

Impact Forecasting for Severe Wind and Rain Events

Research advisory forum / 2019

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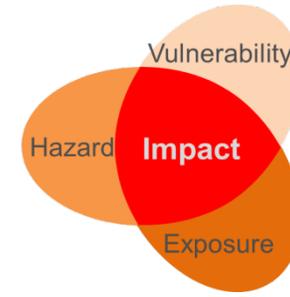
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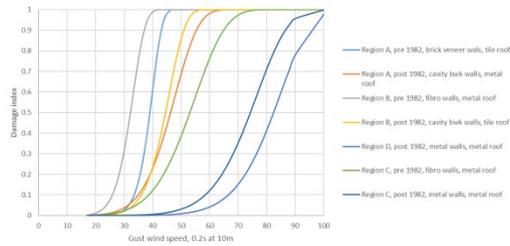
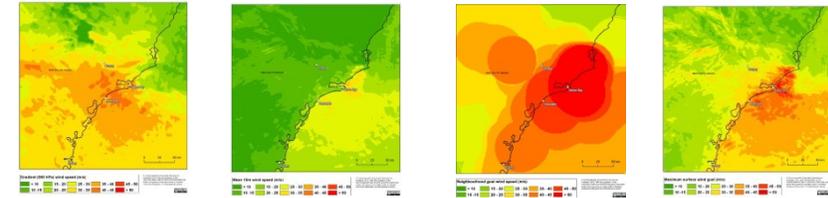
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Where are we at? . A workflow

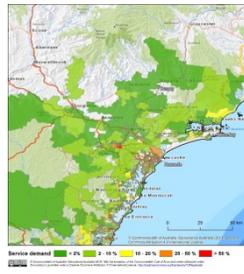


. Multiple wind & rain hazard inputs



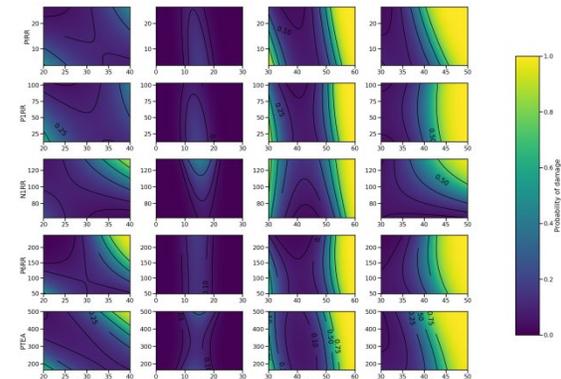
. Vulnerabilities for residential buildings

. Exposure Information from NEXIS

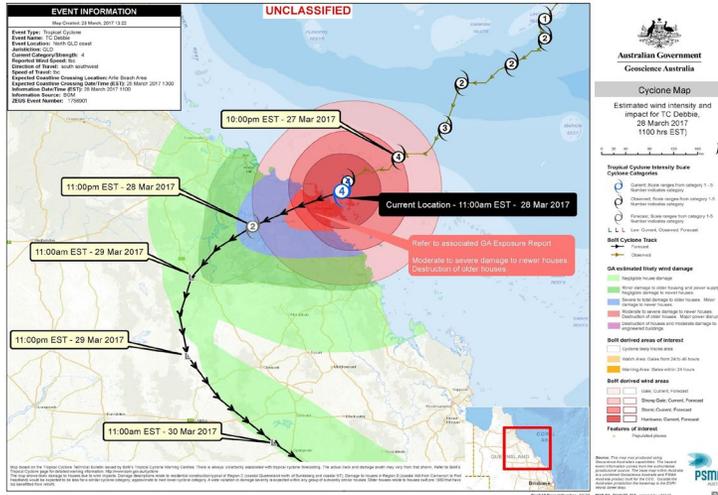


. Spatial Impacts & Damage Assessment Data

. Multi-hazard Predictor



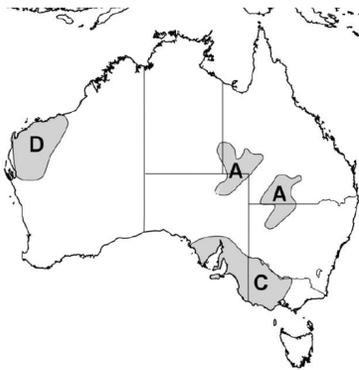
Utilisation Option 1: ACCC Product



Improve current AGCCC products by utilising outcomes from our project work:

- * GA's TC impact product
- * BoM's National Hazard Outlook

Thursday 9 May



Key to hazard risk levels:
 NIL No hazard risks
 GREY Be aware

YELLOW Be prepared
ORANGE Take action
RED Take action – hazard emergency

Add a project-based product to the suite or into the existing products.

Utilisation Option 2: Testbed

- . A testbed in Y1 for near real time appraisal and validation of spatial wind (and possibly rain and wind & rain) impacts on residential buildings?
- . Validation includes enhancing collection of RDA information by EM services and others.
- . Hazard info derived from Bureau City Models
- . Workshop 2 of this current project: test drive this idea with end users in a simulation

Utilisation Option 3: Critical Infrastructure

- Clarification needed: What type of CI? Impacts of what hazards?
- Need end users to facilitate engagement with CI owners / operators
- Might require to find a partner with a critical infrastructure damage model
- An option: end users provide list of significant CI impact events; a project matches events with hazards from BARRA (hazard climatology given impact on CI occurred)

Utilisation Option 4: New Impact Measures

- . Current physical impact measure is the average damage loss ratio (repair cost / rebuild cost averaged over SA1 area)
- . Recast our impact information in different forms and verify these (one goal: easier validation)



Next Steps

1) ONE

2) TWO

