



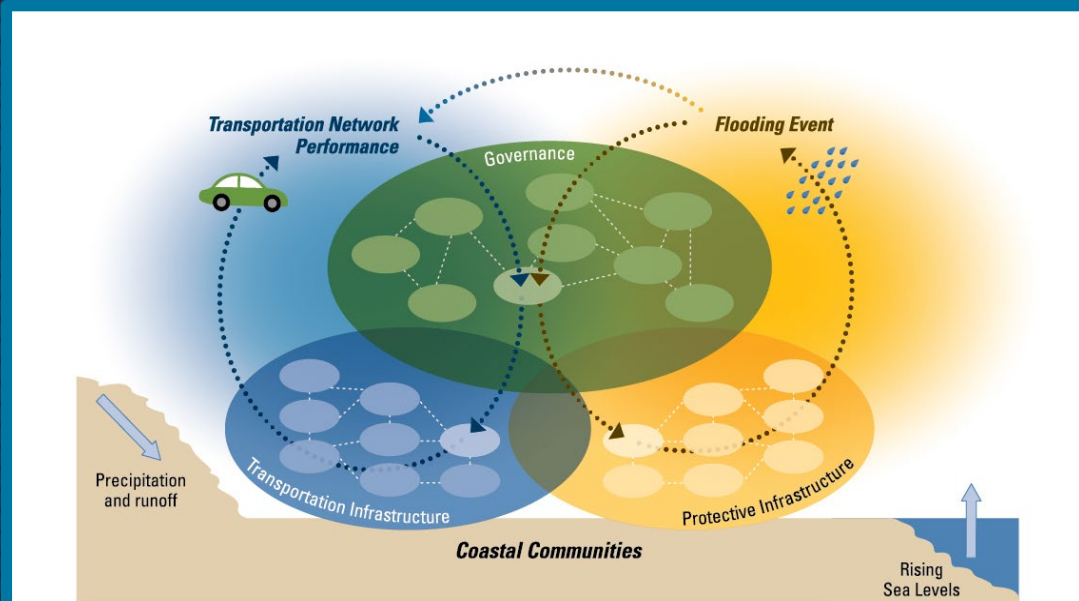
ADAPTATION AND COLLABORATION IN POLYCENTRIC GOVERNANCE: A COMPARISON OF THREE REGIONS

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- 2025 STATE OF THE ESTUARY CONFERENCE

NSF PROJECTS ON SEA LEVEL RISE

RISER SF Bay

Resilient Infrastructure as Seas Rise



Berkeley
UNIVERSITY OF CALIFORNIA

UC DAVIS
UNIVERSITY OF CALIFORNIA

USGS
science for a changing world

NYU



cri
CLIMATE READINESS INSTITUTE

COASTLINES AND PEOPLE RESEARCH COORDINATION NETWORK

EVENTS

CoPe

RAISE: CHIRRP: Centering Equity in Coastal
Community Climate Resilience
**Confronting Hazards, Impacts and Risks
for a Resilient Planet (CHIRRP)**

GOVERNANCE RESEARCH SUMMARY

- MULTI-LEVEL INTERVIEWS FROM REGIONAL TO LOCAL, GOVERNMENT AND NON-GOVERNMENTAL STAKEHOLDERS
- 43 INDIVIDUALS INTERVIEWED AT AVERAGE OF 1 HOUR EACH.
- GOVERNANCE SOLUTIONS FOCUS GROUPS: NORTH BAY, SOUTH BAY, CENTRAL BAY
- REPORT 2017: "THE GOVERNANCE GAP: CLIMATE ADAPTATION AND SEA-LEVEL RISE IN THE SAN FRANCISCO BAY AREA"
- GOVERNANCE GAP SURVEY: JUNE 25-SEPT 10, 2018. 722 RESPONDENTS.
- ONGOING PARTICIPANT OBSERVATION: LUBELL ON BAY ADAPT LEADERSHIP GROUP
- RECENT NSF GRANT FOCUSED ON COMMUNITY ENGAGEMENT AND CO-PRODUCTION (GREENBELT ALLIANCE, CLIMATE RESILIENT COMMUNITIES, CANAL ALLIANCE, BAYCAN, BCDC)
- COMPARATIVE RESEARCH: VA, SC, CA, HOPEFULLY OTHERS
- MANY PUBLICATIONS, WITH MORE FORTHCOMING

A governance survey of involved stakeholders

We launched the survey on July 1st, 2018 and closed it on August 31st, 2018.

