



# NATURE-BASED CLIMATE SOLUTIONS

A ROADMAP TO ACCELERATE ACTION IN  
CALIFORNIA



# The Nature Conservancy & Climate Change

**Climate Change is the greatest threat to our mission to protect the lands and waters upon which all life depends**

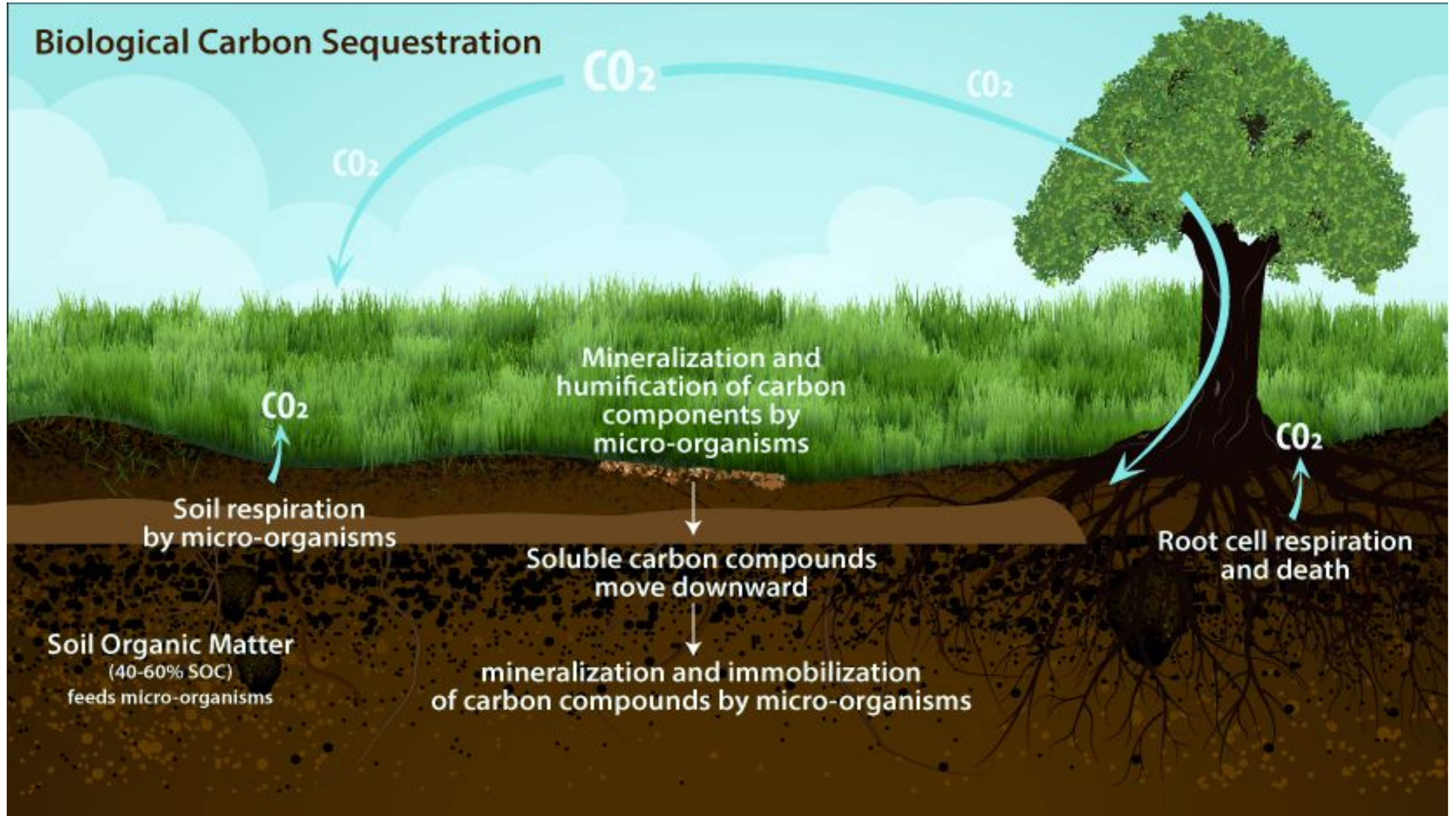
Nature can play a critical role in addressing climate change...

