



# Perceived Barriers and Opportunities for Conservation on Central Coast California Rangelands

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CCRC Spring Meeting  
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# Where am I coming from?

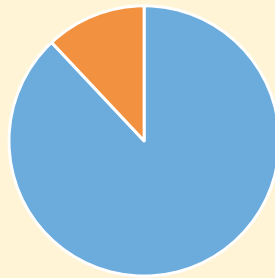


- From Palos Verdes, California
- B.S. Molecular Environmental Biology and Environmental Economics and Policy minor, UC Berkeley, 2015  
Thesis: “Grizzly bear temporal avoidance of roads and trails in Kananaskis Country, Canada”
- Range Technician at Point Reyes National Seashore, 2015-16
- M.S. Range Management Candidate, UC Berkeley, 2018  
Thesis: “A landscape approach to conserving carbon stocks on California rangelands”

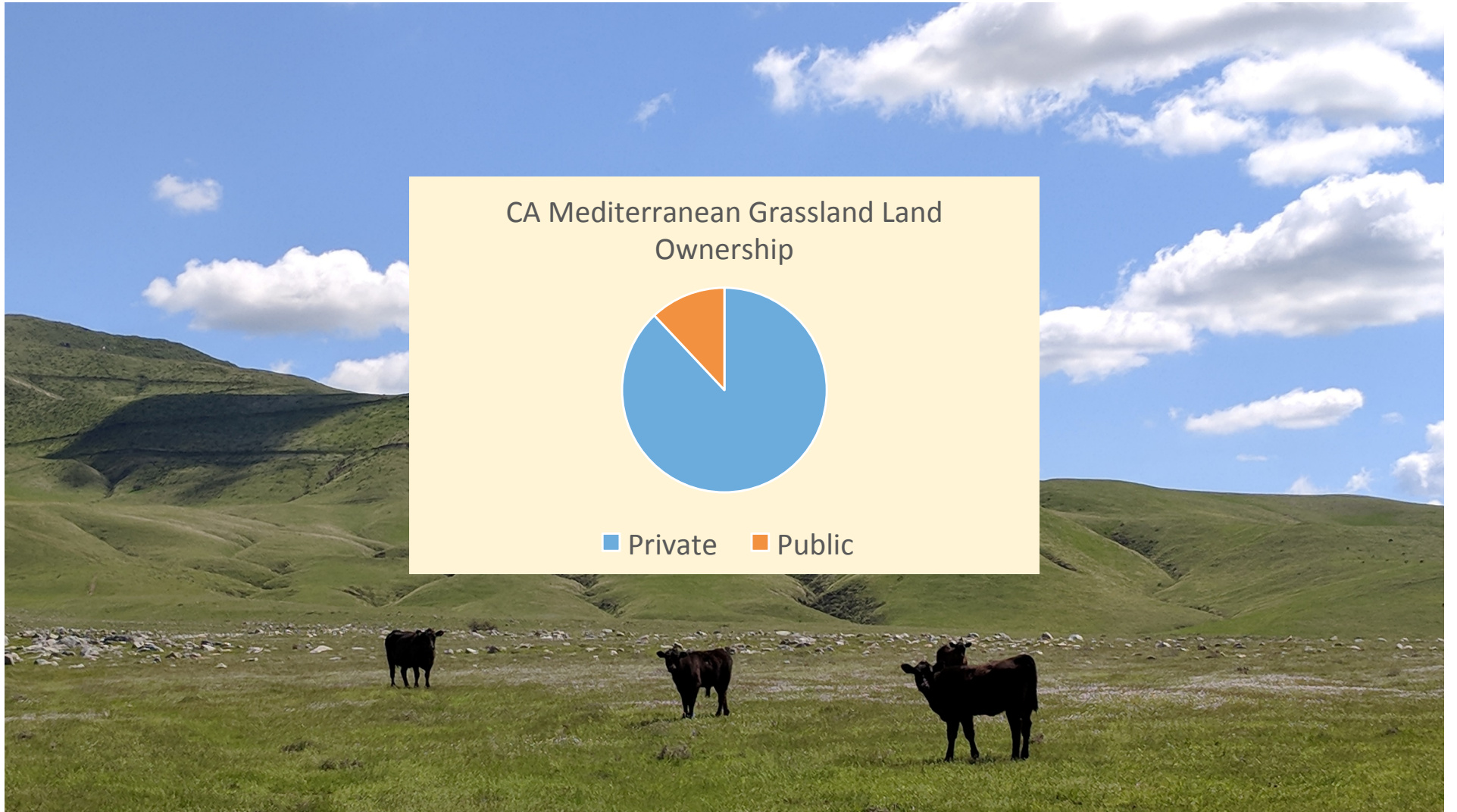


# California's Mediterranean Grasslands

### CA Mediterranean Grassland Land Ownership



■ Private ■ Public





“Landscapes are important to people. They form the backdrop of our everyday lives as dynamic expressions of the interaction between the natural environment and human activities.” (Antrop 1998)

# Research Questions

1. What is the ranching community's definition of "conservation"?
2. What are the threats to conservation in CA rangelands?
3. What are ranchers and land managers' conservation priorities?
4. What are the roadblocks to rangeland conservation?
5. How could we do conservation better?