The survey comprised three main parts:

- stakeholders' perceptions of the problem;
- stakeholders' preferences concerning the actions;
- stakeholders' collaborative activities, within forums and bilaterally with other organizations.

We obtained 722 replies (22% response rate). Respondents represent 385 organizations (65 are involved in an individual capacity; 38 failed to disclose).

CLIMATE ADAPTATION, INTERDEPENDENCE, AND COOPERATION

Panel 1: Community Clustering



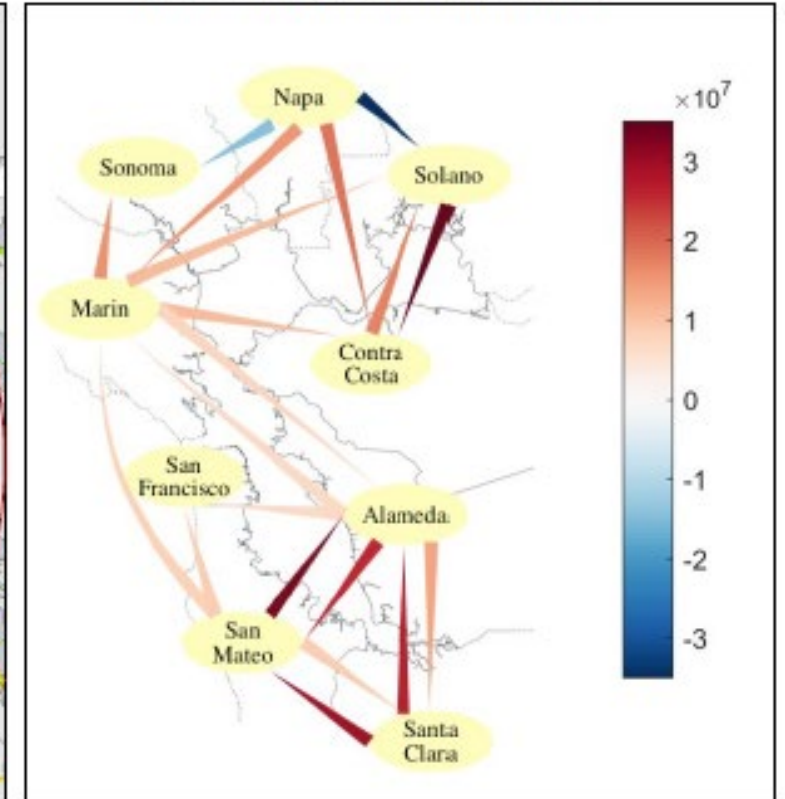
Shared Experience

Panel 2: Regional Traffic Response



Vulnerability