reducing carbon dioxide in the atmosphere and protecting communities from impacts





# Biological Carbon Sequestration

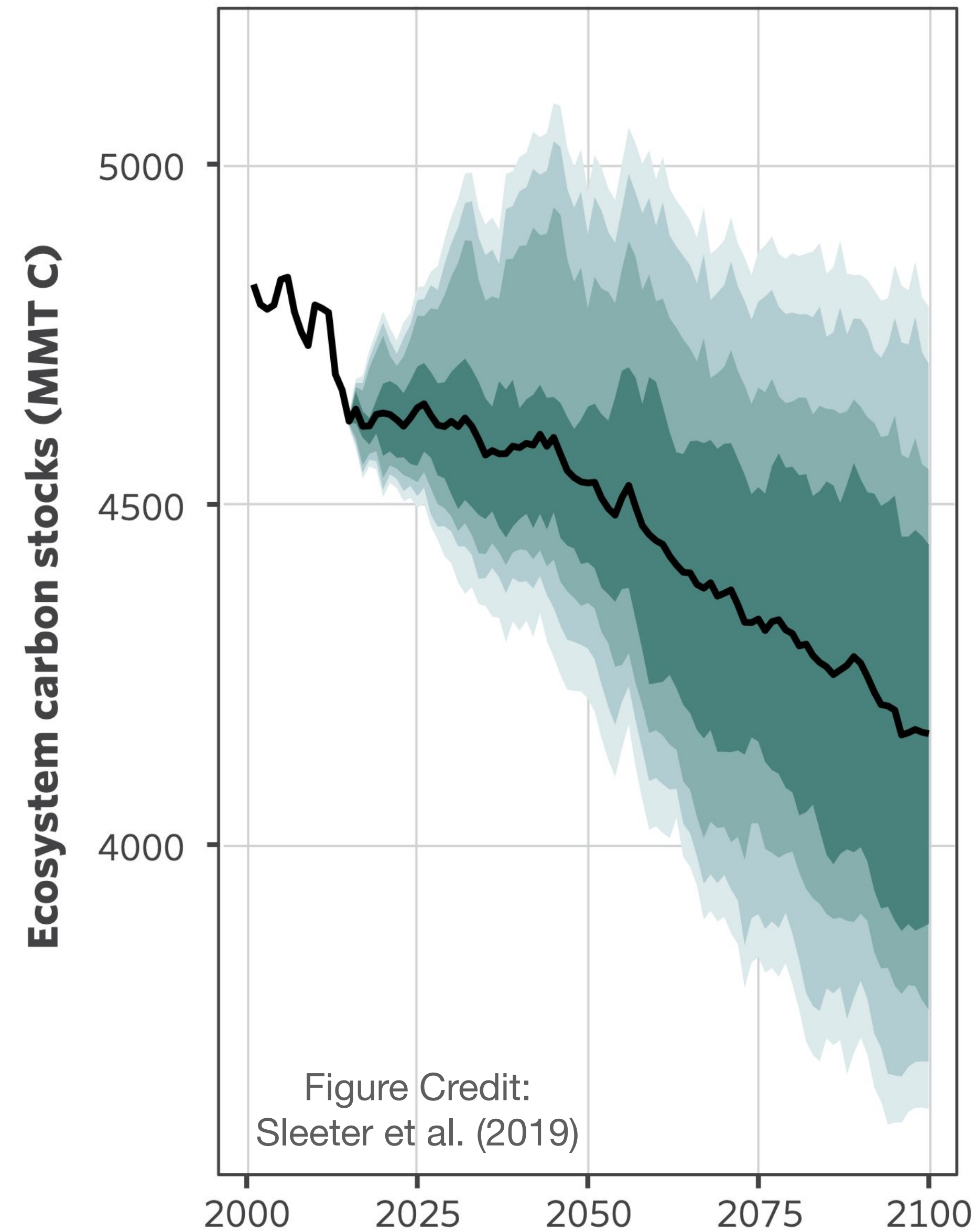




# Nature-based Solutions: Global emissions and reductions opportunities

- **Land Use, Land Use Change and Forestry contributes 23% of global GHG emissions (2007-2016)**
- **Nature-based solutions can achieve approximately 37% of reductions needed to achieve Paris Goals**

