

Mapping horticulture tree crops in Australia

11th Australian Mango Conference, Bowen 2017

This is a printed version of a story map. Dynamic content such as videos and interactive maps is only available in the online version at <http://arcg.is/2pKD0tf>



Craig Shephard and Joel McKechnie
Queensland Land Use Mapping Program

Queensland land use mapping program



Example:

[Dimbulah](#) (link available only in online story)

[Horticulture](#) (link available only in online story)

[Land use map](#) (link available only in online story)

[Mango & pop-up](#) (link available only in online story)

ACLUMP:

Mapping compilation

Partners from all states and territories (jurisdictions)

Mapping bananas in North Queensland

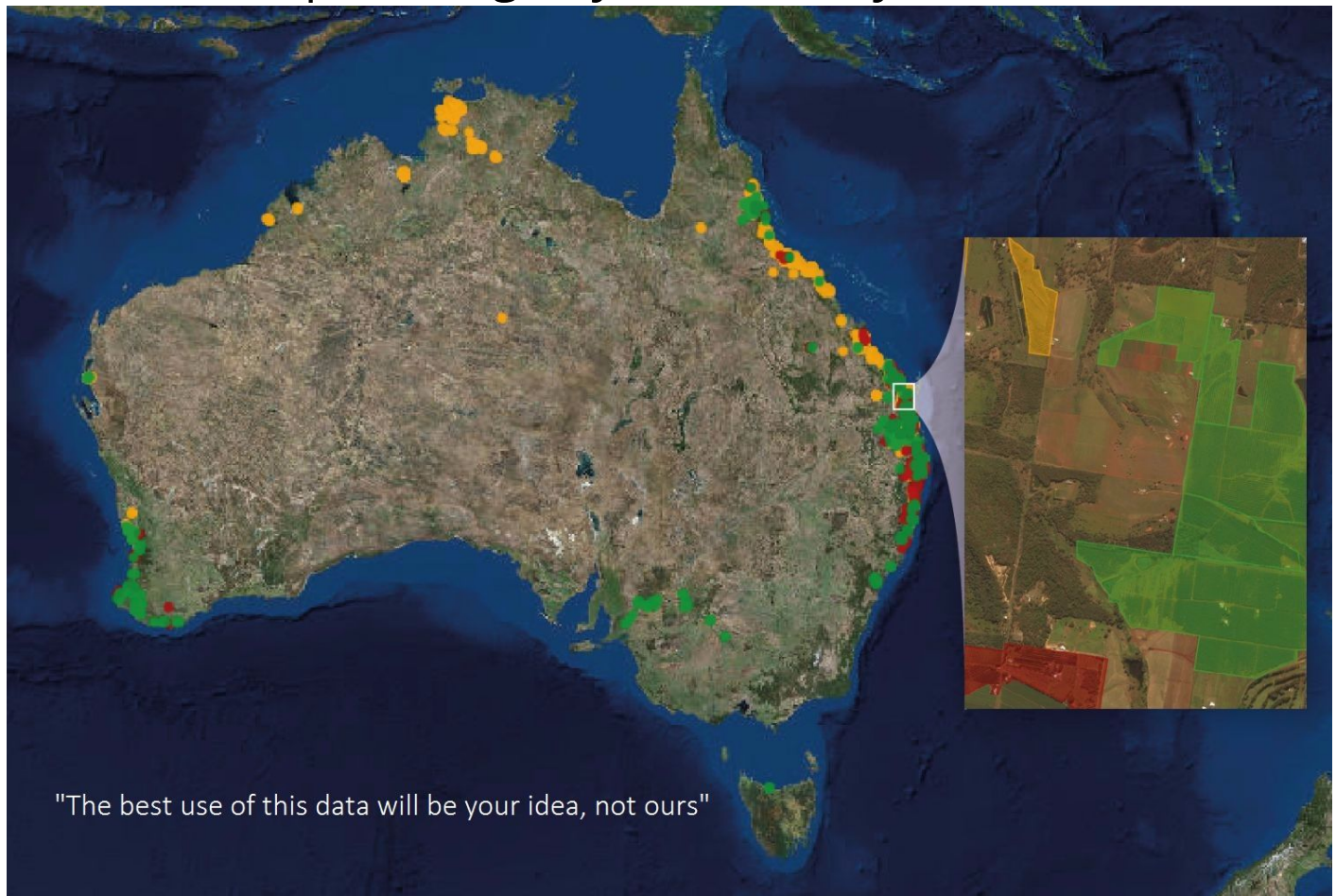




Panama disease tropical race 4

Imagery age example (link available only in online story)— missing bananas? (link available only in online story)

