



# Updating the 2003 PIER Climate Change Research Plan

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# 2003 PIER Climate Change Research Plan

- The Energy Commission started working on climate change in 1988 (AB 4420)
- PIER was created in the late 1990s and started working in earnest on climate change in 2001
- PIER released an exploratory study on impacts and adaptation in 2003\*
- PIER commissioned a series of roadmaps of research on different topics (e.g., regional modeling)
- PIER adopted its long-term research plan in 2003.

\* Wilson T, Williams L, Smith J, and Mendelsohn R (2003). Global Climate Change and California: Potential Implications for Ecosystems, Health, and the Economy. CEC Publication Number: CEC- 500-03-058CF.



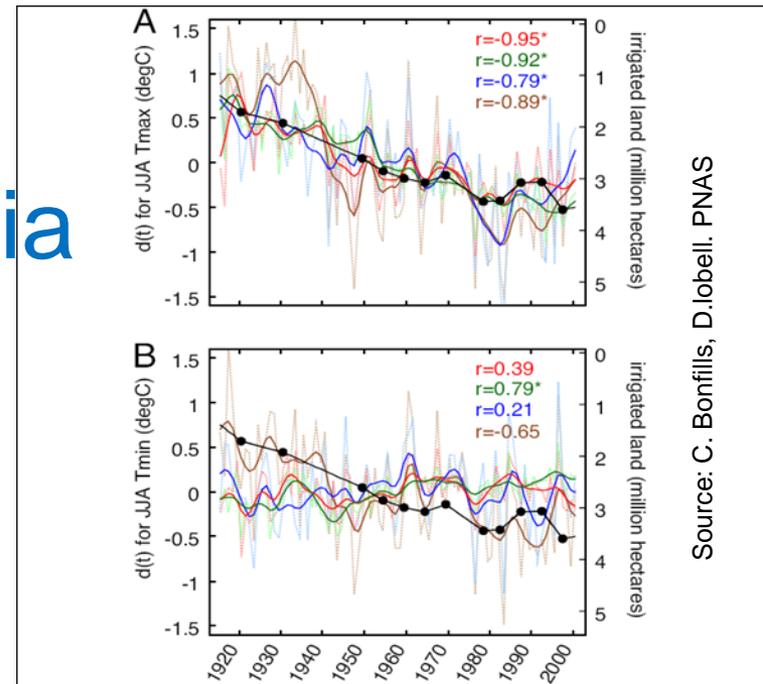
# California Climate Change Center

- Virtual research center designed to implement the PIER plan
- Funding ~ \$6 million/year (the rest of PIER funds are being used for the development of clean energy technologies)
- Scripps Institution of Oceanography is the main core research group (Dr. Dan Cayan) but most of the major research institutions in California are involved.
- Areas of work:
  - Regional climate monitoring, analysis, and modeling
  - GHG Inventory Methods
  - Options to reduce GHG emissions
  - Impacts and adaptation studies



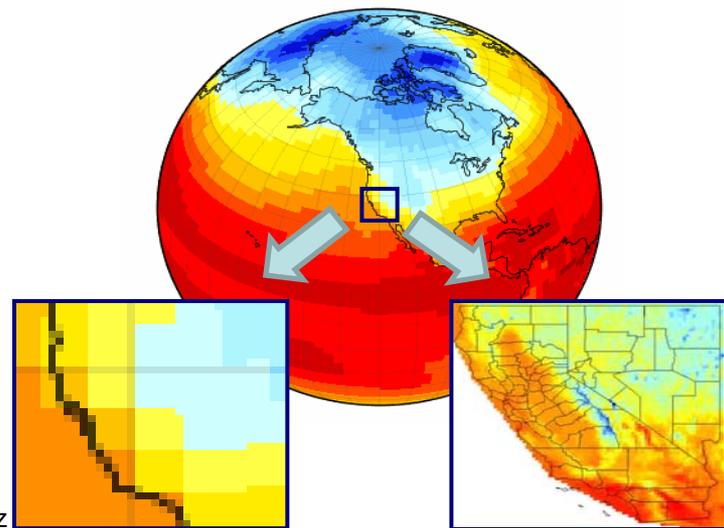
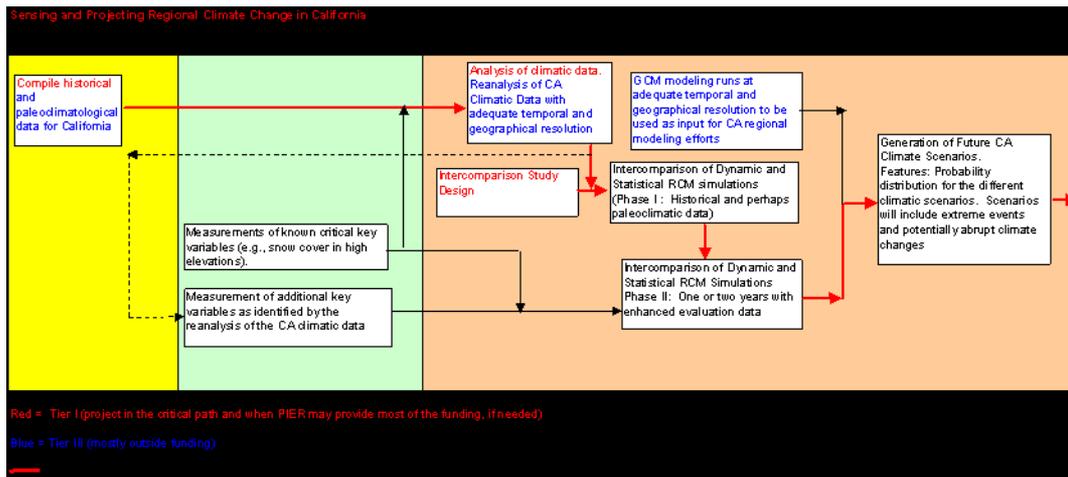
# Development of Probabilistic Climate Projections for California

- Work started in 2003
  - Climate monitoring and analysis
  - New statistical downscaling model and improvements to three dynamic RCMs
  - Inter-comparison of RCMs



Source: C. Bonfills, D.Iobell, PNAS

Fig. 2. Observed time-series of irrigated land cover in California and June-August temperature differences between intensively irrigated lands (CIF > 50%) and a reference area (0.1–10% CIF), both located in the Central Valley





# Purpose for these technical meetings

- Informal discussions about research needs
- PIER is gathering needed information to prepare its updated climate change research plan
- PIER will evaluate what research topics should be supported given the state of the science and new research initiatives



# CAT chapter on Research

- A Climate Action Team (CAT) subgroup headed by Commissioner Boyd is leading the preparation of a new chapter in the CAT report on research needs which is due out later this year
- Multiple agencies are involved
- The CAT chapter is a high-level document
- The PIER climate change plan will be compatible with the overall guidance provided by the CAT