# The carbon future of California's lands without intervention





# Nature-based solutions offer substantial GHG reduction benefits

**28 MILLION ACRES**  
suitable for 13 nature-based  
climate solutions\*

**514 MMT CO<sub>2</sub>e**  
GHG reductions by 2050

- Nature-Based  
Climate Solutions**
- Agroforestry
  - Avoided Conversion
  - Changes in Forest Management
  - Compost Application
  - Cover Cropping
  - Post-Wildfire Reforestation
  - Reduced Wildfire Severity
  - Rice Cultivation
  - Riparian Restoration
  - Urban Reforestation
  - Wetland Restoration
  - Woodland Restoration

0 100 Miles

Suitable acreage and GHG reduction  
benefits integrated from 3 published studies:

Ecosystem management and land conservation can  
substantially contribute to California's climate  
mitigation goals

-----> Cameron et al. (2017)

SCIENCE ADVANCES RESEARCH ARTICLE  
ENVIRONMENTAL STUDIES  
Natural climate solutions for the United States

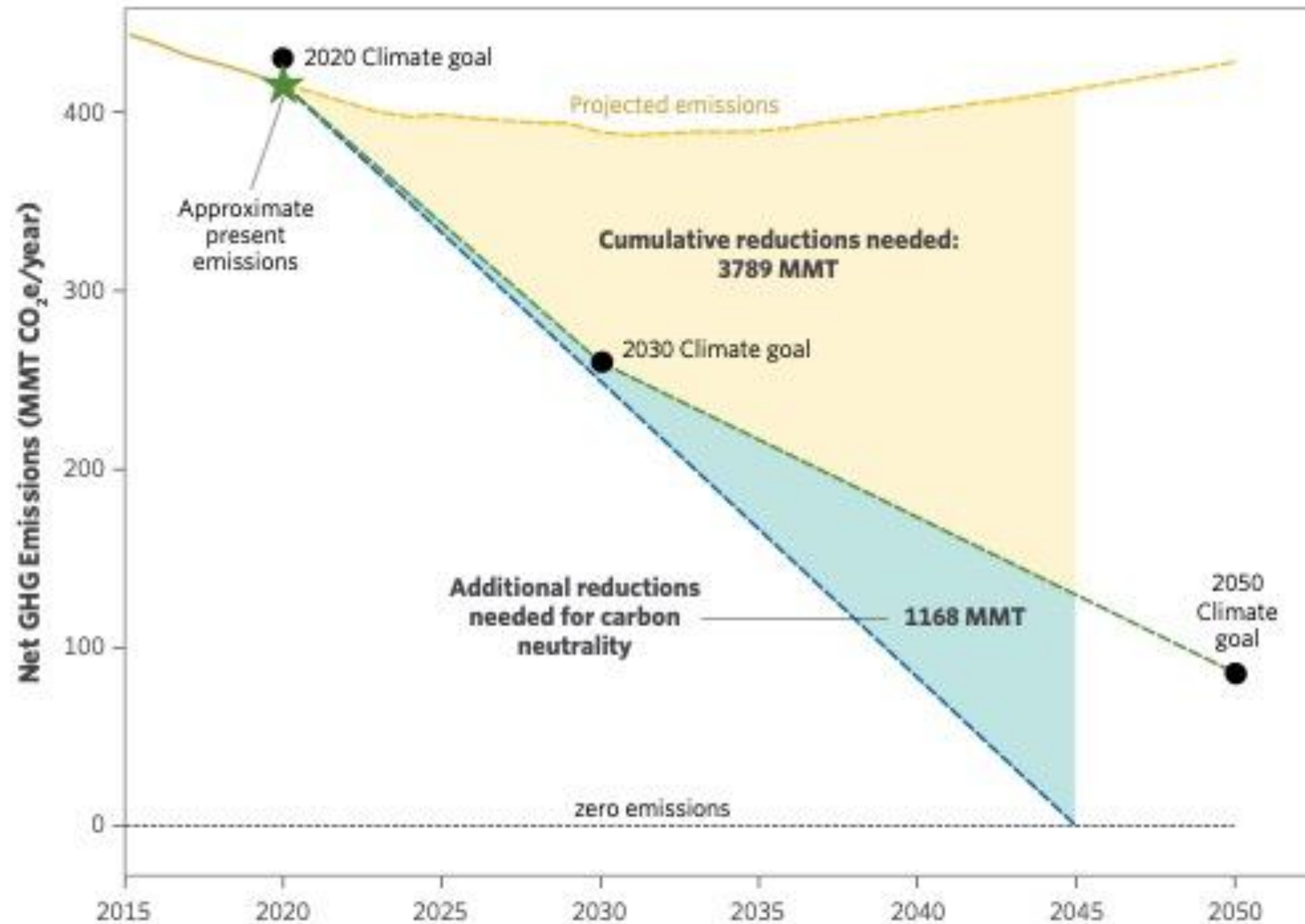
-----> Fargione et al. (2018)

