

# Exploring Innovation in Biodiversity Conservation Decision-Making Through Open Science and Generative AI

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ENVIRONMENTAL DATA SCIENCE  
INNOVATION & INCLUSION LAB

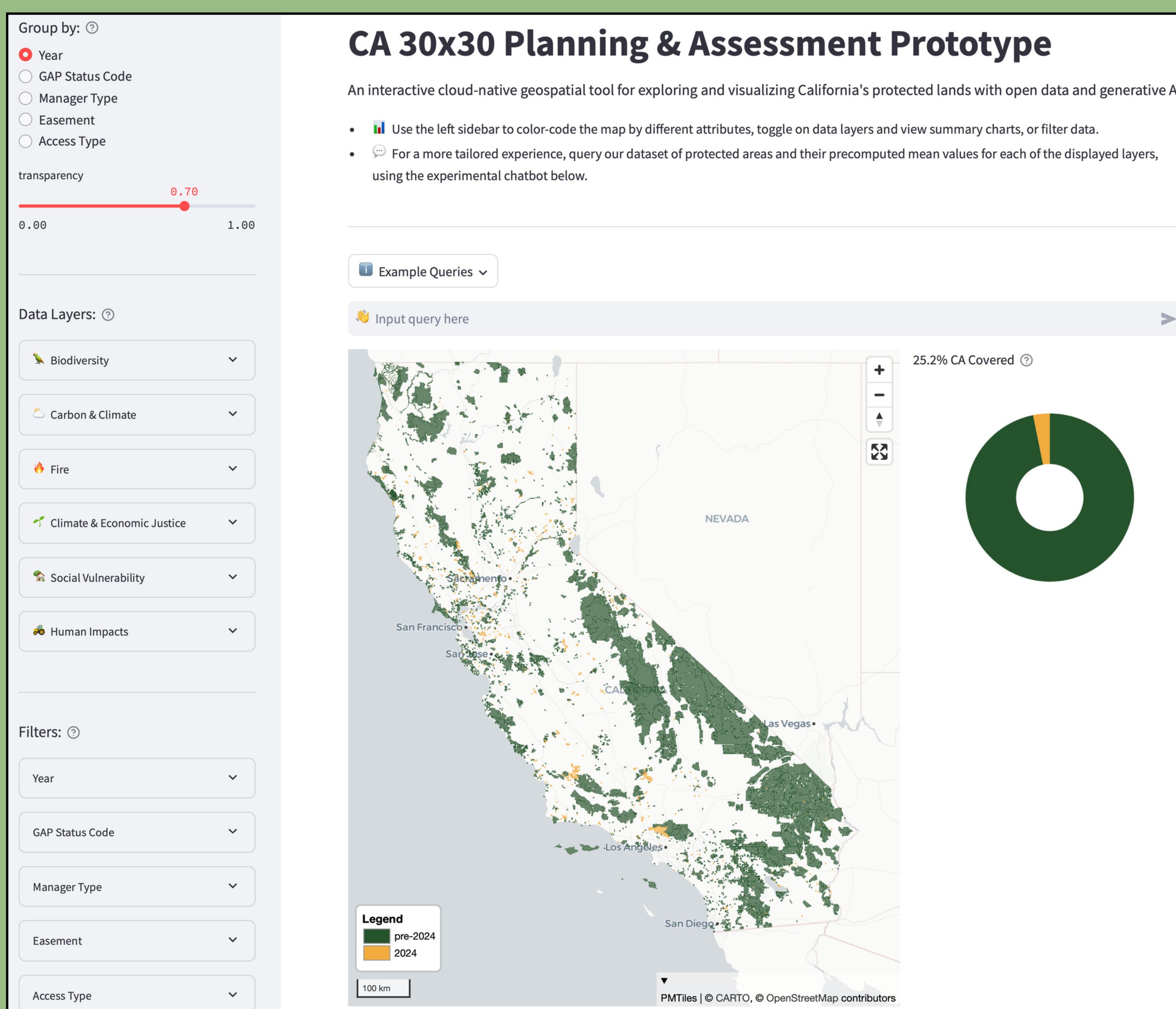


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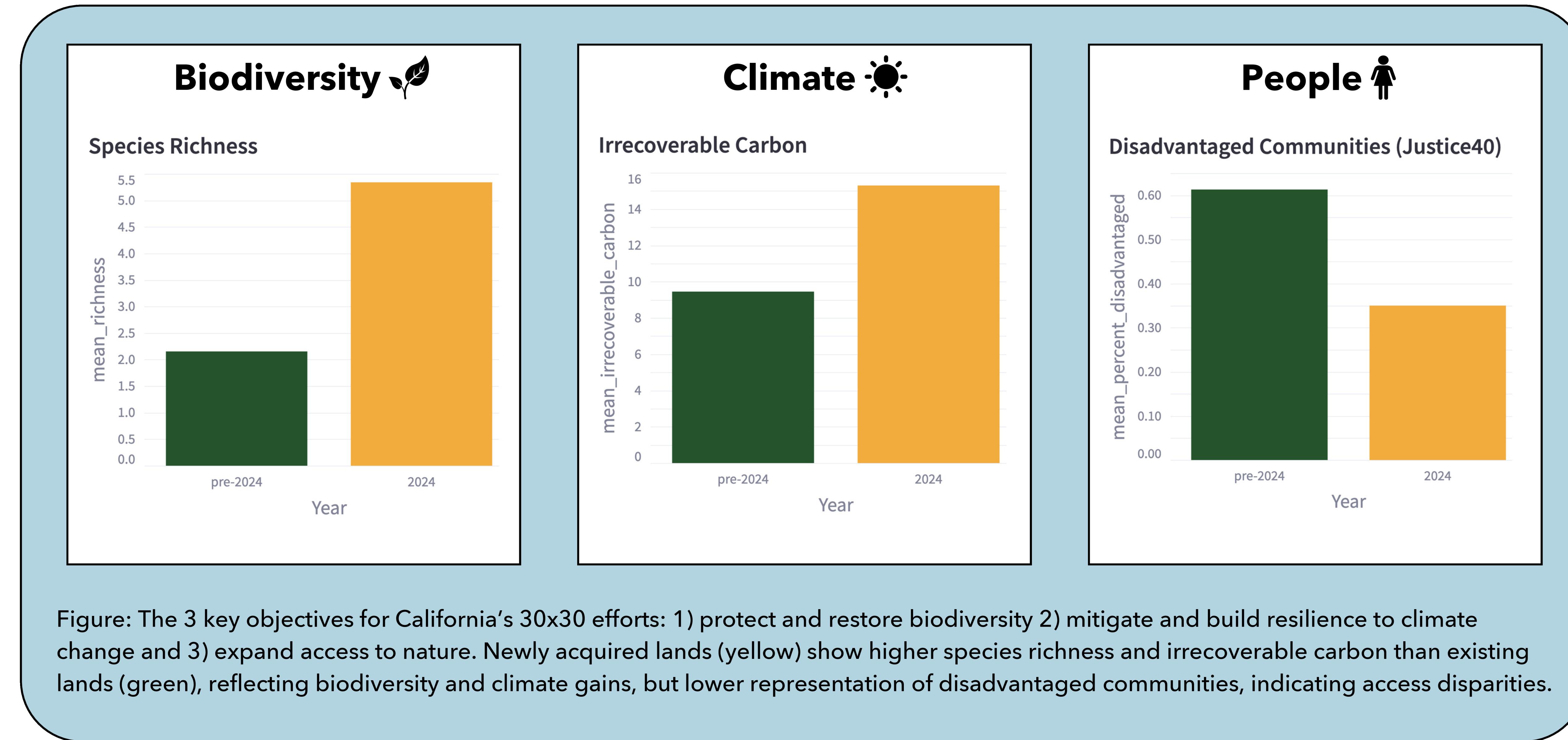
DEPARTMENT of ENVIRONMENTAL  
SCIENCE, POLICY, AND MANAGEMENT

An **open** and **interactive**  
**cloud-native geospatial** platform  
for planning and assessing  
**protected lands.**



<https://huggingface.co/spaces/boettiger-lab/ca-30x30>

## 30x30: Conserving 30% of California's lands and coastal waters by 2030



### 30x30: What counts?

**GAP Code:** Degree of biodiversity protection

**GAP 1:** Managed for biodiversity with natural disturbance events allowed (e.g. Yosemite National Park)

**GAP 2:** Managed for biodiversity with management that may interfere with natural processes (e.g. San Diego National Wildlife Refuge)

**GAP 3:** Permanent protection, but the land is subject to multiple uses (forestry, farming, intensive recreation) (e.g. parts of Klamath National Forest)

**GAP 4:** No known institutional mandates to prevent conversion of natural habitat types (e.g. Napa Golf Course)

**GAP 1 & 2 count towards the 30% target**

## Our tool helps you evaluate these goals!

### Citizen

Jennie, a local hiker and nature enthusiast, wants to find nearby protected areas that are open access and highly biodiverse.

"Show me areas open to the public that are in the top 10% of species richness."

### Non-Profit

Felipe, a project manager at TNC, wants to assess how their lands are contributing towards 30x30 targets.

"Show me all GAP 1 and 2 lands managed by The Nature Conservancy."

### State

Yin, a state employee, wants to expand areas that provide access to nature for socially vulnerable communities.

"Show me state land smaller than 1000 acres, with a social vulnerability index in the 90th percentile."

### Federal

Sam at the BLM is looking to promote areas with the most critically endangered species to a higher level of protection.

"Show me GAP 3 and 4 lands managed by BLM, in the top 5% of range-size rarity."

How would you use this tool?