C3WE Components

Engineering for Climate Extremes Partnership
Workshops, Blogs, Videos, Newsletters, Tutorials.

Rising Voices: Collaborative Science with Indigenous Knowledge for Climate Solutions.

Global Risk, Resilience, and Impacts Toolbox
Community Planning and Adaptation Resource.
GRRIT Goals

• Actionable science for community adaptation and planning

• Aiding Societal Actions
• to:
  • Increase Resilience
  • Improve Planning
  • Support Relocation
  • Etc.
Collaboration with, e.g., Tableau, Willis TW, IAG, Geoscience Australia, OASIS, Academia.
Seasonal Forecasts Days >30°C

Days over 30°C by US County

Seasonal Forecast
For June-July-Aug 2017

Applicable anywhere on earth
Temperature, Rain, Wind

(Visualization: Tableau)
Santa Clara County Days >30°C

Days Exceeded

Seasonal Forecast
For June-July-Aug 2017

(Visualization: Tableau)
Cyclone Damage Potential

Incorporates: Intensity, Size, Translation Speed

(Visualization: Tableau)
Forecast Probability Distributions:
- Out to seven days
- Seasonal
- Decadal

Global Landfalling Cyclone Wind and Damage
- Observed
- Synthetic

(Visualization: Tableau)
Impact of Climate Change on Hurricane Rainfall

Accumulated Rainfall

Control

SST +2

Burnett River

Richmond River

Hastings River
Rainfall Changes by River Basin

Total Rain (mm) 4x4 km areal average per basin
Assessing Hail Impacts: Climatology

Observed Average number of hail storms per month (1979-2015)

Nr. of hail storms per year in 0.75° x 0.75° area
Assessing Hail Impacts: Synthetic

Simulated Average number of hail storms per month (1979-2015)
Summary

• C3WE
  • ECEP
  • Rising Voices
  • GRRIT

• Aiding Societal Actions to:
  • Increase Resilience
  • Improve Planning
  • Support Relocation
  • etc.

• Through a Peer-reviewed set of Appropriate Tools