

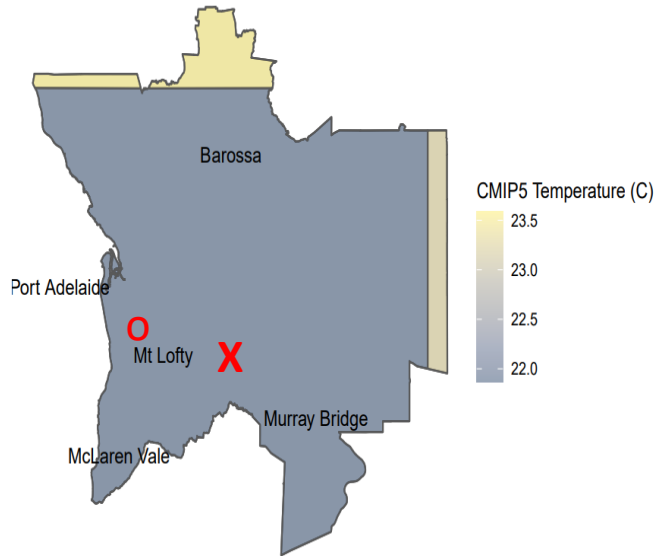


Setting the standard for projection of climate-related risk and opportunity

# Climate Projections – Resolution

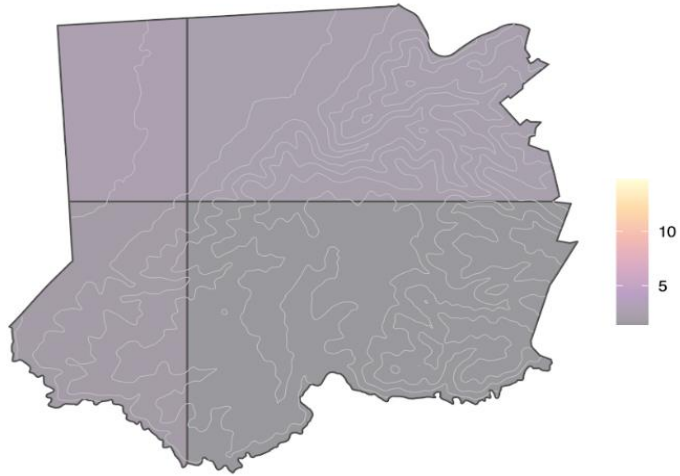
## Mitcham LGA

Average Daily Maximum Temperature, 1990-2020

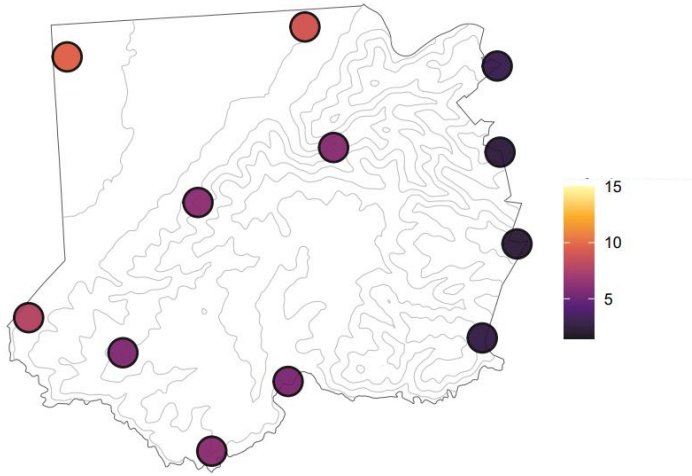


IPCC

Number of days/annum with Maximum Temperature > 38°C, 2010



NARClIM1.5

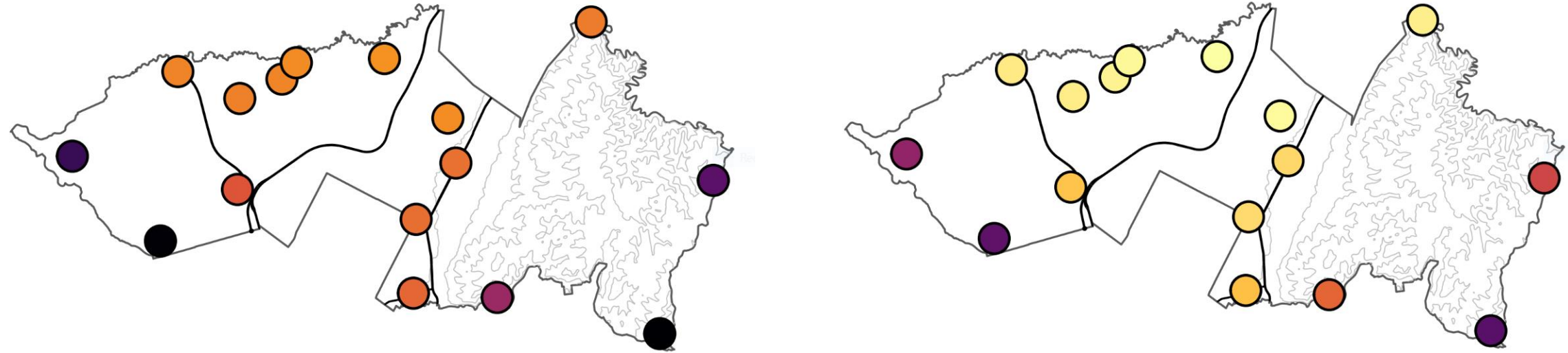


Forty2 Science

# Playford LGA: 2010-2050

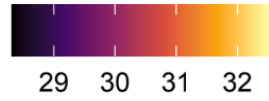
Forty2 Science

## Average Daily Maximum Temperature in January



2010

Average Temperature



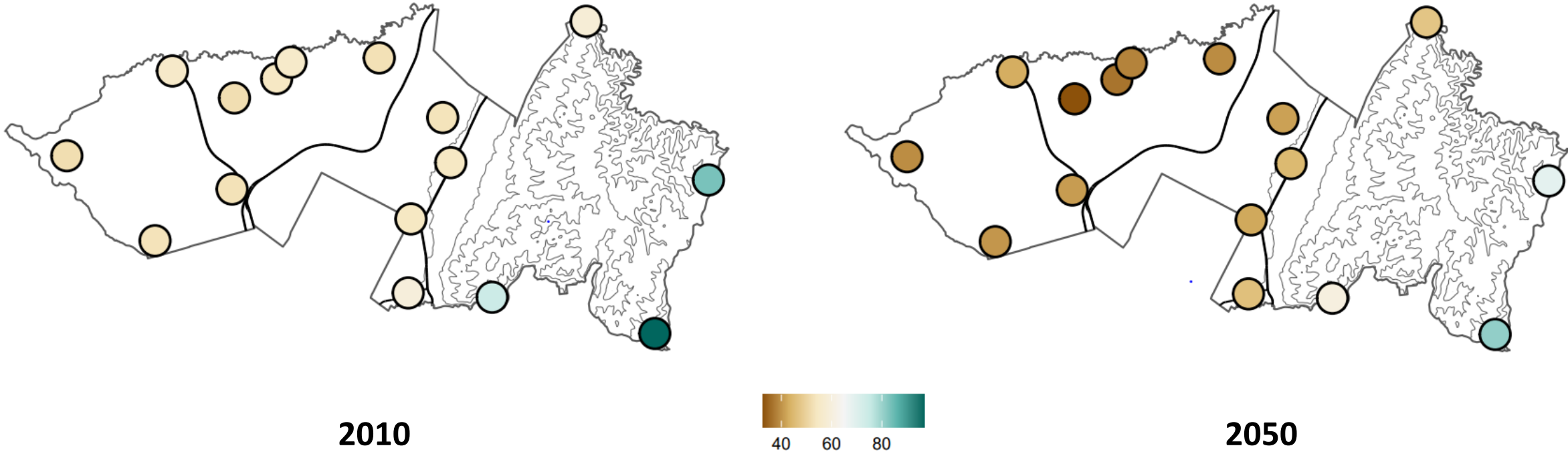
2050



# Playford LGA: 2010-2050

Forty2 Science - TII