What we are providing to your industry



Location and extent of all commercial orchards

To understand:

- Grower demographics
- Changes to growing area
- Regional and cultivar variation
- Production, quality and yield

To support:

- Efficient and accurate land management
- Improve land management practice
- Export forecasting
- Biosecurity and natural disaster response and recovery

Industry meets Innovation

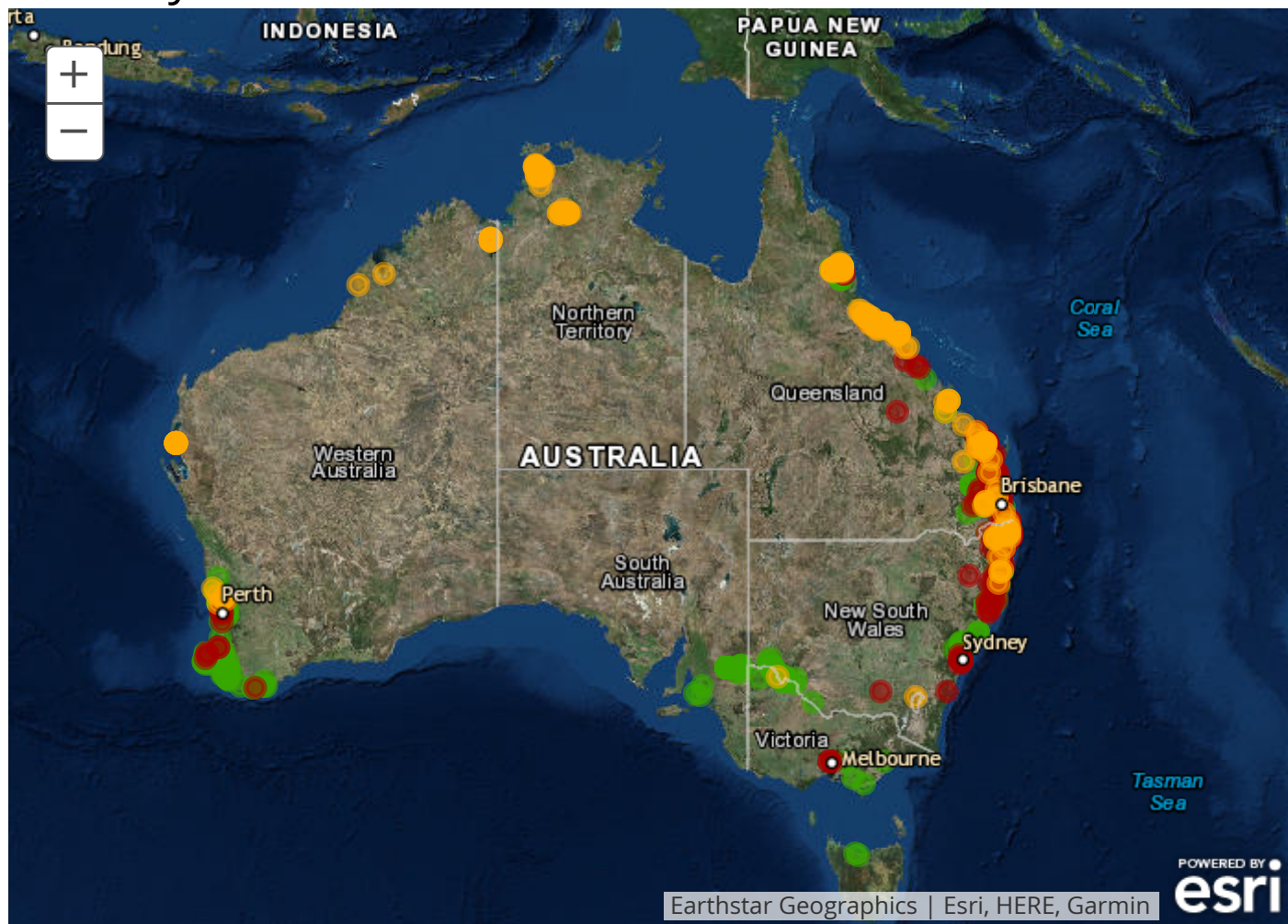


Collaboration:

- Australian Macadamia Society
- Australian Mango Industry Association
- Avocados Australia
- Horticulture Innovation Australia
- Simpson Farms
- ACLUMP Partners (jurisdictions)
- Agtrix
- Universities (UNE, UQ, USyd, CQU)

Mapping workflow:

Industry data



Membership data:

- Geocoded by Agtrix
- Postal addresses not orchard location (link available only in online story)
- Snakker du engelsk? (link available only in online story)
- Some points land on a road (link available only in online story)

Imagery interpretation



Image Services (free and accessible)

Appearance (link available only in online story) (variety, region)

Management (link available only in online story) (hedging, pruning)

New crops (link available only in online story)

Ancillary data sources



Information used to aid interpretation:

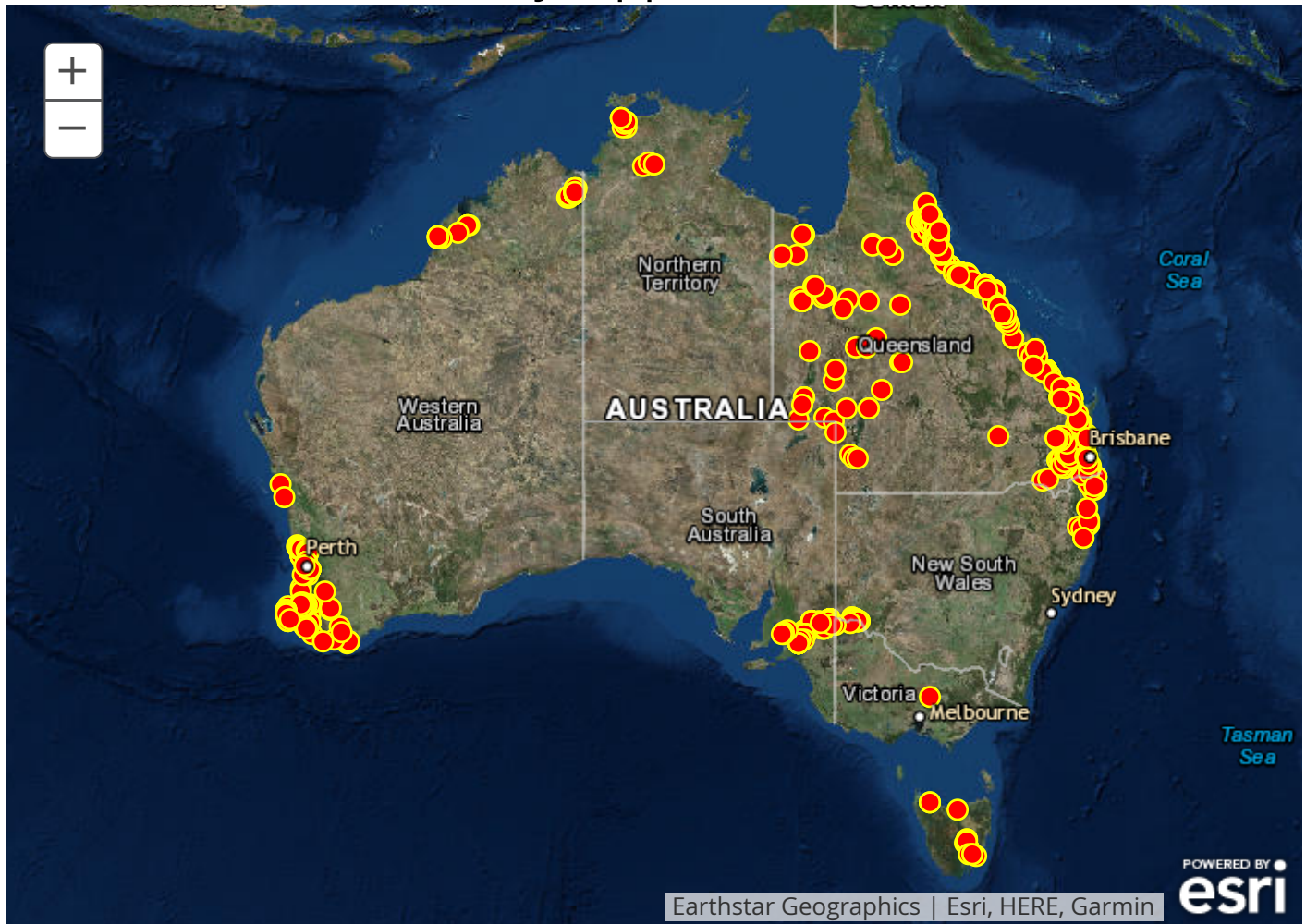
[Google Maps](#) (link available only in online story)

