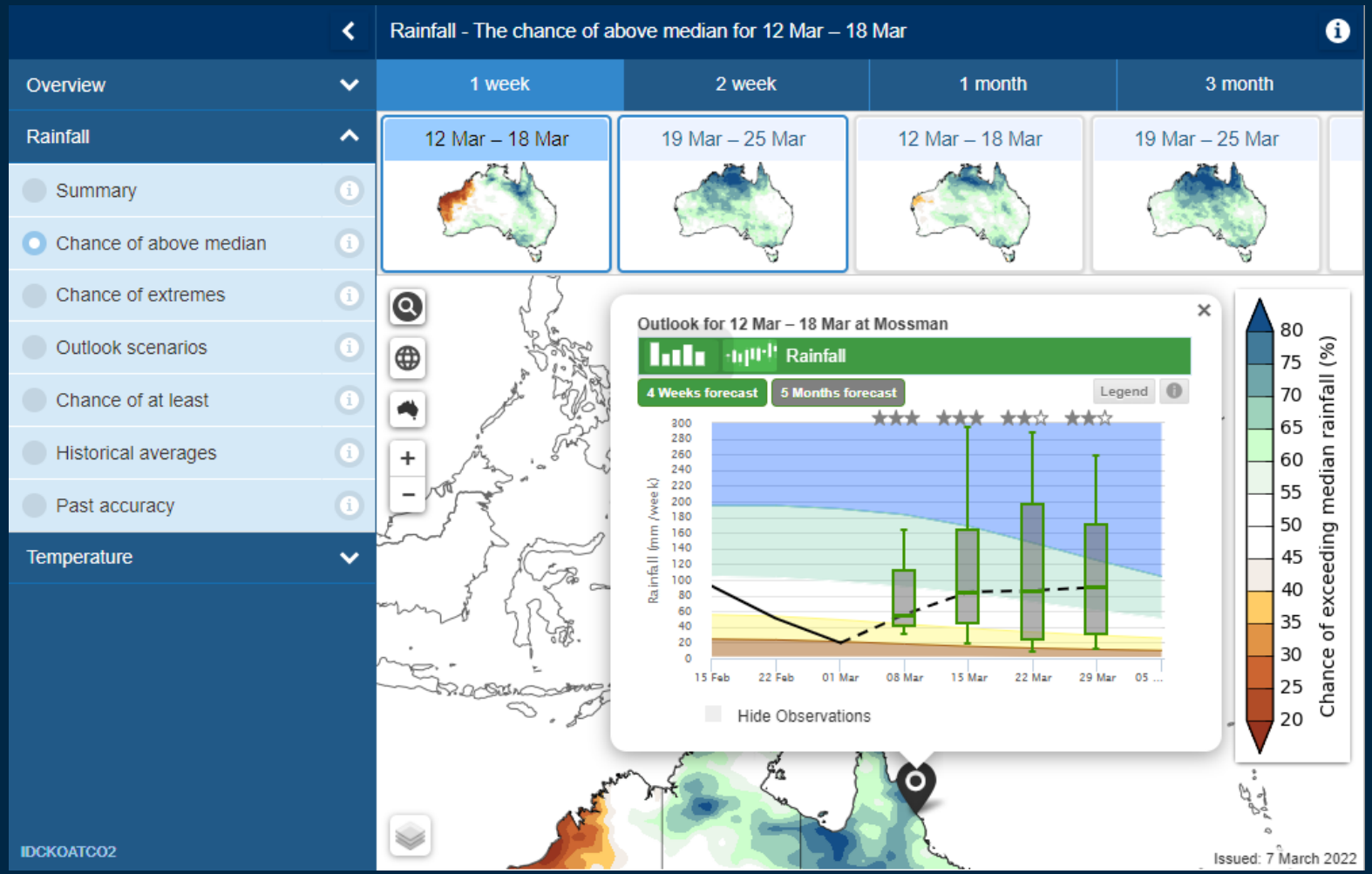
*It is acknowledged that this is a complex product that takes time to interpret, but most believe it to be valuable once understood.*