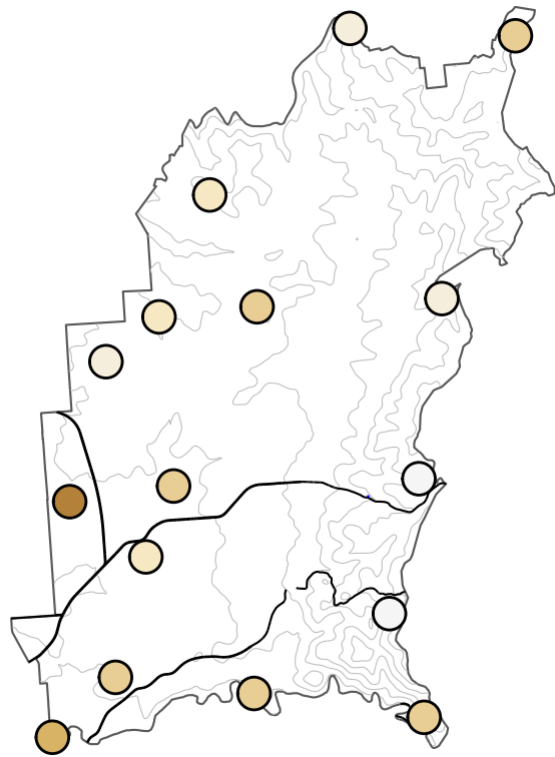
## Average Winter (June) Rainfall



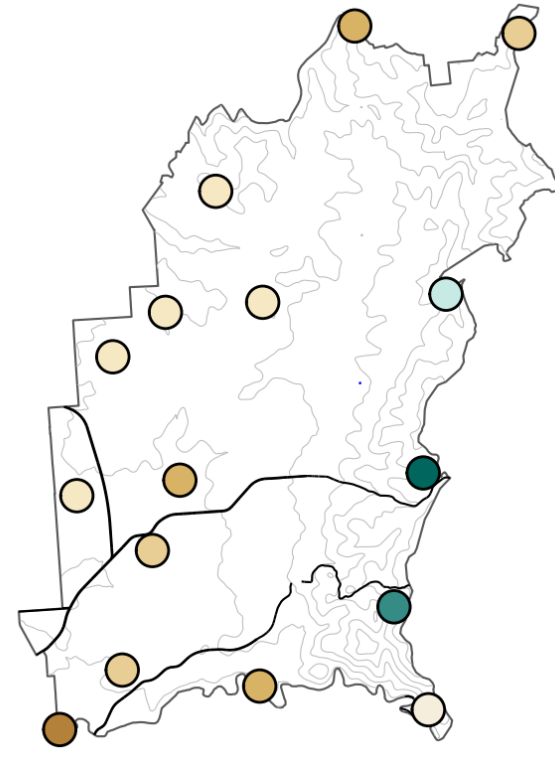
# Tea-Tree Gully LGA: 2010-2050

Forty2 Science - TII

Days with Rainfall > 60mm

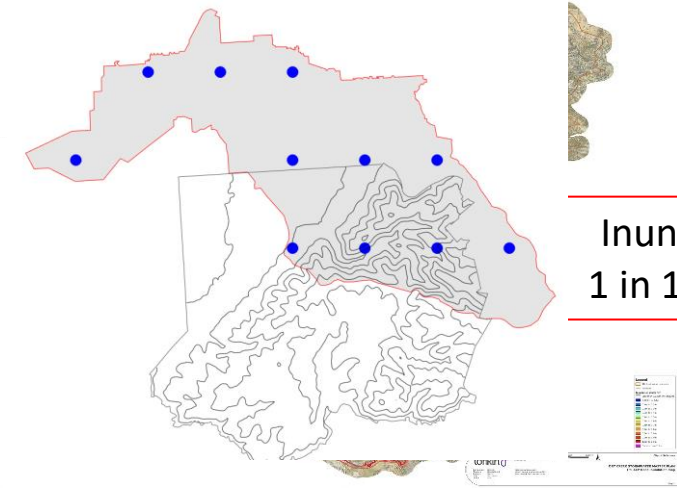


2010



2050

# Location-Specific Flood Risk



Inundation Map:  
1 in 100 year flood

## Rainfall Events (Historical)

One in  
x years      Events  
per year      Eq. 24 hour  
Rainfall (mm)

## Rainfall Events (Forty2 Science)

2030      2050      2070      2090

500	-	138.7	140	250	200	75
100	-	109.0	65	65	45	30
50	-	96.9	40	40	25	20
20	-	81.6	22	18	13	11
10	-	70.9	12	10	8	7
-	0.2	61.6	0.15	0.19	0.22	0.26
-	1	41.0	0.6	0.81	0.8	0.77

# High Resolution Climate Projections

## LGA Implications

Quantitative.....Accurate.....Predictive



### Land Use

- Unviable crops/viable alternatives
  - Agriculture, energy
  - Housing
  - Urban plantings
  - Biodiversity
- Changes in output – logistics and supply chains
- Urban design



### Heat

- Future frequency and intensity of heatwaves
- Health effects
  - Days off work
  - Hospitalisation
  - Excess death
  - Comorbidities/SES
- Energy storage and transmission



### Fire/Flood/Drought Risk

- Governance
- Organisational Adaptation
  - Planning and Service Delivery
  - Cost-Benefit analysis
  - Depreciation
  - Insurance

F O R T Y 2  
S C I E N C E









