



The Bureau
of Meteorology



Natural
Hazards
Research
Australia

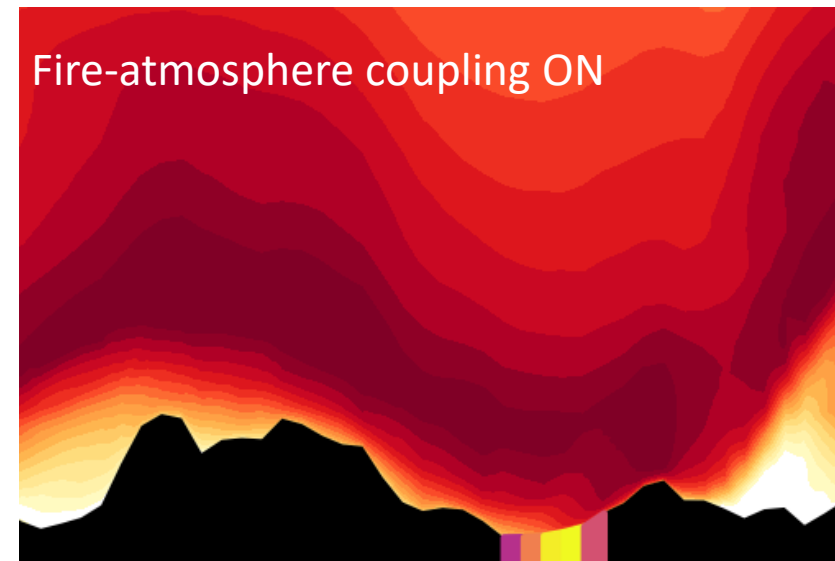
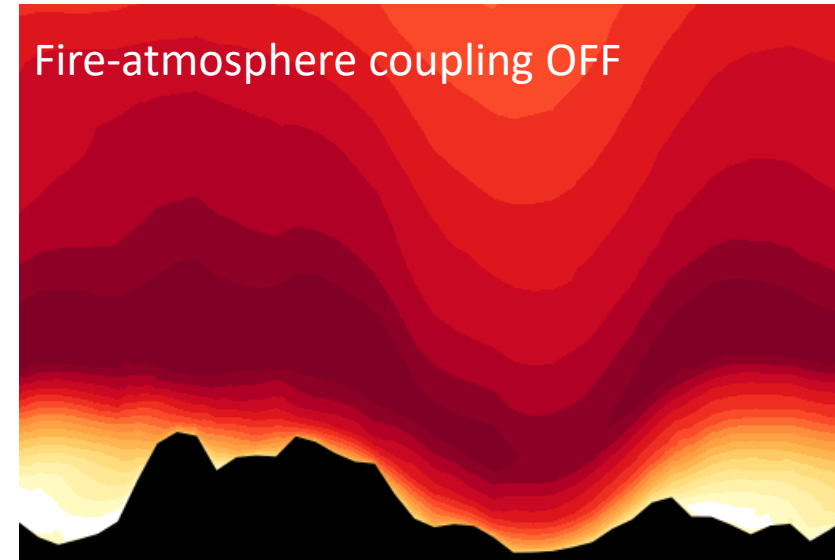
T3-A4 Fire Case Studies

Jeff Kepert and Mika Peace, Bureau of Meteorology

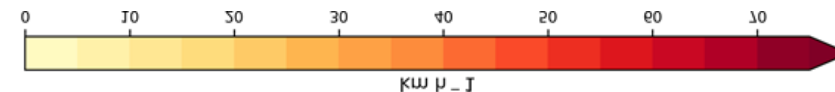
Corryong simulations ACCESS-Fire 0410LT 31 December

Why case studies?

- Lived experience
- Use advanced techniques
- Gather all relevant data
- Utilise a wide range of expertise
- Luxury of time
- Benefit of hindsight
- **Deeper understanding of what, how, why**
- Translate into working knowledge
- Contribute to formal enquiries
- **Information exchange researchers / practitioners**
- **Adapt to changing climate**



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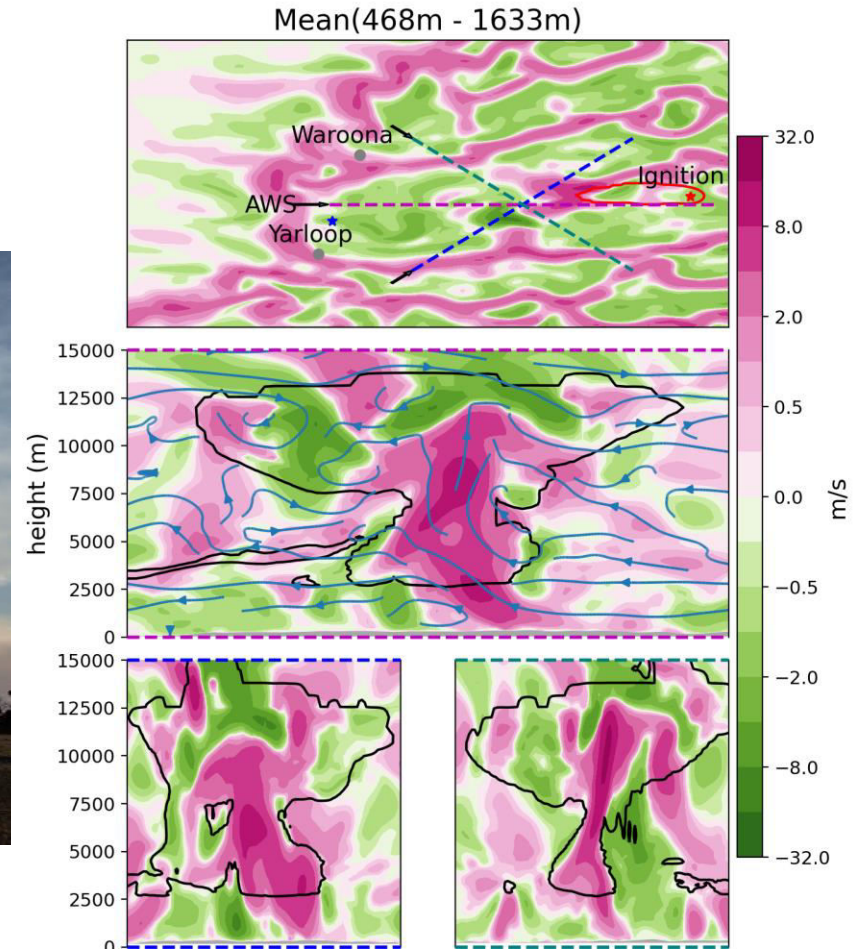