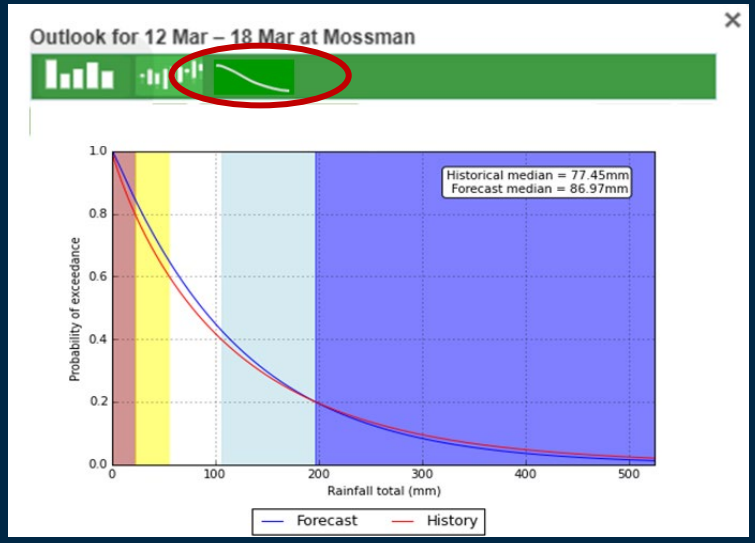


# POE into Climate Outlooks

- We are proposing to place the POE curves in a new tab in the location-based pop-ups along (next to a new tab for the climagrams)
- Will have a slightly different look to the experimental version

