

Wednesday, 27 March

Plenary 1: Opening Keynotes

Climate and weather forecasts

Prof. Erland Källén, Director, Centre for Climate Research
Singapore



**METEOROLOGICAL
SERVICE
SINGAPORE**
Centre for Climate Research Singapore

Climate and Weather Forecasts

Prof Erland Källén
Director (CCRS)

InterMET Asia

27 March 2019

Forecast Timescales



Weather
Forecasts



Seasonal
Predictions



Climate
Projections

Short timescale
(hours/days)

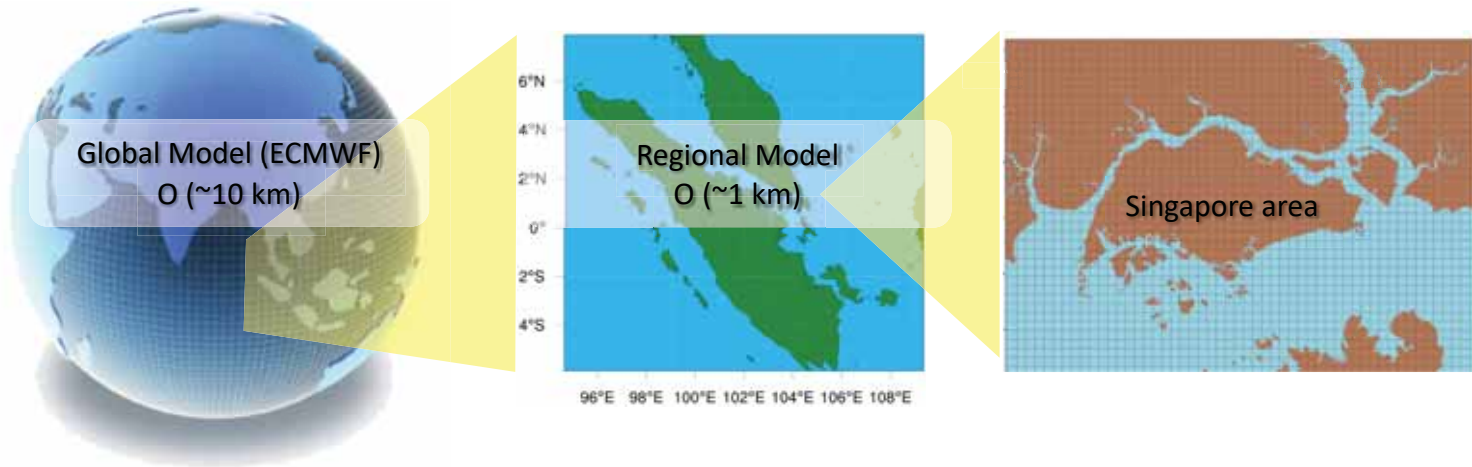
(weeks/months)

Longer timescale
(years/century)

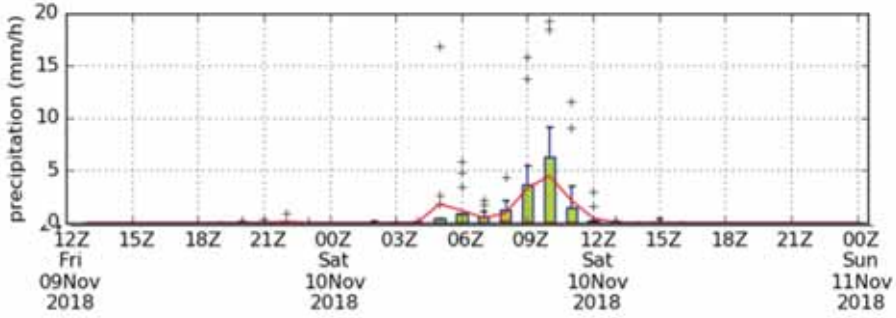
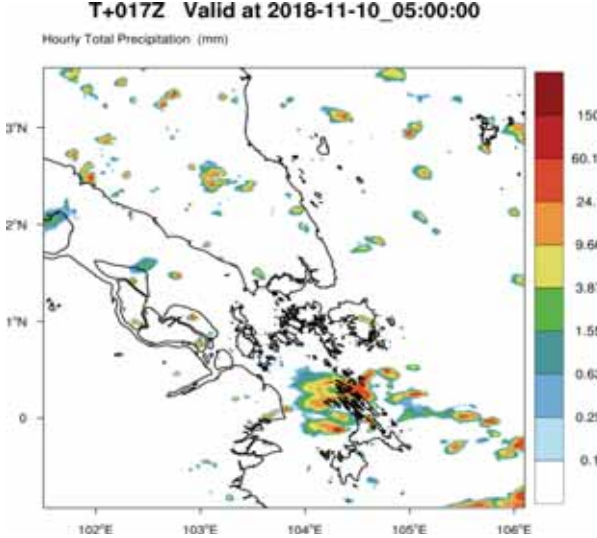
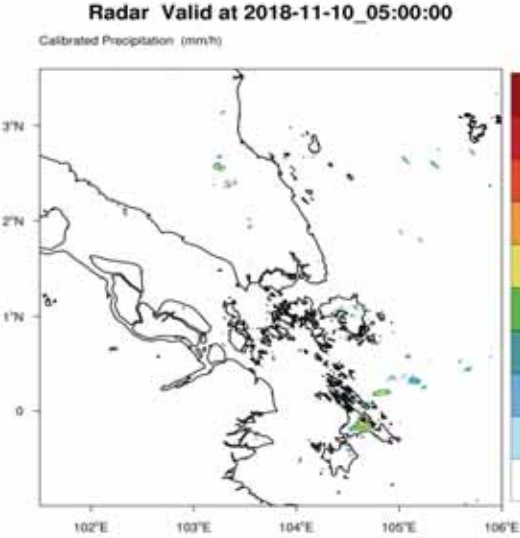
Tropical NWP: Very High Resolution Modelling