[Google Street View](#) (link available only in online story)

[Property search](#) (link available only in online story)

Picture: Mango orchard, Katherine

Get the 'Land use Survey' App

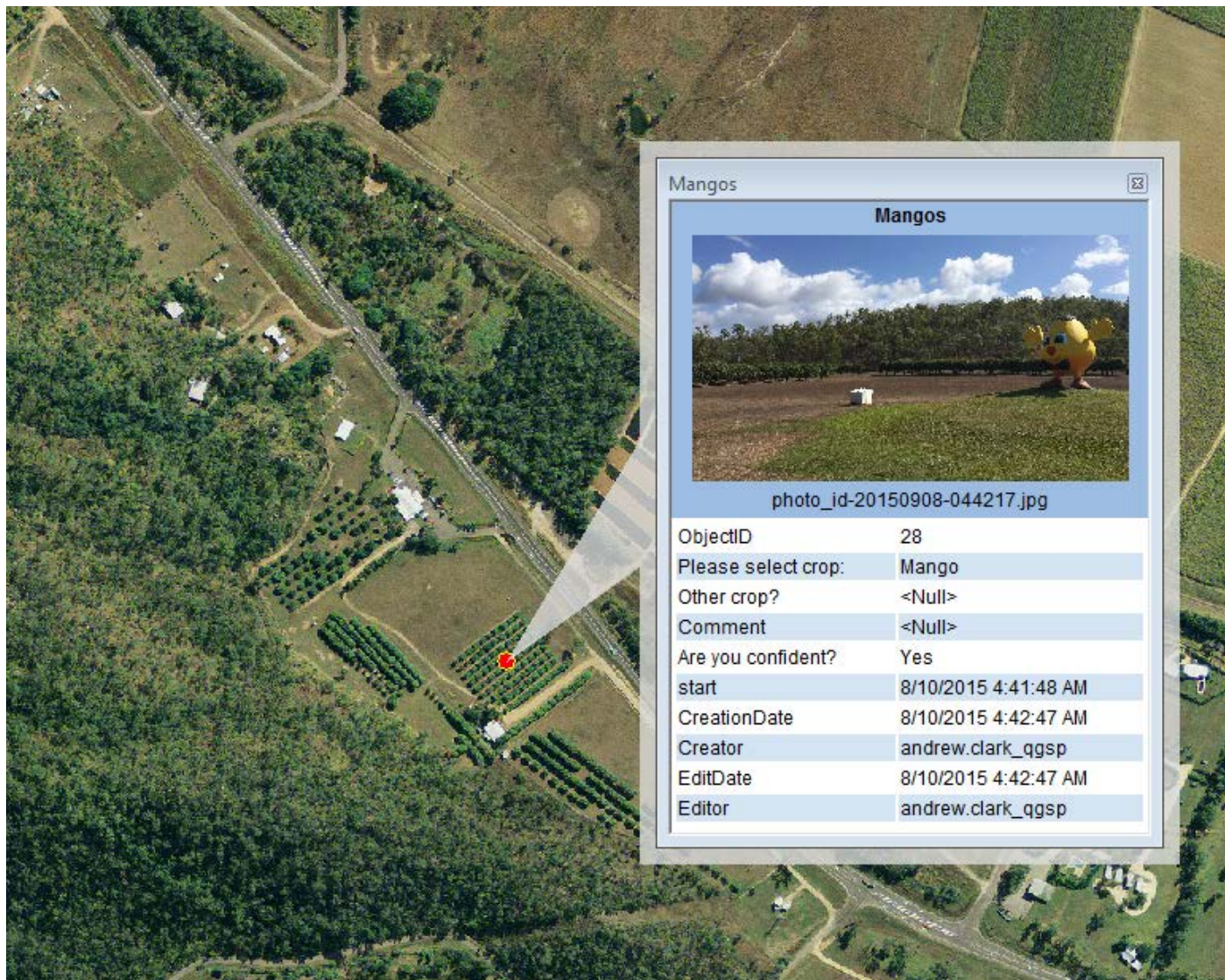


Free on iOS and Android



Land use Survey app

Citizen Science