Interdependence

Panel 3: Physical Interactions



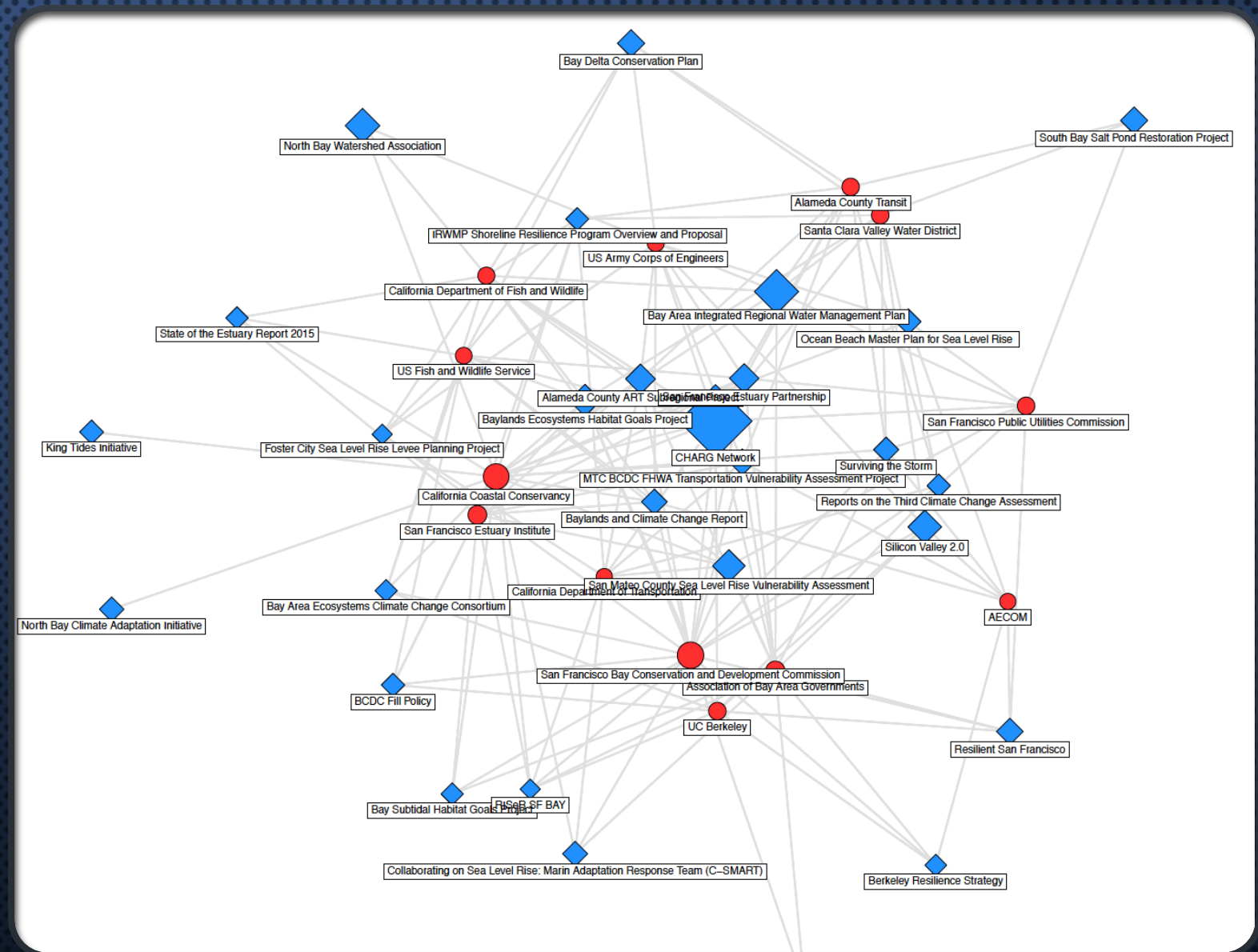
Adaptation
Interdependence

Not shown: Policy interdependence

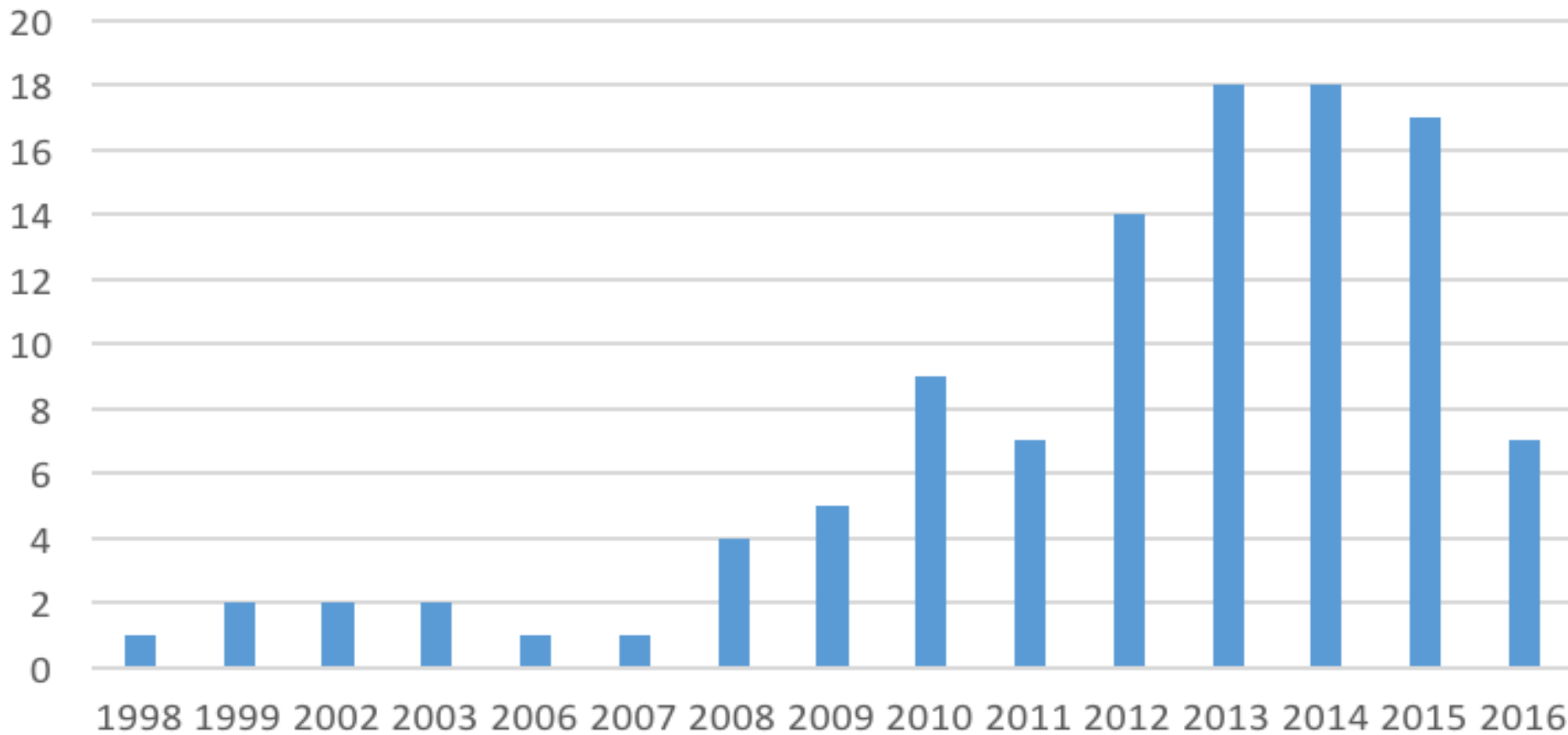
“MESSY” POLYCENTRIC GOVERNANCE SYSTEMS

“PUBLIC POLICY IS ALMOST ALWAYS A MESS. LET'S ACKNOWLEDGE THE INEVITABLE AND FIGURE OUT HOW TO MANAGE A MESSY SITUATION. TRYING TO DEFINE A POLICY “PROBLEM” IS HARD ENOUGH. TRYING TO FIND A SOLUTION IS EVEN HARDER. TRYING TO DO EITHER IN A POLICY-MAKING STRUCTURE IN WHICH EVERYONE IS INVOLVED, BUT NOBODY IS IN CHARGE, IS NEARLY IMPOSSIBLE.”