- Requirements:**
- Resolve convective-scale thunderstorms
 - Resolve land-sea contrasts and orography

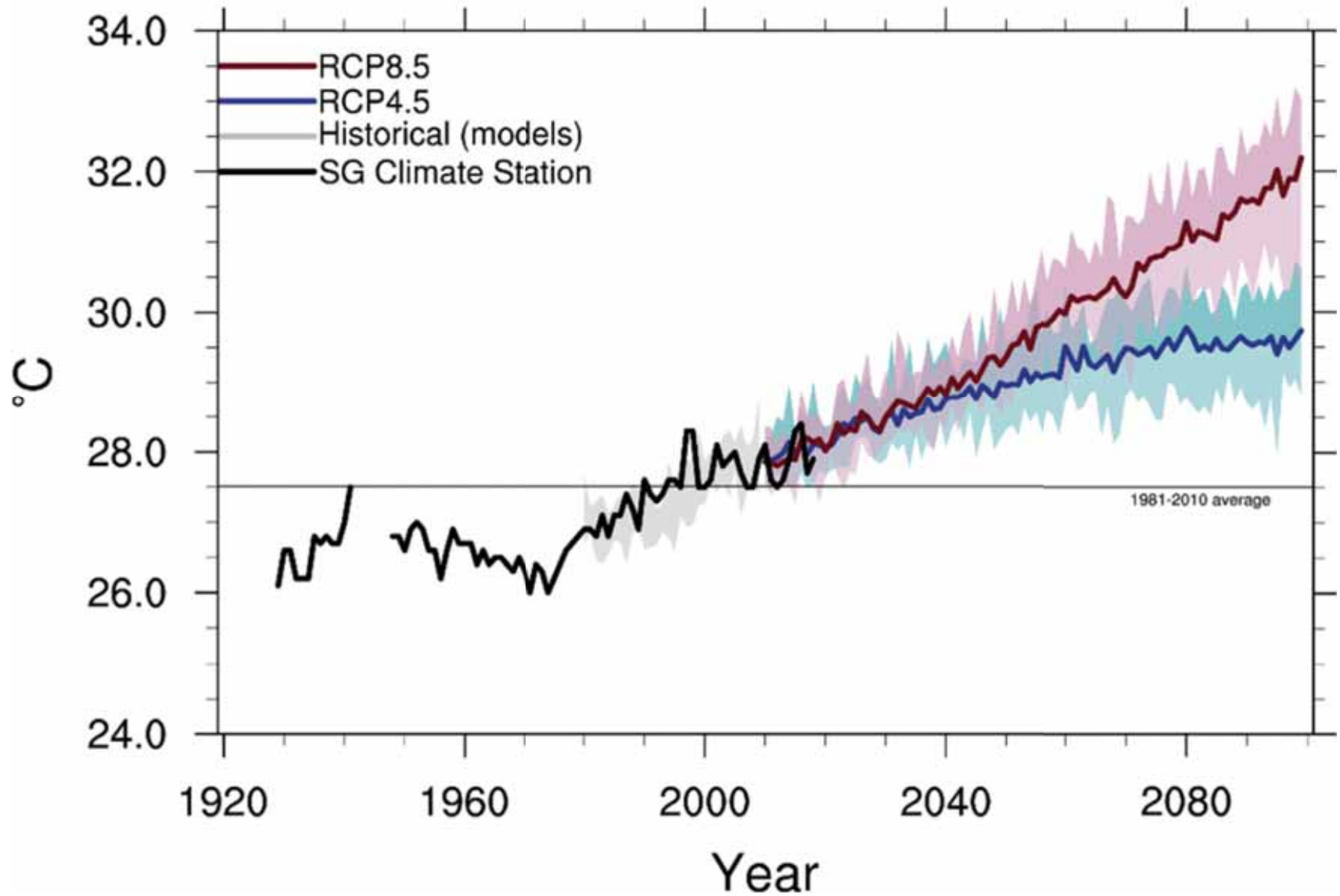
- Challenges:**
- Computationally expensive
 - Convective-scale NWP is cutting-edge research



Choa Chu Kang and Bukit Batok flooding 10 November 2018



Observed and Projected Singapore Temperatures Annual Mean



Conclusions

- Regional high resolution model for
 - Predicting intense precipitation events
 - Climate change simulations
- Sea level rise



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