**Toward a Carbon  
Neutral California**  
Economic and  
Climate Benefits  
of Land Use  
Interventions

-----> Marvin et al. (2018)

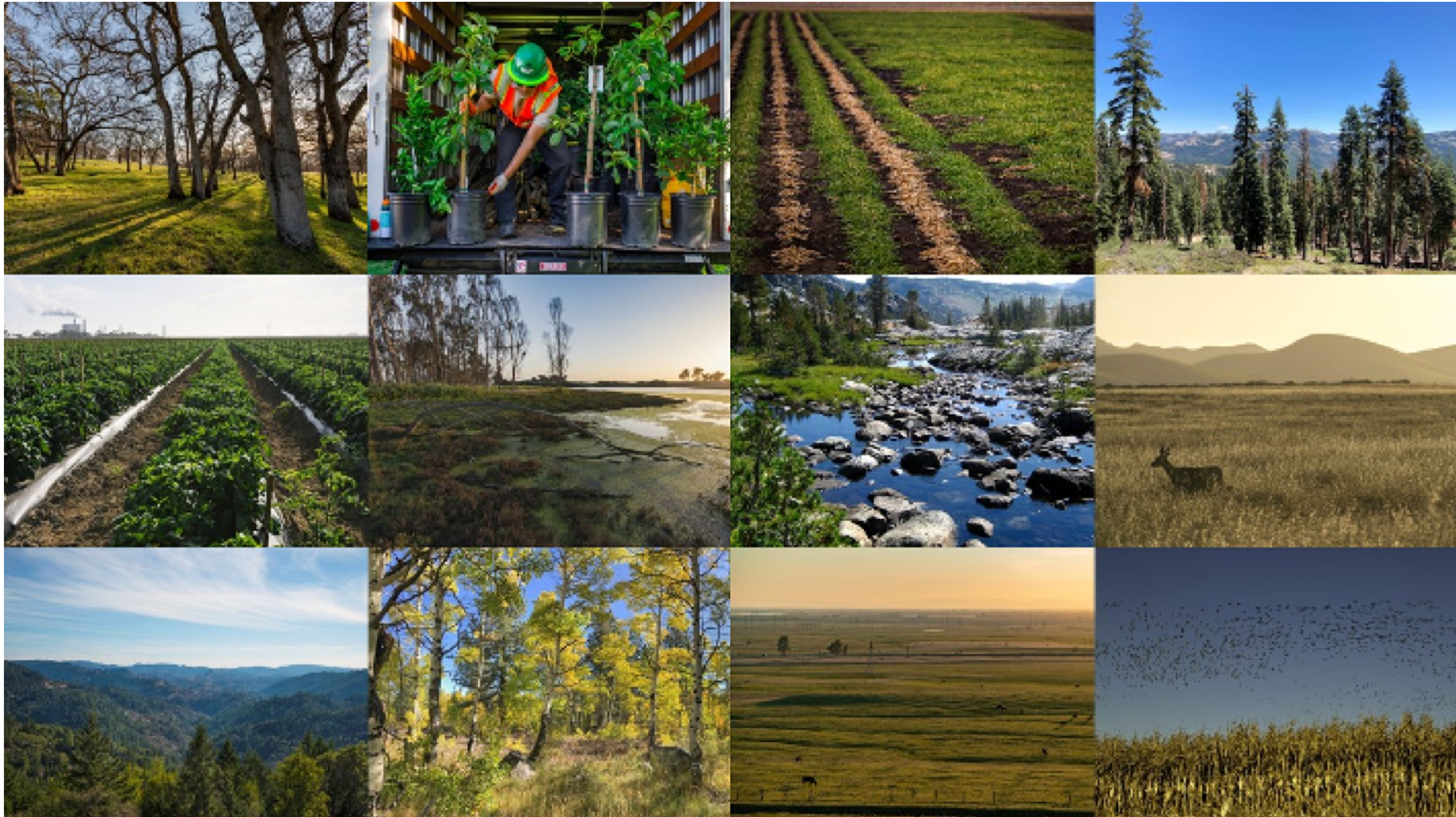