--PHIL ISENBERG, 2016



Adaptation Project by Inception Date



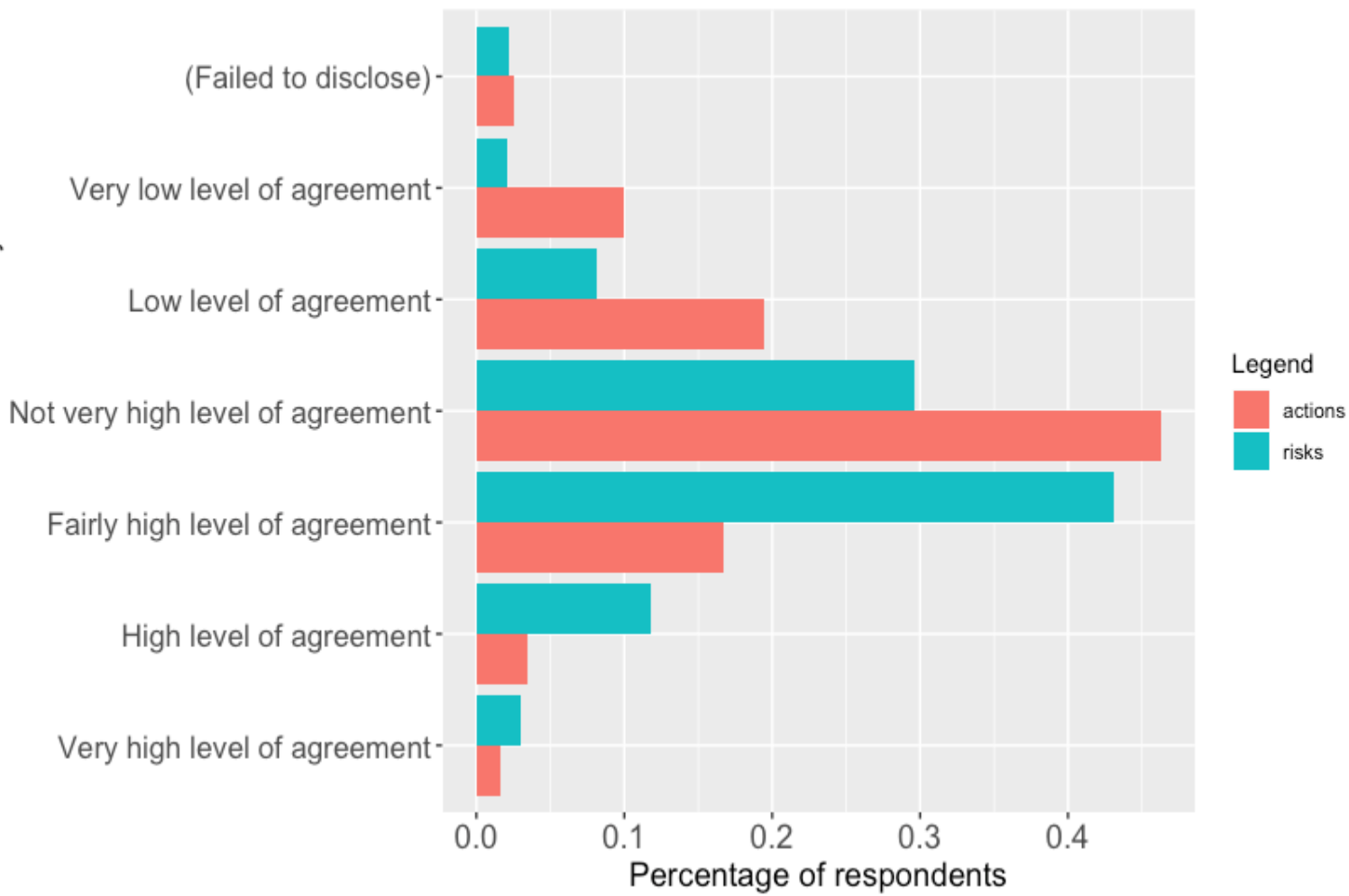
Period 1: 1998-2007

Period 2: 2008-2012

Period 3: 2013-2016

Question: Based on your experience, how would you characterize the level of agreement