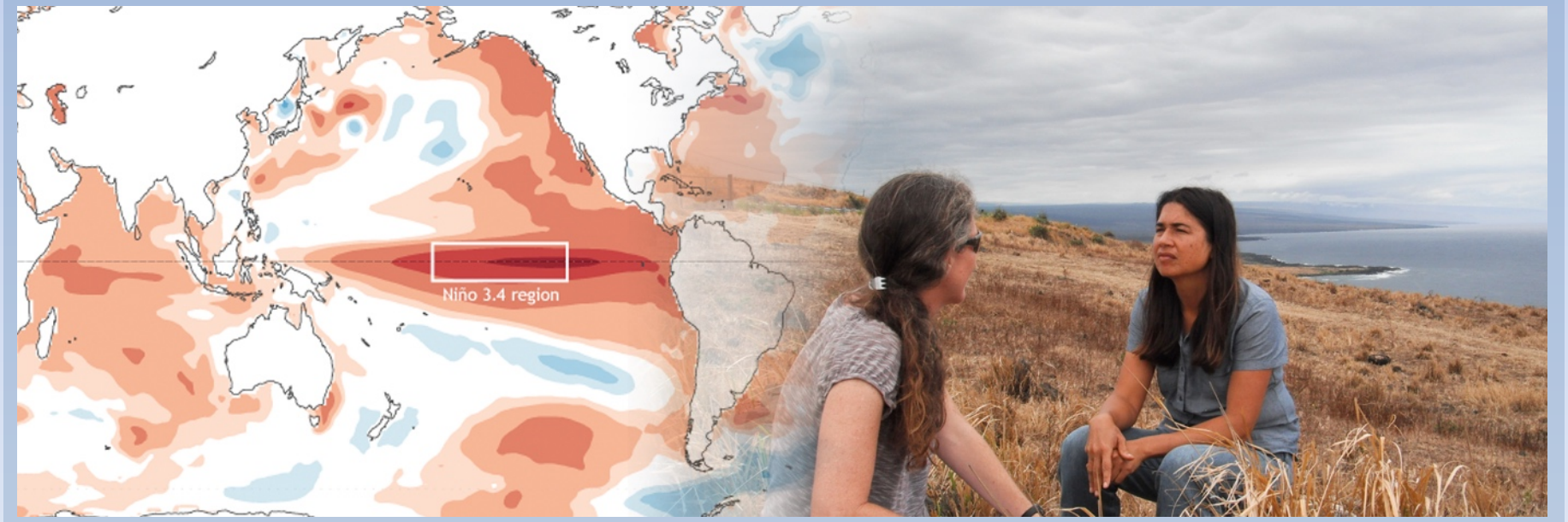
NOAA's Climate Program Office

National Oceanic and Atmospheric Administration • Office of Oceanic and Atmospheric Research • Climate Program Office

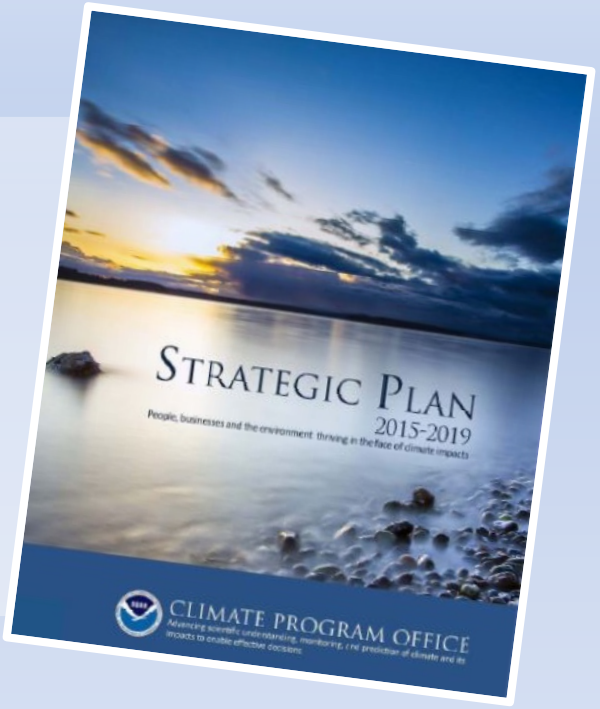


November 29, 2016

Our Goal, Our Mission, Our Vision

CPO

> **"CPO works to improve climate intelligence and its linkage to resilience."**
>
> CPO Director Dr. Wayne Higgins



CPO Mission

Why we exist: We advance scientific understanding, monitoring, and prediction of climate and its impacts to enable effective decisions

