



## Darwin Living Lab newsletter – December 2020

### Building successful partnerships to deliver on the vision for a cooler and thriving Darwin

Darwin Living Lab's **new projects** are underway. Together, they're building the evidence-base for a cooler Darwin. The process for developing these new projects focussed on strengthening relationships with key local partners, City of Darwin and Northern Territory Government, while also bringing in some new collaborators who have expertise on heat mitigation, smart cities and Indigenous knowledge. The new projects are outlined below. Stay tuned for how to get involved including our **webinar series**, which is underway. The first webinar explored – *'How can smart sensor data lead to a more liveable Darwin?'* For those that missed it live the event can be viewed [here](#). Our next webinar will be held in February and will take a focus on *'Understanding community needs for urban green space in Darwin'*. Future webinars will be held around the new project themes.

Two Darwin Living Lab reports that are helping to inform the development of a heat mitigation strategy are now available online [here](#). As a tough 2020 draws to a close, which has also been one of the hottest years on record, we hope you can rest-up and stay cool over the holiday period and look forward to working with you in 2021!

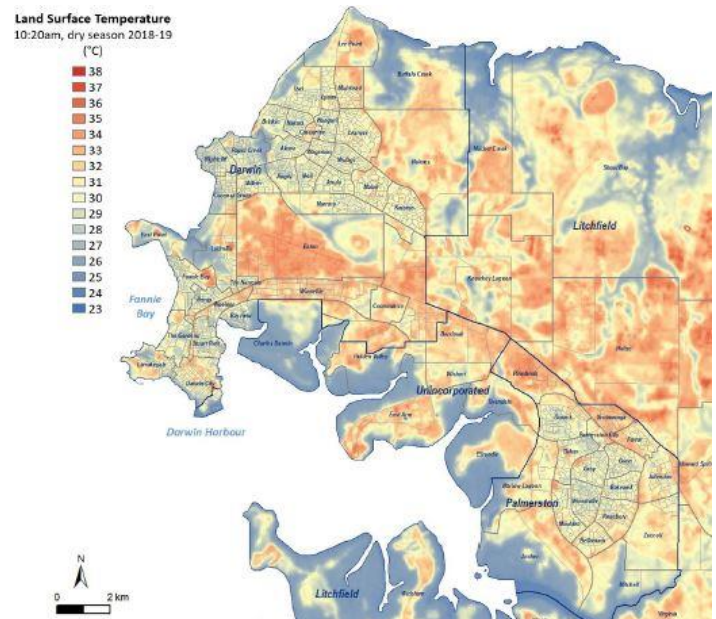


## Release of the latest Darwin Living Lab reports

The Darwin Living Lab has just released two reports. See: <https://research.csiro.au/darwinlivinglab/publications/> The first report details mapping of Darwin's land surface temperatures using satellite imagery in the dry season, which highlights thermal 'hot spots' based on satellite imagery. The report also maps heat-health vulnerability across Darwin using demographic and socioeconomic data to highlight areas where more residents may be exposed to higher temperatures, have a higher risk of heat-related illness, and fewer economic resources to respond, by investing in adaptation strategies like increasing tree cover.

The accompanying report details the latest science in urban heat mitigation, helping to inform future heat mitigation plans by the Northern Territory Government and the City of Darwin.

The report provides a review of international best practice for heat mitigation in similar wet-dry tropical climates that highlights potential actions for Darwin, such as cool buildings, water features, water sensitive urban design, and green infrastructure, such as green roofs. The research outlines best practice ideas from cities with



## Darwin Living Lab current projects

In May this year we put out a call for expressions of interest to engage with the Darwin Living Lab in the following themes: heat mitigation trials and demonstration projects, the development of knowledge products and in community engagement. Responses to this request have enabled the Darwin Living Lab to progress its science and impact with broader collaborations and more input from those local to Darwin. Several new projects have or are soon to commence – more details are available [here](#).

### Heat mitigation, liveability & tropical design

- **Understanding community needs for urban green space in Darwin** (Dr John Gardner and Dr Brenda Lin, CSIRO)
- **Analysis of City of Darwin sensor network data and integration with AirRater** (Dr Erin Dunne and Jennifer Powell, CSIRO; Krishan Maheson and Jack Silburn, City of Darwin; integrating with data from NT EPA and BoM)

### Tracking Darwin baseline & implementation

- **Towards a Digital Twin of Darwin to monitor and navigate change** (Dr Sorada Tapsuwan, Dr Ray Marcos Martinez and Guy Barnett, CSIRO; Ron Grinsell, Joshua Forner, Eric Lede, Krishan Maheson, City of Darwin; NT DIPL.)
- **Larrakia-led Darwin biodiversity values** (Adam Liedloff, Emma Woodward and Jon Schatz, CSIRO; Lorraine Williams, Larrakia partner; Ben Smith, Larrakia Rangers)

### Capability development with partners & universities

- **Developing local capacity to monitor and evaluate urban innovations using UAV's** (Assoc.Prof Hamish Campbell, Dr Deepak Gautum and Dr Hooman Mehdizadeh Rad, Charles Darwin University; Dr Shaun Levick, CSIRO).

## What's next?

- Thursday 26<sup>th</sup> February – Darwin Living Lab webinar on Understanding community needs for urban green space in Darwin'. Details to be available early next year.
- Late February release of the 'Your Tropical City' website an online resource for tropical design and living in Darwin.

**Stay tuned for more in our next quarterly update. For more information or register for updates go to:**

<https://research.csiro.au/darwinlivinglab/>