among stakeholders concerning the risks/actions needed to address sea level rise in the Bay Area?

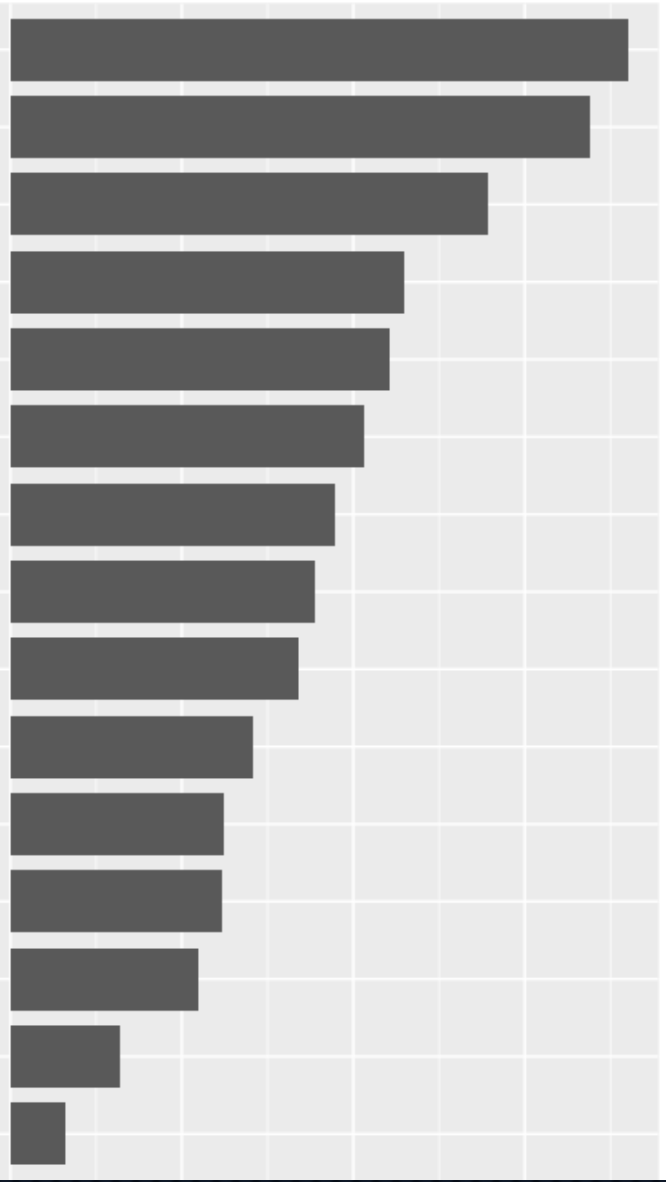
Perceived level of agreement on risks vs actions



AGREEMENT ON
THE PROBLEM, BUT
WHAT SHOULD WE
DO ABOUT IT?