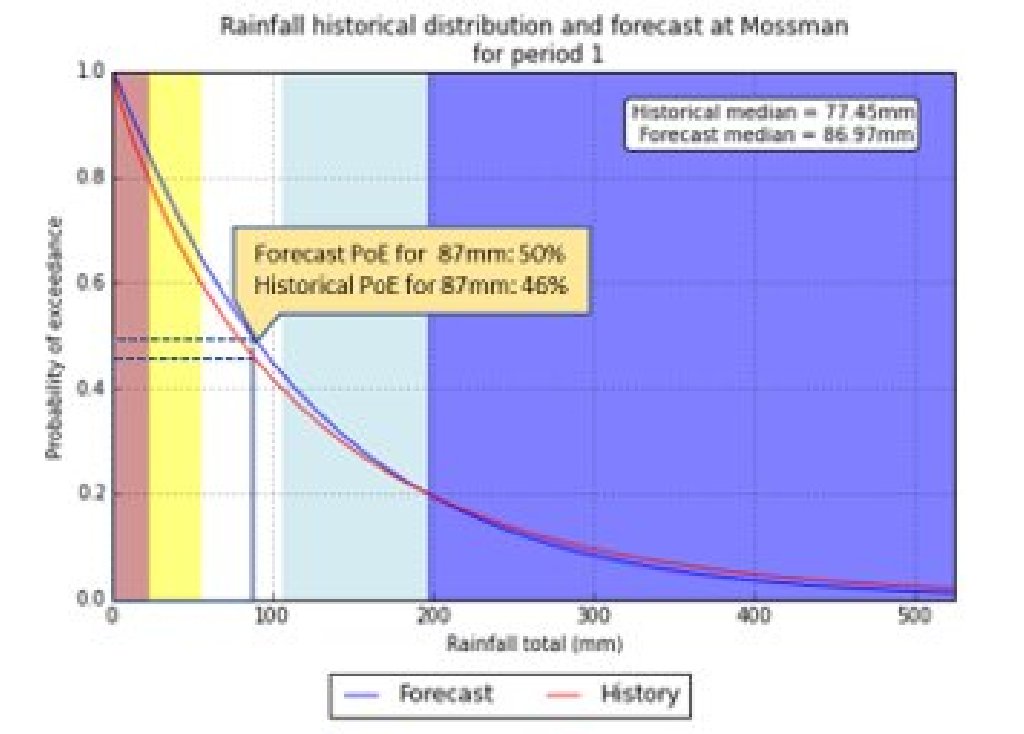


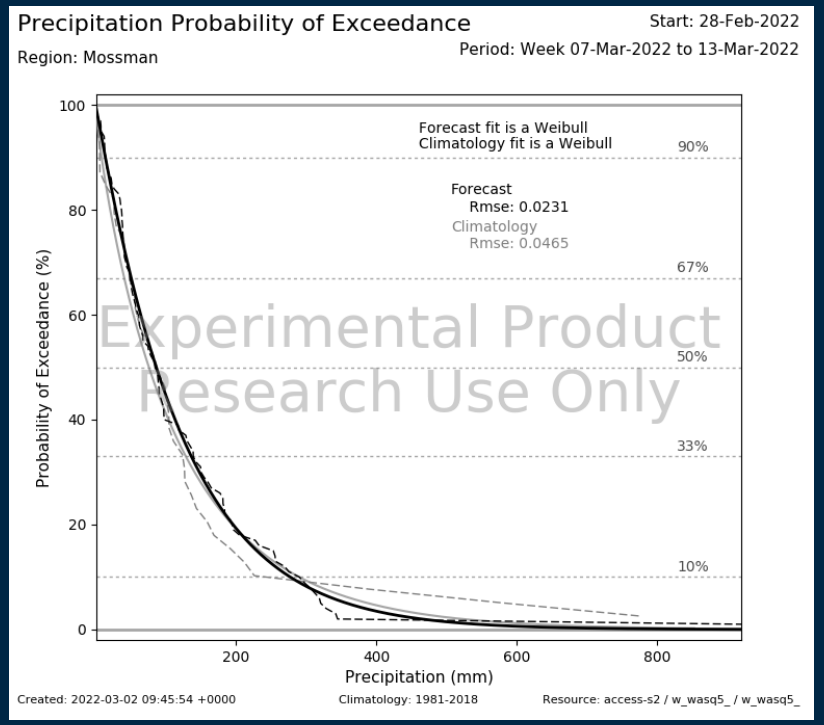
Proposed version

1. Does not include the raw ensemble distribution, coloured background (to give quintile cues)
2. Experimental website look




Features:

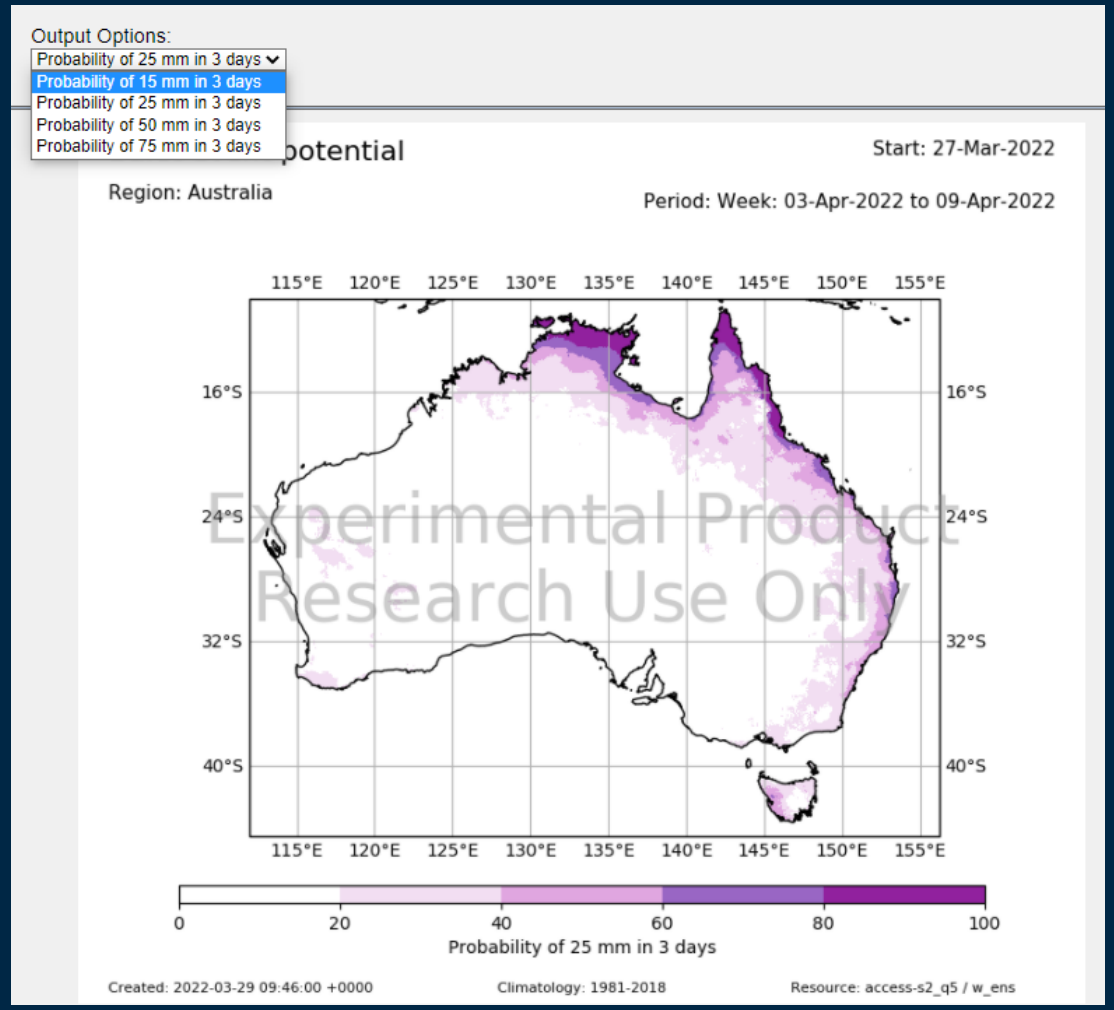
- Hovering tooltip gives probability at any rainfall
- Cuts off at a probability = 0.05
- Background coloured to indicate climatological quintiles
- Potential to provide medians as a legend (if useful)
- Available at all grid points




