Communicating Climate Change Adaptation & Resiliency Through Story Maps

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Green House Gases & Emissions

Green House Gases

• Water vapor (H₂O)
• Carbon dioxide (CO₂)
• Methane (CH₄)
• Nitrous oxide (N₂O)
• Ozone (O₃)

CO₂ Graph Courtesy of Scripps Institution of Oceanography
Climate Change Impacts

- Warming / Heat Waves
- Precipitation
- Sea Level Rise & Intense Storms
- Coastal Flooding
- Increased Stress on Ecosystems
- Change in Fire Regimes
- Stresses on Natural Resources
- Public Health
Warming / Heat Waves

1985 Baseline (Historical Average)

2013
+1.7°F

2050
+4.8°F

NOW
2 DAYS

MID-CENTURY
15 DAYS
Precipitation

- **16%**: 16% fewer rainy days
- **8%**: 8% more rainfall during the biggest rainstorms

Images:
- Sign: "Serious drought. Help save water.
- Flooded street with traffic.
Sea Level Rise, Storms & Tides

Sea level rise with tides + storms

Mid-century sea level

With tides + storms

Current sea level
Coastal Flooding
Increased Stress on Ecosystems
Change in Fire Regimes

"Suddenly, the little spark became a flame! Then with the help of the wind, a patch of grass began to blaze!

"Quickly it spread...

"...until the flame became a roaring forest fire!

The Story of Smokey the Bear, 1960

Total Acres Burned by Wildfires in San Diego County by Decade

- 1910's
- 1920's
- 1930's
- 1940's
- 1950's
- 1960's
- 1970's
- 1980's
- 1990's
- 2000's
Stress on Natural Resources
Quick Facts from the 2006 California Heat Wave

- Lives lost: **140**
- Hospitalizations: **1,200**
- Proportion of Hospitalizations Who Were Elderly: **52%**
- Added Emergency Room Visits: **16,000**
- Added Health Costs: **$133,000,000**
Mitigation vs. Adaptation

• Climate change **mitigation** generally involves engaging in activities that reduce the production of human generated greenhouse gas emissions

• Climate change **adaptation** involves making changes in our environment or the way we do things to respond to changes in climate
Support, promote, and network activities that will safeguard our communities and natural resources from climate change risks.
Partnerships

- Over 140 partnering organizations
  - Government
  - Research Partners
  - Baja Partners
  - Conservation NGOs/Foundations
  - Partnerships/Projects
  - Educators/Artists
  - Utility/Transportation
  - Business
Using Story Maps

Resilient Coastlines Project of Greater San Diego

Climate-Smart Case Studies
Using Story Maps

Climate Adaptation in Action: Case Studies in the South Coast Eco-Region

The South Coast region is alive with projects, planning efforts and partnerships that are focused on conserving the biological diversity and uniqueness of our region, as well as the communities where we live and work. These existing efforts and partnerships are critical to forming the foundation for understanding and building resilience to climate change impacts now and in the future. The following case studies illustrate specific actions that are being taken to safeguard our natural resources and communities in the South Coast Eco-Region of Southern California.

https://cdfw.maps.arcgis.com/apps/MapJournal/index.html?appid=f4ebcec143ab47b7baae8b1fc4de401a
Using Story Maps

Coastal Resilience Activities Occurring in San Diego County

Rising tides, combined with intense coastal storms, have the potential to damage and harm businesses, residents, and infrastructure along San Diego’s coast. Planning for increased flooding and inundation, coastal erosion, changes in sediment movement, and saltwater intrusion can better prepare our coastal communities and infrastructure for major storm events and make them more resilient.

The Climate Collaborative is working closely with local jurisdictions and public agencies to enhance and coordinate coastal resilience activities in the region.

Explore our region’s coastal resilience projects by clicking on the tabs across the top of this interactive story map or the stars on the map.

http://cdfw.maps.arcgis.com/apps/MapSeries/index.html?appid=39d728adc9db4573bd608a5f971bcf9e
Additional Resources

**Sea Level Rise Viewers**
- CoSmOs Viewer (California)
  - [www.ourcoastourfuture.org](http://www.ourcoastourfuture.org)
- NOAA’s Sea Level Rise Viewer
  - [www.coast.noaa.gov/slr/](http://www.coast.noaa.gov/slr/)

**Climate Change Data and Resources**
- Climate Science Alliance
  - [http://www.climatesciencealliance.org/resources](http://www.climatesciencealliance.org/resources)
- California-Nevada Climate Applications Program (CNAP)
  - [www.scripps.ucsd.edu/programs/cnap/](http://www.scripps.ucsd.edu/programs/cnap/)
- Climate Central
  - [www.climatecentral.org](http://www.climatecentral.org)
USGS CoSMoS
Communicating Climate Change

Scenario A

GIS Data

Scenario C

Artist Interpretation

Story Maps
Thank You!

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