Mitigating the effects of severe fires, floods and heatwaves through the improvements of land dryness measures and forecasts.

Research Advisory Forum / July 2019

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**JASMIN**

JULES based **Australian Soil Moisture Information**

- **Status against milestones**
  - On target.
  - 2018/19 annual report submitted.
  - Positive end-user feedback.

- **Recent progress**
  - Routine updates to JASMIN.
  - Tech-report on downscaling submitted.
  - Research on soil-fuel moisture content relationship under way.

- **Research impacts**
  - Assessed in WA-DBCA research study.
  - JASMIN methodology adopted in BARRA for soil moisture initialization.
  - Tas Parks evaluated JASMIN for placing open fire restriction on national parks.
Data visualization.

- Can easily pull the timeseries over a location as a csv file.
- Only the soil moisture data currently available.
- Data provided as volumetric soil moisture (m$^3$ m$^{-3}$).
- Daily interval
- Top two model soil layers.
  - 0–10 cm;
  - 10–35 cm;
Calibration of JASMIN

For easier utilization of JASMIN

- Utilization of JASMIN in existing operational frameworks.
- Rescale native moisture content from JASMIN to moisture deficit (0 – 200 mm).
- Each calibration product is tailored for potential user requirement.
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BoM THREDDS

THREDDS Data Server | Australian Bureau of Meteorology

THREDDS Data Server | Version 4.2.8 - 20110727.2340 | Documentation
Summary

Data availability

- AFMS / OPeNDAP - THREDDS
- Internal web platform for Extreme Weather Desk
- Routine updates

Calibration of JASMIN

- JASMIN in the prototype National Fire Danger Rating System.
- Soil-fuel moisture relationship.
- JASMIN within NASA's Land Information System (LIS) framework.

Future plans

- Utilization strategy.
- Addresses immediate requirement for more accurate soil dryness product.
- Simple, faster and cost-effective.
Thank you

Acknowledgements
• BNHCRC and the end-users.
• Marta Yebra / ANU / AFMS.
• BoM colleagues in StS.
• Monash University & University of Melbourne for OzNet.
• CSIRO for CosmOz.
• TERN for OzFlux.

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