What's not there:

- Fit statistic
- Raw ensemble distribution
- Skill

# Operational Product #5: Rainfall over 3 days – burst



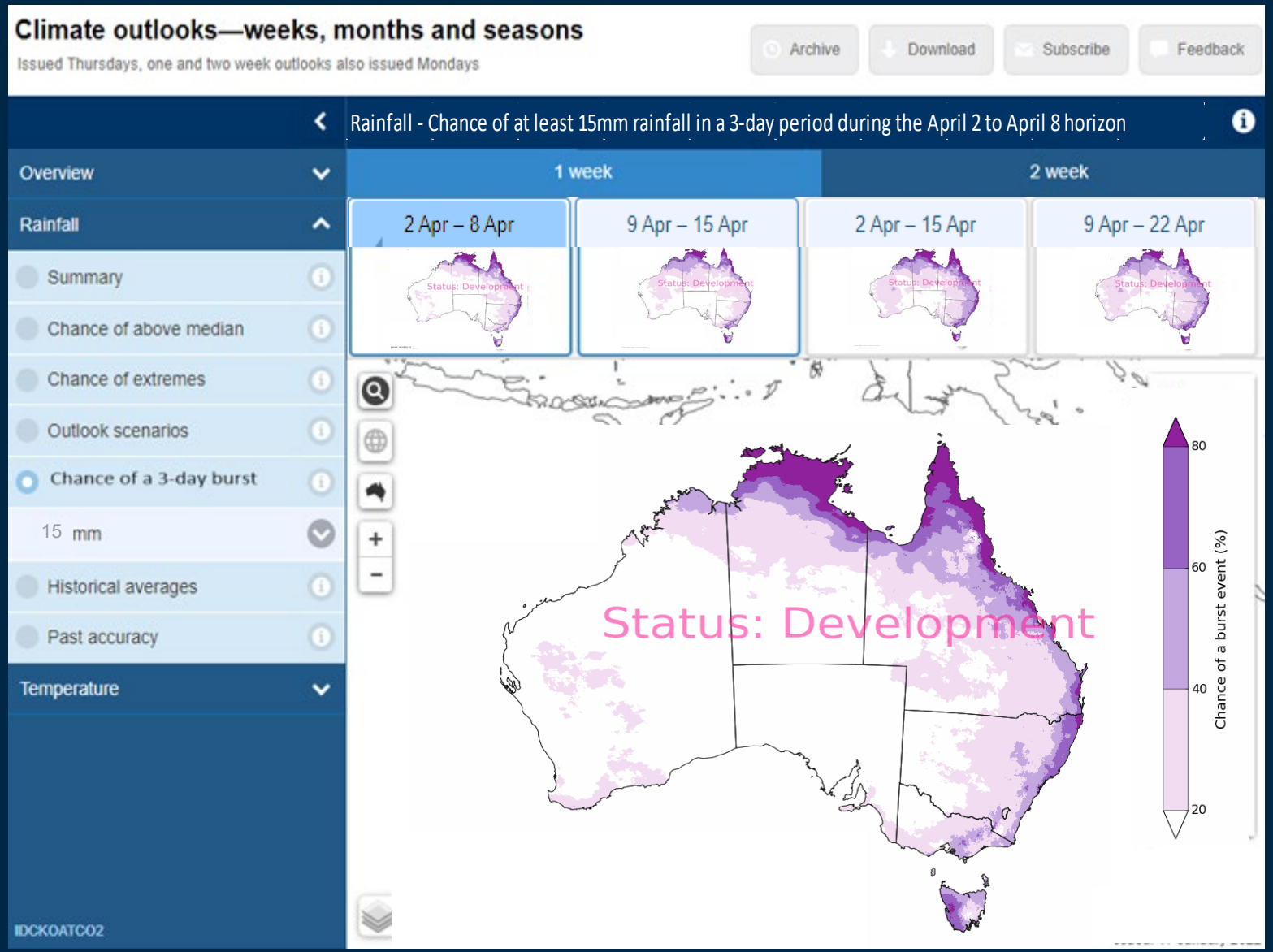

## Characteristics:

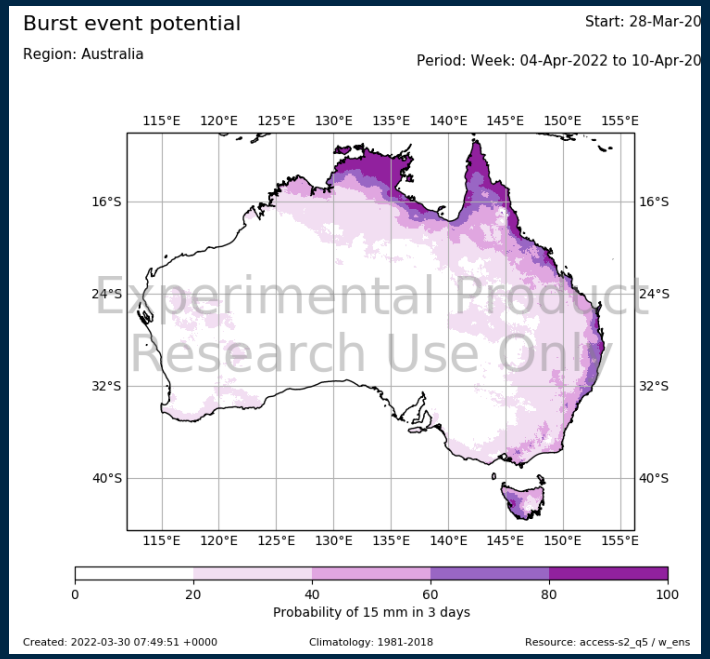
- Available for Rainfall
- Available for weeks and fortnights ahead (i.e., only multi-week)
- Chance of getting x-mm of rain over 3-days (3-day accumulation)
- Preselected thresholds of rainfall are available

## Notes:

- Developed in collaboration with Northern Australia Climate Program project
- Favourable feedback, particularly from northern groups (especially 50 mm in 3 days from northern producers)