# Study Design

- Study area: Central Coast California rangelands
- Participants from 14 counties
- Phone interview (approx. 45 min):
  - 10 ranchers
  - 6 land managers
- Online survey (5 questions):
  - 10 academics from UC, Cal State, and UCCE



0 30 60 120 180  
Miles

Created by Lina Aoyama on March 23, 2018  
Source: <https://data.ca.gov/dataset/ca-geographic-boundaries>



What is your definition of “conservation”?



taking wildlife  
natural frogs  
only care  
things land site-specific  
managing  
stewards  
resources

Ranchers

Land Managers

think species  
functions  
used maintain  
all  
natural  
human environment  
use land  
ecosystem

Academics

natural  
enhance  
Protection  
improve Making  
Preserve  
land lands population  
Protect Keep  
habitat

# Threats to rangeland conservation

## Ranchers

1. Inexperienced managers
2. Lack of public understanding
3. Land conversions

## Land Managers

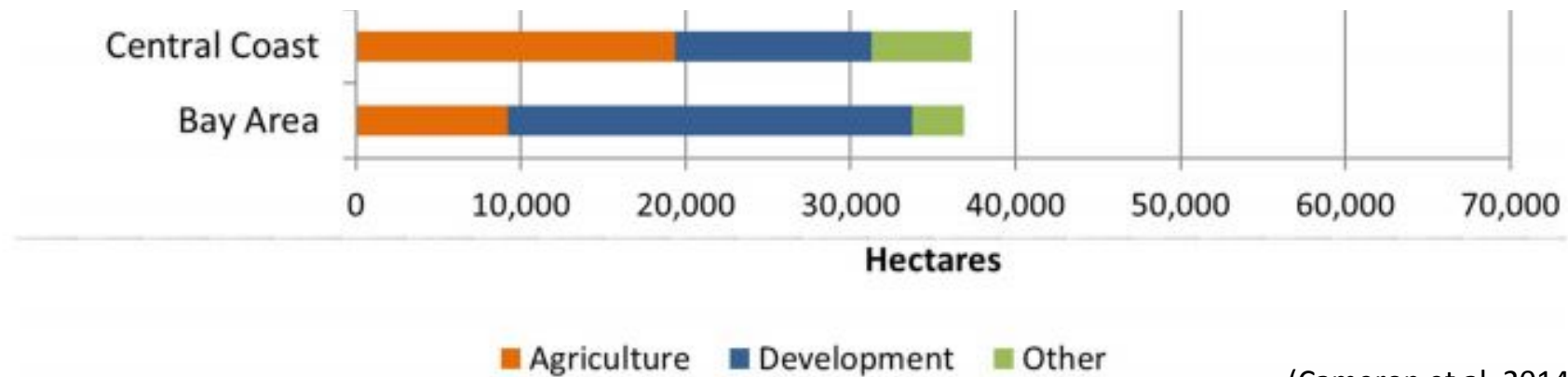
1. Land conversions
2. Climate change
3. Lack of public understanding

## Academics

1. Land conversions
2. Lack of public understanding
3. Climate change
3. Regulations
3. Underfunding

California rangeland conversion from the 1980s to early 2000s:  
49 % of total area to development  
40 % of total area to agriculture  
{13% vineyards}

### Regional Land Conversion Patterns (1980s-2000s)



(Cameron et al. 2014)

# Conservation Priorities

Ranchers	Both	Land Mangers
Amount and quality of feed	Economic viability	Annual and mixed grassland
Livestock body condition	Biodiversity/Wildlife	Wetlands
Ranch succession	Invasive species control	Riparian area
Manage soil	Water	
Reduce fuel load	Condition of range	
Meet RDM levels		

# Economic viability

## Ranchers

“First thing to be sustainable is to be economically viable. I am finding the right balance between economically sustainable cattle number and not overgrazing.”

“I am trying to provide for myself and my family by having a sustainable operation regardless of rainfall.”

## Land manager

“economic sustainability of ranching.”

# Biodiversity/Wildlife

## Ranchers

“protect special status species”

“protect native plants”

“promote biodiversity”

“enhance perennial wildflowers and rest of native plant life”

“create wildlife habitat”

## Land managers

“maintain special status plant species population and listed wildlife populations”

“protect steelhead habitat and wildlife corridor”

“preserve native flowers and trees”

“On both lands, I am trying to provide for my family. On public lands, I have to meet their goals such as **water quality, RDM level**, and habitat protection for **special status species**. They are all about the same priority for me because they are all intertwined.”

“On private land, I am looking for good water and feed. On public land, I work towards the agency’s goal to create **wildlife habitat** and to meet **RDM levels**.”

# Conservation Practices

Ranchers	Land managers
Oak restoration	Water quality and stream survey
Extensive period of rest	Place supplements on higher elevation
Wildlife friendly fences	Riparian fencing
RDM monitoring in fall	Road rehab and commissioning
	Wetland restoration

Both
★ Improvement of water infrastructure
★ Invasive species management
★ Rotational grazing
Intensive grazing for special status species
Riparian planting of trees and shrubs for wildlife
Stock pond clean up and restoration



## People Issues

Rancher	Aging infrastructure
	Public access
	Many stakeholders
Land Manager	Minimal funding
	Minimal staffing
Shared	Permitting paperwork
	Frequent staff turnovers

## Ecological Issues

Land Manager	Drought
	Not enough cattle
	Soil type
Shared	Site variability
	Limited availability of water

## “Knowledge-block” of range management:

- Ecosystem services provided by native plants and animals
- Soil carbon
- Prevention of introduction and spread of invasive species
- Ecological Site Description and State-and-Transition models
- Adaptive management
- Social-ecological system
- Management within a non-equilibrium system

# Opportunities

- Tax relief, incentive programs, conservation easements
- Fund rangeland research and extension
- Educate the public to increase interest in rangeland ecosystems and services they provide
- Tax the public for the services provided by rangeland
- Extend the Ecological Site Description and State-and-Transition platform statewide
- Outreach to decision makers for better policies
- Create space for ranchers, land managers, and academics to share information

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Questions/Comments?