Question: If you had to decide what sea level rise policies should be prioritized in the Bay Area, which ones would you select from the list below? (please select up to 3)

- Create a regional Sea Level Rise adaptation plan
- Create a collaborative partnership between existing agencies and stakeholders to address sea level rise
- Promote projects aimed at accommodating sea level rise with "green" infrastructure
- Complete vulnerability assessments for all 9 counties
- Develop faster/more efficient permitting processes that incorporate considerations of sea level rise
- Empowering an existing regional agency to address sea level rise
- Lobby at the state or federal level for funding to help respond to sea level rise in California
- Focus attention on the impact of sea level rise on disadvantaged communities
- Create a single information platform concerning the status of projects related to sea level rise
- Promote projects with different or innovative design solutions
- A "visioning process" where stakeholders collaboratively identify the principles goals and actions for addressing sea level rise
- Establish a new regional authority to address sea level rise
- Pass local tax measures to address sea level rise
- Support local jurisdictions to respond to sea level rise as they see fit
- (Failed to disclose)



EVERYBODY WANTS A PLAN ...BUT WHO WILL MAKE IT?

NOBODY WANTS A NEW AUTHORITY!

KEY 2: PLANNING

[ABOUT ↓](#)[BAY ADAPT ↓](#)[RESOURCES ↓](#)[CONTACT US](#)

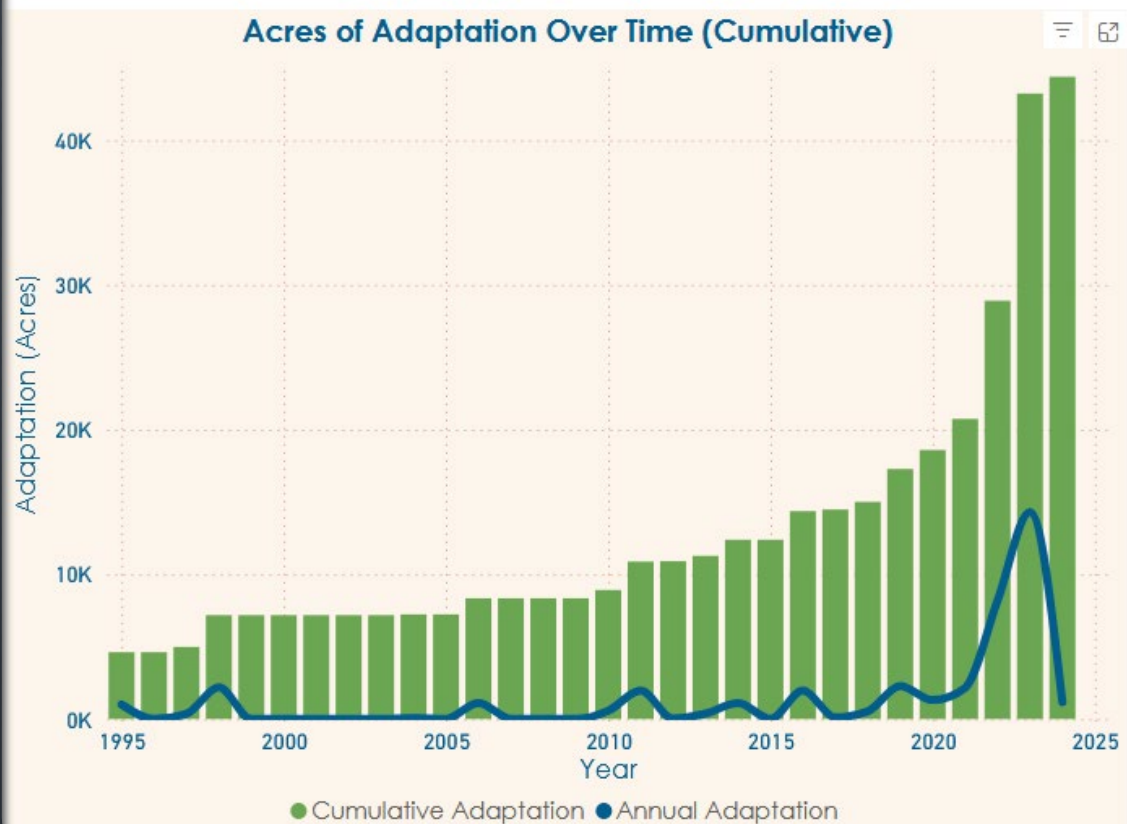
BAY ADAPT is an initiative to establish regional agreement on the actions necessary to protect people and the natural and built environment from rising sea levels.