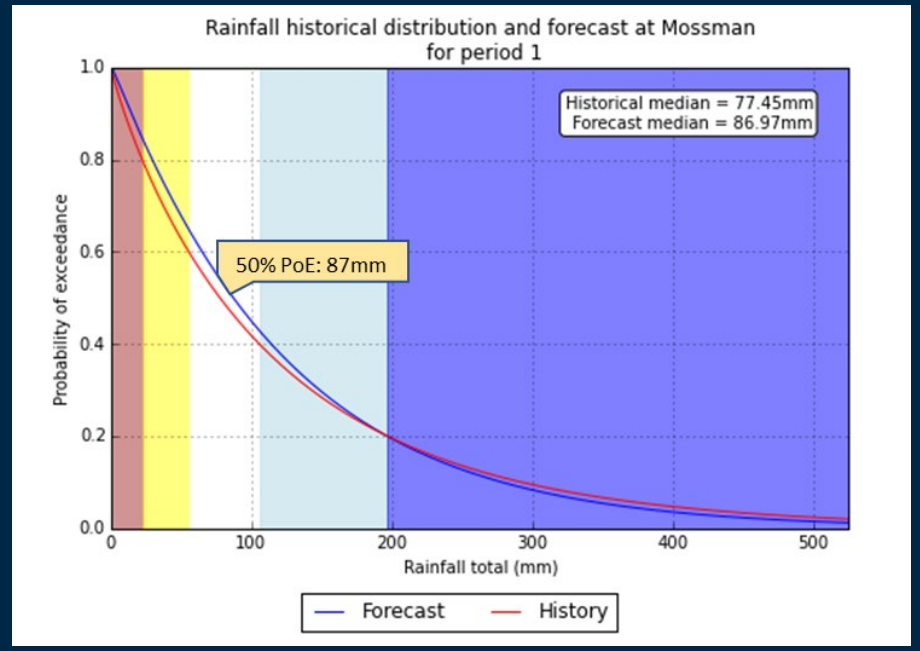
# Maps of 3-Day Rainfall Burst potential

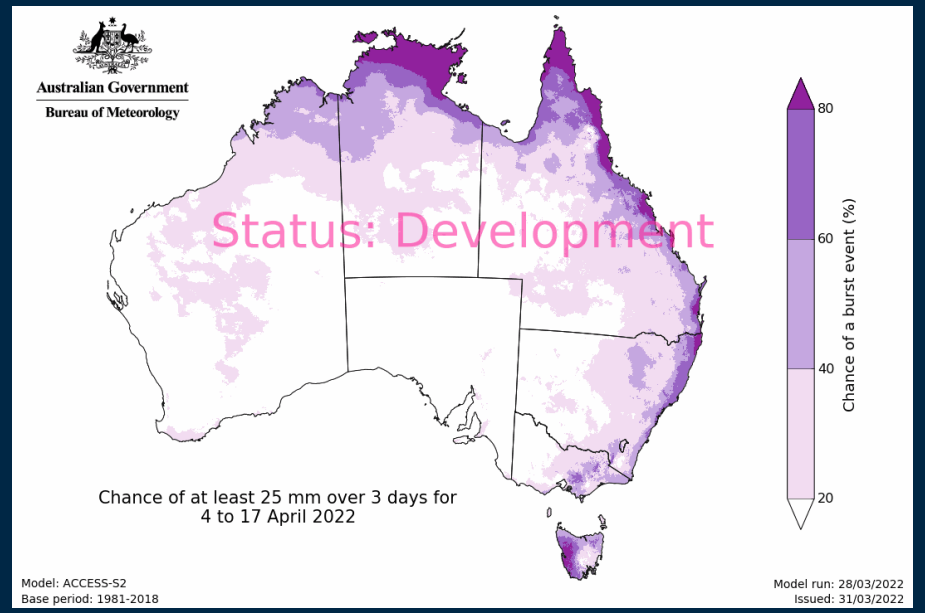


# Points for discussion/feedback:

- Placing the PoE curves in a location based popup – Lack of other options given our page constraints. Keen to hear if you think its an issue.
- Background climatology – we propose to use the quintile ranges which tie in with the extremes (also using the same colour scheme)
- Is it clear that the colour scheme in the background refers to the historical range of data?
- The hovering tooltip could provide POE/mm value at each point along both curves. Should we focus on the probability or the rainfall total at any point on the graph?
- Is the display of skill required?
- How should we refer to these products?
  - PoE
  - 3-day rainfall bursts



# Thank you

Please provide your feedback

Questions?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