Field data (ground truth) adds certainty

Picture: The Frosty Mango north of Townsville, Queensland

Locate, map and classify



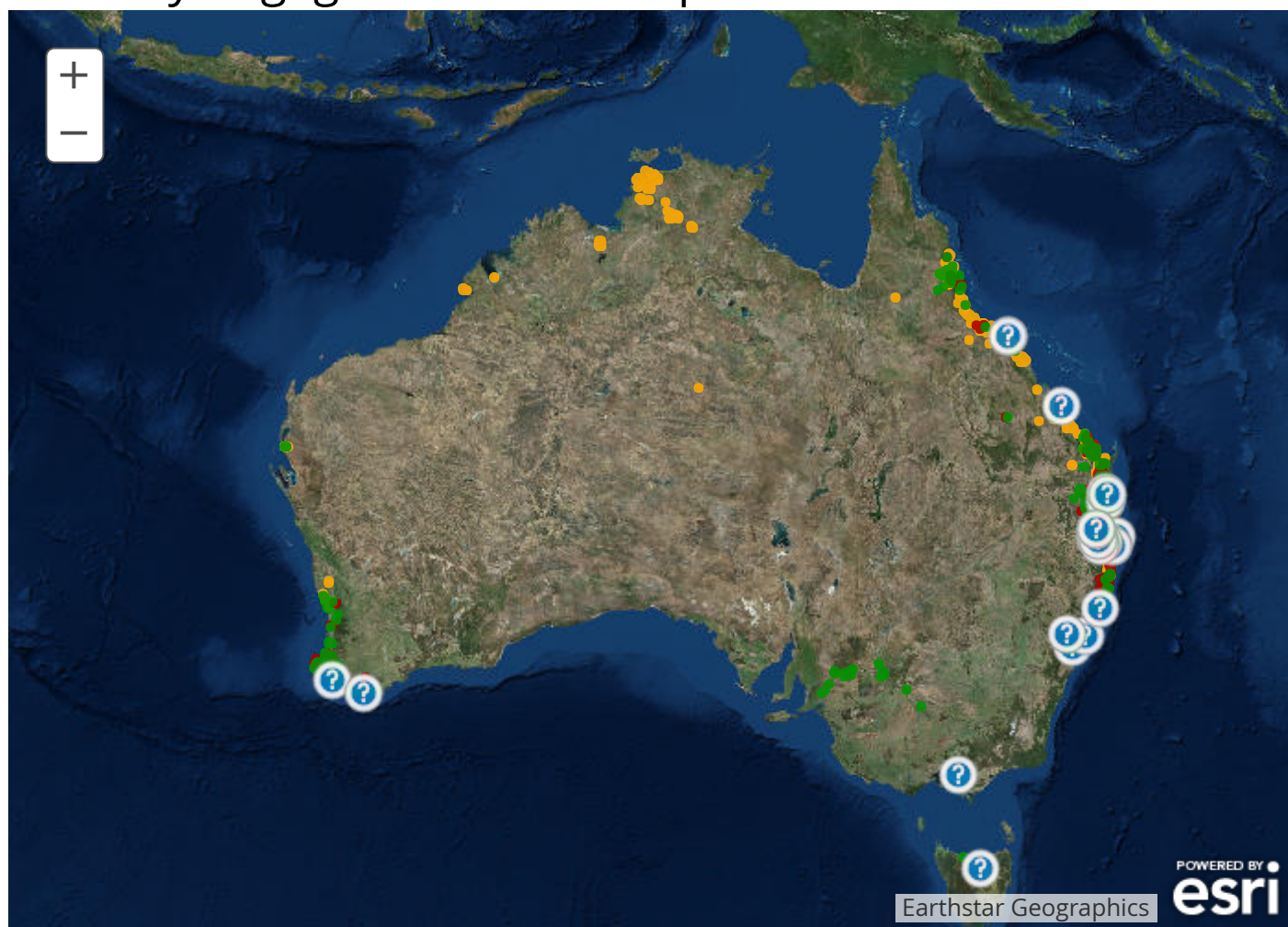
Interpretation process:

1. Imagery
2. Industry data (points)
3. Field observations & photos
4. Polygons + classify (note: Scale / MMU)
5. Final mapping