# Significant reductions are needed to meet California's climate goals



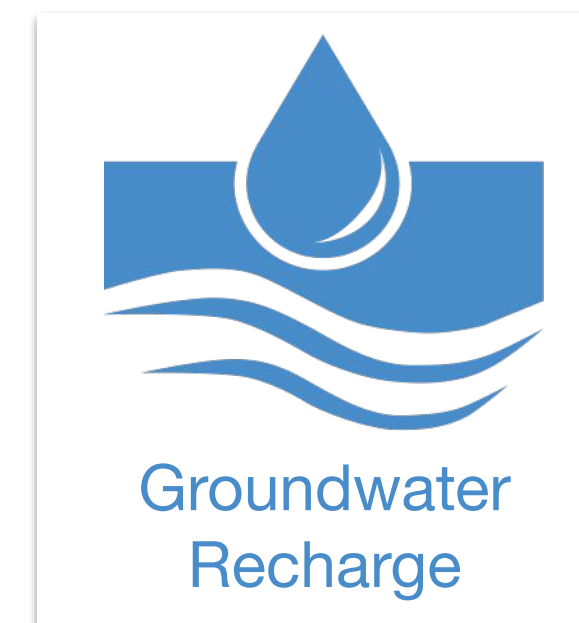
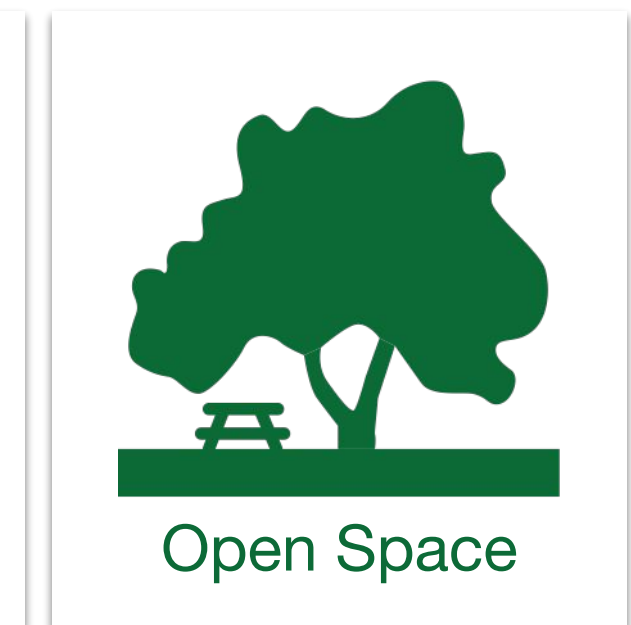
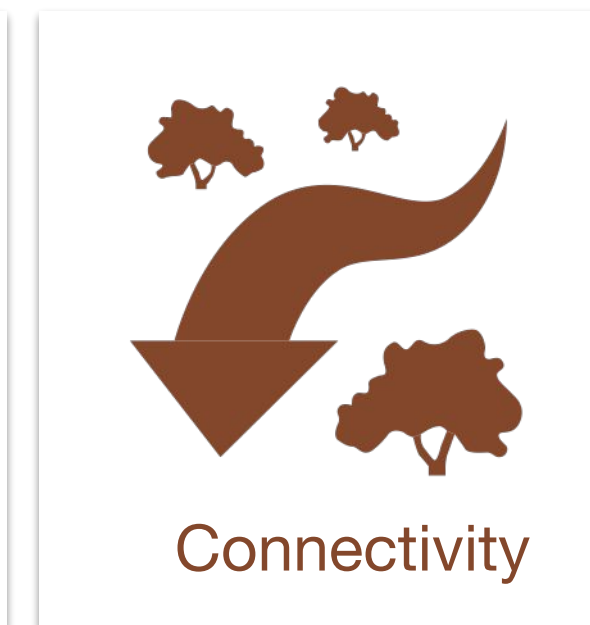
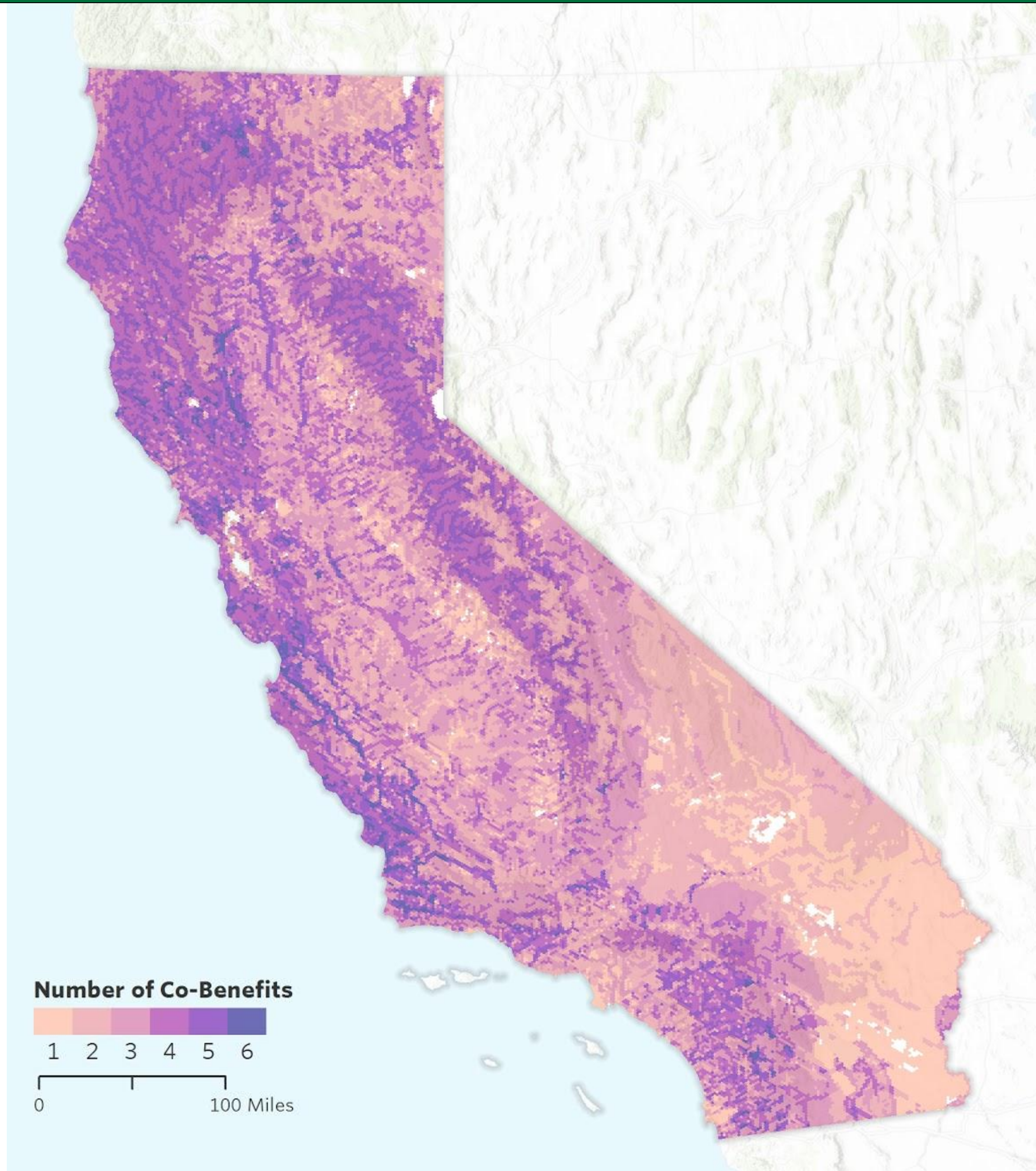


# 13 nature-based climate solutions





# Nature-based solutions provide multiple co-benefits



Can also avoid over \$24 billion in economic damages, based on social cost of carbon





