Guam & CNMI
PI-CSC Science for the Pacific Islands Region

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CSC 101

- Origins with Obama Admin *sustainability* and *green growth* initiatives
- Manifested in Dept. of Interior via Secretarial Order 3289 (Jan. 2009)
- Public-Private partnership – CSC is hosted by a University, public funds split to CSC and University
- Funds flow from Congress to USGS to 8 regional CSCs
- Tap into the science horsepower of University and USGS, partner with others (e.g., NOAA)
PI-CSC Region of Service – Hawaiian Archipelago, US-Affiliated Pacific Islands, and Remote Refuges
CSC 101

• non-FACA Stakeholder Advisory Committee provides counsel on regional priorities
• Optimize mission, minimize redundancy
• Practical science designed for resource managers
• Stick to the science – CSCs are policy-neutral, no advocacy. Provide knowledge and tools to support resource management decisions.
PI-CSC Priority Themes

- Climate Predictions
- Availability and Quality of Freshwater Resources (water security)
- Vulnerability of Coastal and Low-Lying Areas (infrastructure security)
- Community Sustainability (food and cultural security)
Case Study: Estimating sea level rise impacts in the Main Hawaiian Islands

• Dr. Chip Fletcher (UH) in cooperation with Hawai‘i State
• Factors include
  – Wave flooding
  – Groundwater inundation
  – Drainage failure
• Estimates feed into TMK-based economic impacts analysis
Case Study: Modeling effects of land management on coral reefs & their services

• Dr. Kirsten Oleson (UH)
• Factors include
  • Terrestrial sediment runoff
  • Nearshore ecosystem health
  • Coastal stakeholder valuation
• Models allow land managers to understand reef impacts and protection in dollar terms
Climate Variability – El Niño

• Community Impacts
  – Heat Waves
  – Extreme Rain
  – Failure of Trade Winds
  – Active Hurricane Season
  – Drought

• Climate change predicted to increase number of events
El Niño affects Resource Distribution

[Diagram showing the impact of El Niño on resource distribution]

- Lower sea level
- Cooler than normal
- Less rain
- Wind bursts
- Increased rain
- Warmer than normal

El Niño

Warm water

Cold water
THANK YOU!