CPO Vision

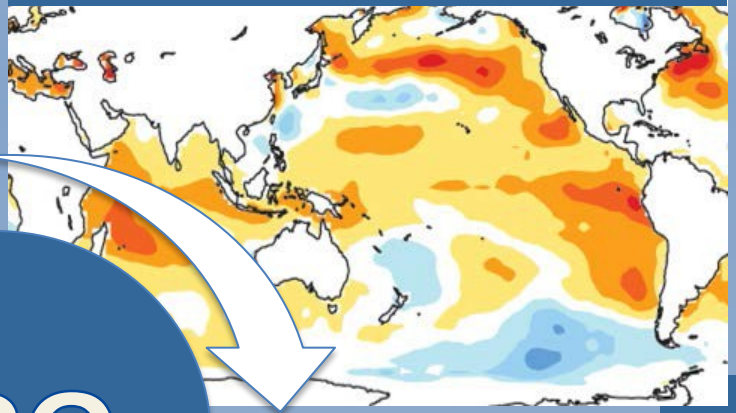
What we hope to achieve: People, businesses, and the environment thriving in the face of climate impacts.

Our Divisions

CPO

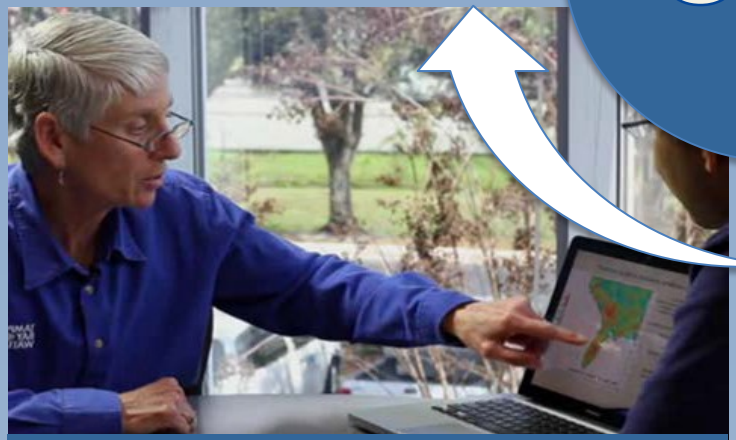
Ocean Observing and Monitoring

Earth System Science and Modeling



CPO

Administrative Services Division



Communication, Education, & Engagement

Climate and Societal Interactions

CPO's Unique Value

1. **Integrating Information:** Building climate resilience in NOAA mission-specific societal challenge areas.

2. **Engaging the Community:** Supporting the best science and building on mission-driven research priorities.

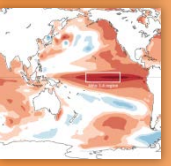
3. **Collaboration:** Facilitating coordination and integration and accelerating transition activities across OAR, with NOAA service lines, other federal agencies, and through partnerships and outreach.

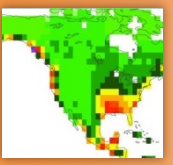
1. Integrating Information


Understanding


Monitoring


Observations


Modeling


Predictions & Projections

Assessments

FOUNDATIONAL SCIENCE

CPO

SOCIETAL CHALLENGES

Coastal Inundation


Water Resources


Extreme Events


Marine Ecosystems


Arctic


Atmospheric Composition

2. Engaging the Community

Who are we serving?