Spatial location and extent of tree crops classified by commodity

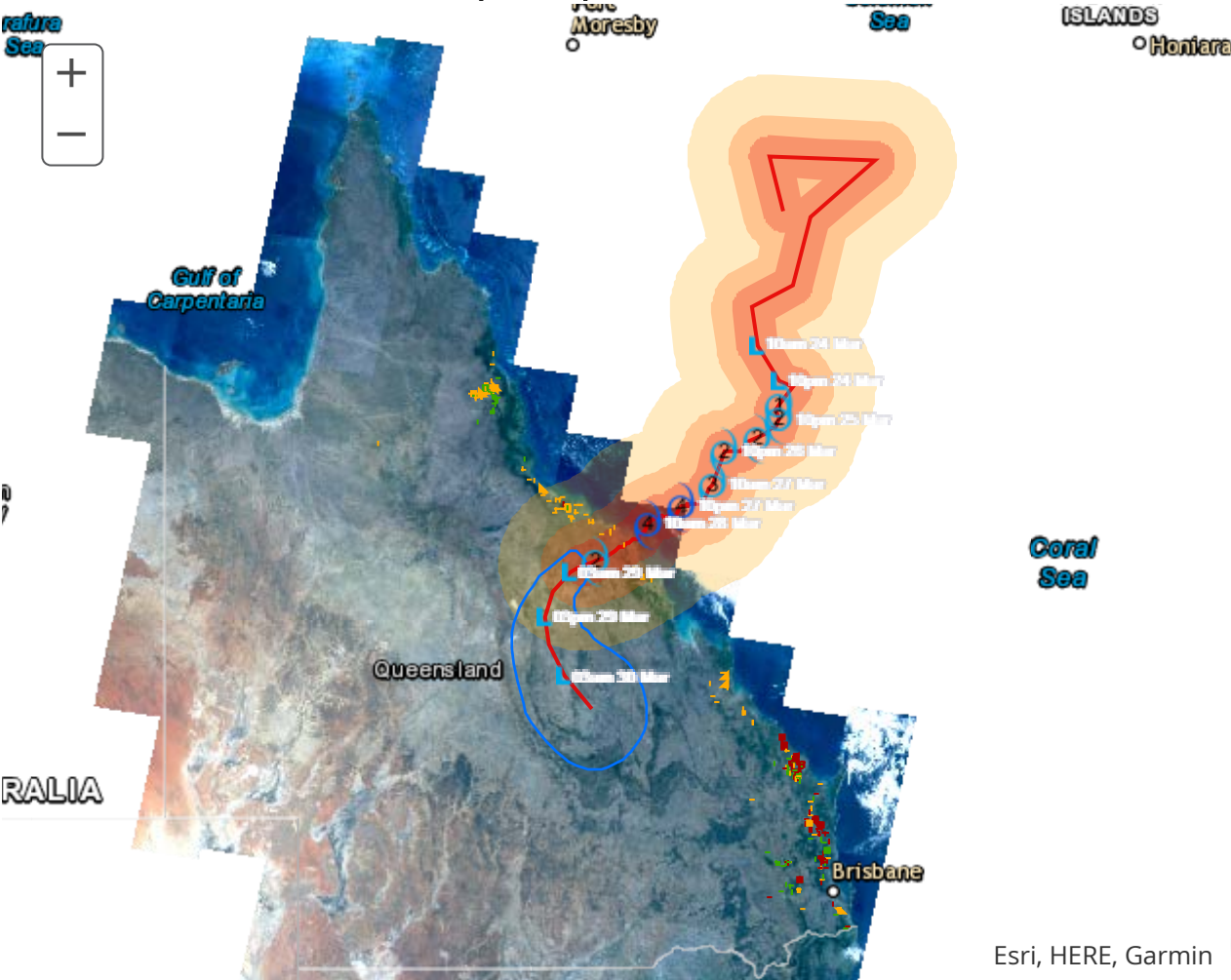
Picture: Mapping example animation

Industry Engagement Web Map



Peer review of draft mapping

TC Debbie - Tree crop impacts



Avocado, macadamia and mango orchards

- Avocado
- Macadamia
- Mango

Cyclone points

- 1
- 2
- 3
- 4
- L

Cyclone track



Likely track area

50km buffer

100km buffer

200km buffer



World Boundaries and Places

World Boundaries and Places

Map live on March 30th, critical to inform impacts, response and recovery. Map shows:

- TC Debbie track (link available only in online story)
- Impact zones (link available only in online story) (buffers)
- Tree crops (link available only in online story)

Milestones



March 2017

Draft mapping for peer review (link available only in online story)

Sep 2017

Final mapping (link available only in online story)

May 2018

Reporting

Picture: Central pivot avocado orchard north of Childers, Queensland

Contact us...



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Craig and Joel