IMPACT BASED FORECASTING:

Supporting improved intelligence for emergency services

Jane Sexton
Geoscience Australia
BOM Weather is the Bureau of Meteorology's weather app, giving you the most accurate weather information as you move around.
WHAT DOES THIS MEAN?
WHAT IS THE LIKELY IMPACT?
WHAT DO I DO ABOUT IT?
WHAT ARE WE HEARING FROM END-USERS?

• Pre-deploying assets can take 12-24 hrs
  - Getting the **where** is important for emergency services
  - Improving **intelligence** to support targeted response

• Critical infrastructure, e.g. hospitals, rely on power connection
  - Is there **likely** to be damage to the power network and will lines be down?

➢ **Don’t let perfect get in the way of good**

- April 2015 The Australian Photo: John Grainger
- ECL June 2016  impact of wild storms on the NSW South Coast. Photo: Bay Post
- Sep 2016 South Australia ABC News
- Sep 2016 South Australia ABC News
WHAT IS THE PROJECT GOING TO DO?

- Hazard
- Exposure
- Vulnerability
- Impact
IMPACT ASSESSMENT (hypothetical event)

Tropical Cyclone track and associated wind field

Vulnerability Models

People and assets exposed to the storm

155,000
52,000
7
52
IMPACT OUTPUTS

$446mn  
16,645

Average damage
- Slight
- Moderate
- Extensive
- Complete

Cairns

0 5 km
ESTIMATING IMPACT - HAZARD

OLD

NEW
ESTIMATING IMPACT - EXPOSURE

Develop maps (e.g. at suburb scale) of:

- age of buildings
- roof type
- number of stories
- etc
ESTIMATING IMPACT - VULNERABILITY

e.g. RFA, AVL, RDA

damage state to be developed

forecast wind speed / rainfall

POWER STATION
Generates electricity

TRANSMISSION NETWORKS

DISTRIBUTION LINES

Who do you Call?
If you require SES assistance during a flood or storm emergency

Life threatening emergency—Call 000

Request SES assistance—direct line—no waiting

www.132500.qld.gov.au

132 500 SES Assistance App

The app is available for both iPhone and Android devices. Please use the Google Play Store or Apple App Store to download the app.

The app can be used to search for the location of the nearest SES volunteer and the level of emergency risk.

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HOW WILL THE PROJECT OPERATE
WHAT MIGHT IT LOOK LIKE

TRIAL IMPACT PRODUCTS FOR THE CCC
TAKE HOME MESSAGES

• The aim is to develop a **PILOT** capability for Bureau forecasters and emergency managers **ONLY**

• The availability and useability of historic impact data will be crucial

• The project will need to manage expectations given the high level of interest in the project
QUESTIONS