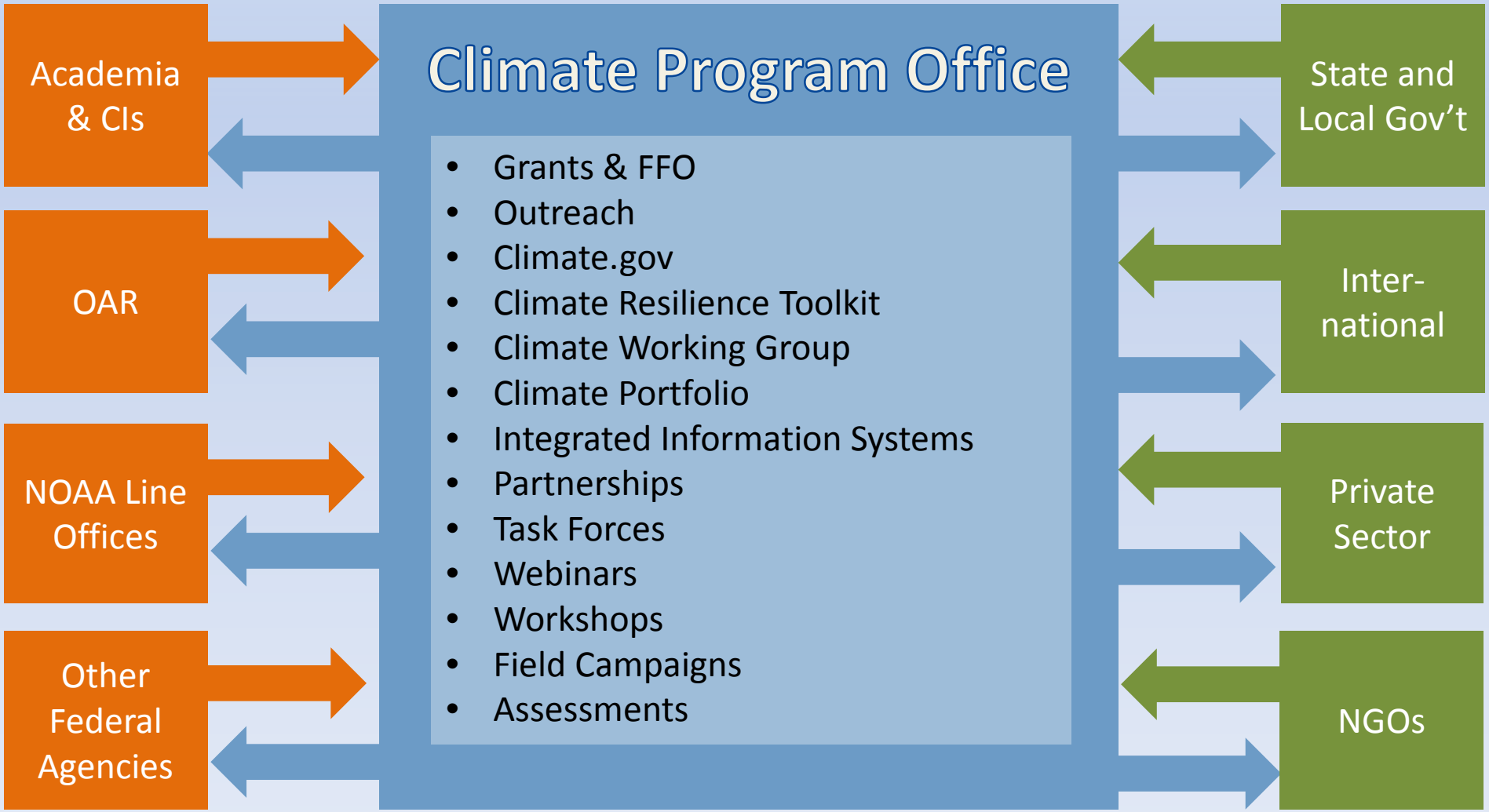
NOAA, Science, and Research Institutions

Decision Makers and Service Providers

CPO's foundational programs improve climate models, support research, sustain observation, and provide information.

CPO's programs also develop partnerships, build literacy, and provide leadership and support for research, assessments, and climate services.

3. Collaboration



FY16 Research Competitions

Climate Observations and Monitoring (COM)

- *In Situ* Technologies to Contribute to the Tropical Pacific Observing System 2020 Project

Earth System Science (ESS)

- **Atmospheric Chemistry, Carbon Cycle, & Climate (AC4):** Fires in the Western US: Emissions and Chemical Transformations
- **Climate Variability & Predictability (CVP):** AMOC-Climate Linkages in the N. and/or S. Atlantic

Modeling, Analysis, Prediction, and Projections (MAPP)

- NOAA Climate Test Bed Accelerating Transition of Research into Operations
- Research to Advance Prediction of Subseasonal to Seasonal Phenomena

Climate and Societal Interactions (CSI)

- **COCA:** Ecosystem Services for a Resilient Coast in a Changing Climate
- **RISA:** Regional Integrated Sciences and Assessments
- **SARP – NIDIS:** Coping with Drought *($1.7M)* and Water Resources and Extreme Events

Opportunities and Challenges

Emerging Requirements

Climate Observations Division (COD):

- Increased Arctic observing (e.g. for sea-ice for prediction)
- Redesign of the Tropical Pacific Observing System (TPOS – 2020)
- Improved biogeochemical ocean observing
- New observing technologies (e.g. sensors; autonomous vehicles)
- Fulfilling federal data management requirements for public access to data

Research Programs Division (RPD):

- Develop Integrated Earth System modeling and prediction capabilities (process studies, resolution and scaling)
- Identify sources of predictability for subseasonal to decadal phenomena
- Advance Subseasonal to Seasonal (S2S) prediction capabilities
- Accelerate transition activities
- Significant increases in infrastructure (especially High Performance Computing)

Opportunities and Challenges

Emerging Requirements

Climate Assessments and Services Division (CASD):

- Increasing demand for integrated data and information at regional scales tied to weather and climate extremes, water quantity and quality, coastal inundation, and marine ecosystems
- Increasing requirements stemming from programs across and external to NOAA (e.g. USGCRP; NIDIS Act (P.L. 109-430); Global Framework for Climate Services)

Communication and Education (CommEd) :

- Demand for Climate Resilience Toolkit tools, topics, case studies, mobile access
- Public-private partnerships (both data exchange and subject matter expertise)
- Redesign of Climate.gov to better cross-walk with the Climate Resilience Toolkit
- Decision support for businesses, resource managers, and government entities to develop / implement climate resilience plan