The Waroona Fire – PyroCb, Low Level Jet and Downslope Winds

Vertical motion 2016 Jan 06 14:30 (LT)



Credit: Darren McCagh, Farmhouse Films.

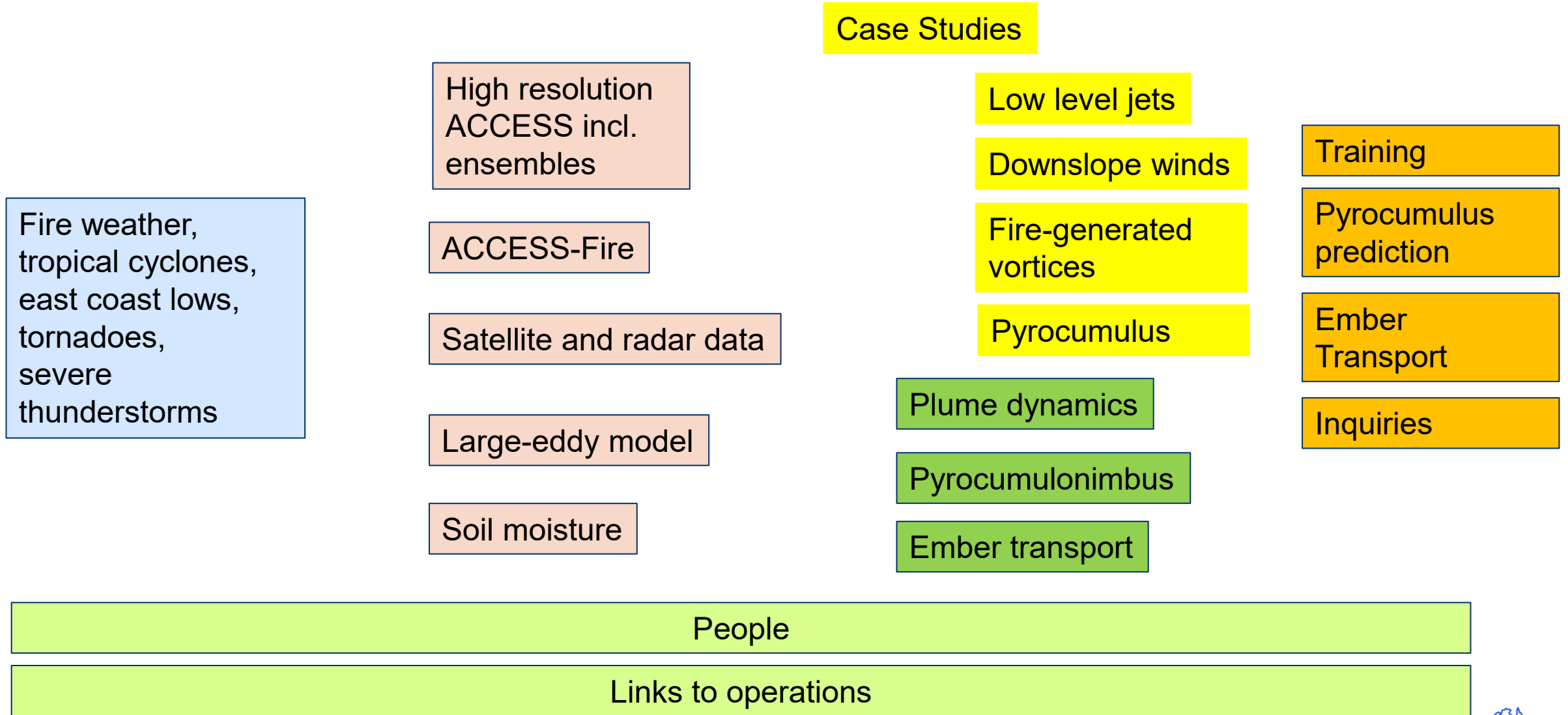


Doing case studies better

- Existing process: ad hoc, slow, requires high level of technical expertise
- Streamlined process: standardised, semi-automated, initial quick-but-deep look, possible to drill deeper.
- Benefits:
 - Deepen understanding
 - Quicker turn-around
 - Less technical skill required
 - Input to inquiries
 - Upskill operational people
 - Strengthen relationships research / operations, across agencies
- Deliver:
 - Studies of Currowan (with NSW RFS) and Woorooloo (with WA DBCA and DFES)
 - Documented framework
 - Streamlined model run and visualisation
 - Input to training material
 - Discussion paper



Our Research Context – High Impact Weather Research, Bureau of Meteorology



Summary

- **Do case studies quicker, faster, better**
- Learnings are available sooner
- Grow the body of working knowledge
- Upskill operational staff
- Knowledge transfer

- **Strengthen relationships and partnerships between research and operations, across jurisdictions**

- **World-leading science, relevant to end users**