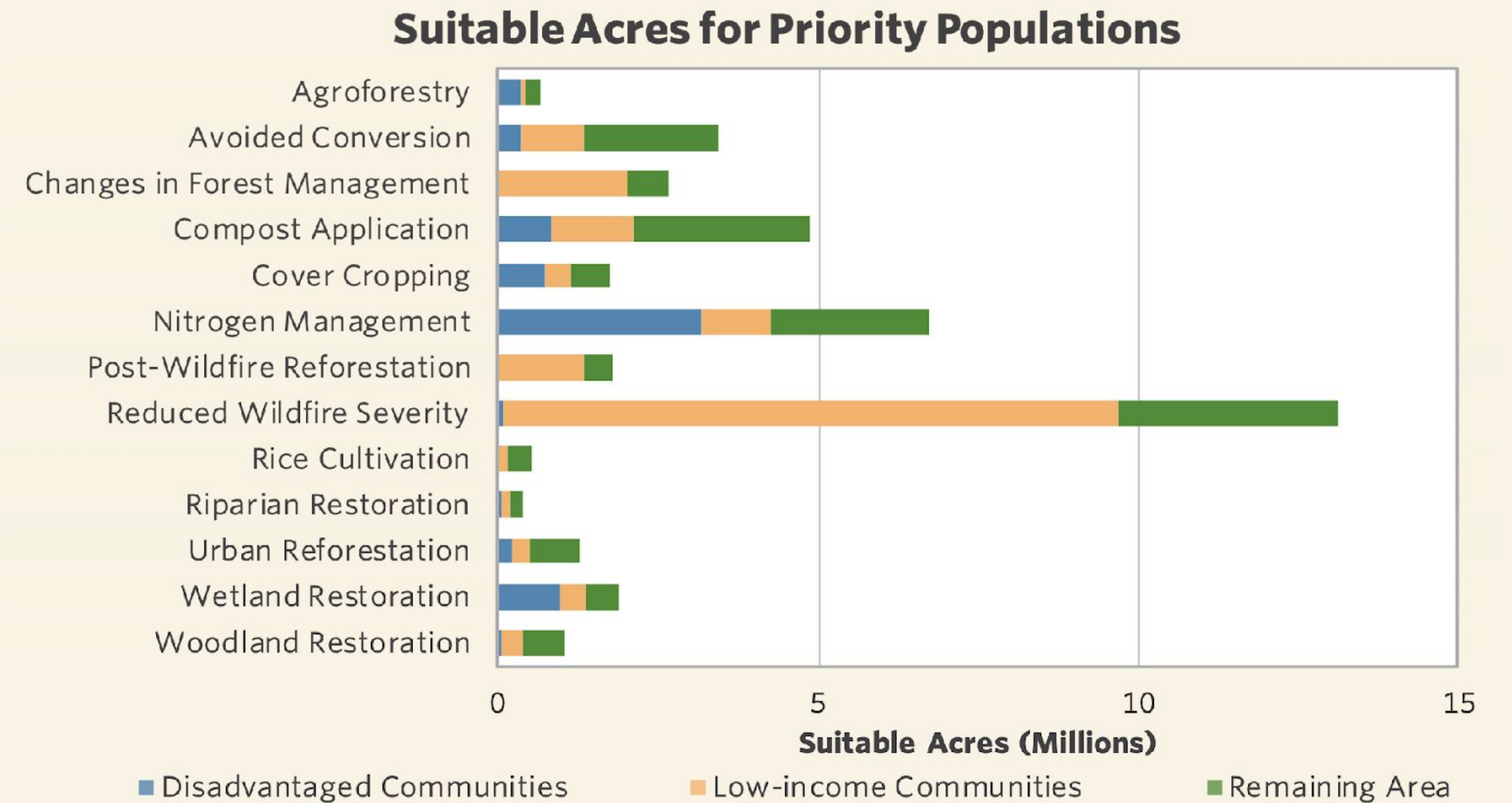
# The Path Forward

- Nature-based climate solutions are a “must-have” (not a “nice to have”)
- Solutions provide multiple benefits across California
- Pace and scale of action/investment must be scaled up to meet scale of the problem
- Policies and tools are readily available.....

greater investment, coordination &  
public-private partnerships are key!



# Substantial opportunity exists to impact priority populations



More than 60% of land suitable for these solutions falls within disadvantaged and low-income communities