94

Completed adaptation
projects since 1995

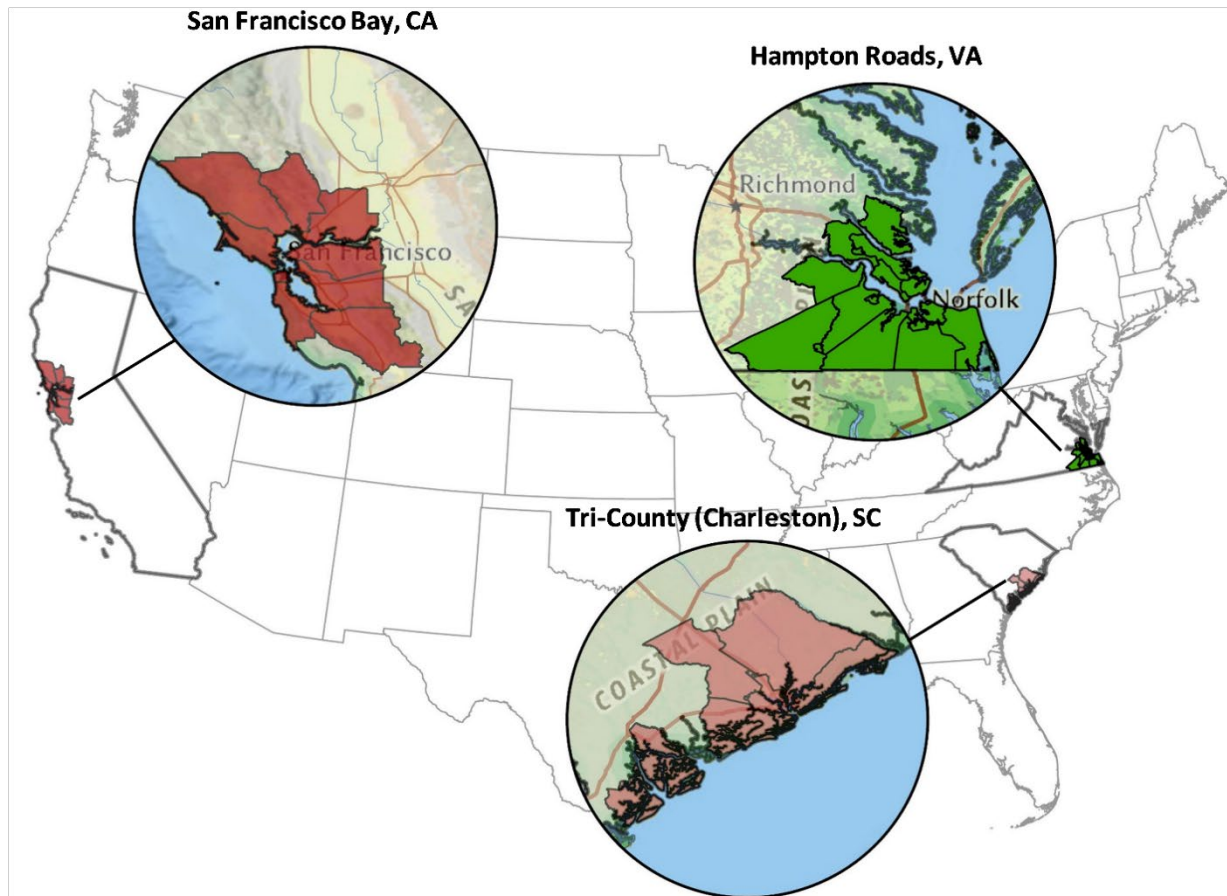
44K

Acres of completed
adaptation since 1995



OUTCOMES: ON THE GROUND ADAPTATION PROJECTS

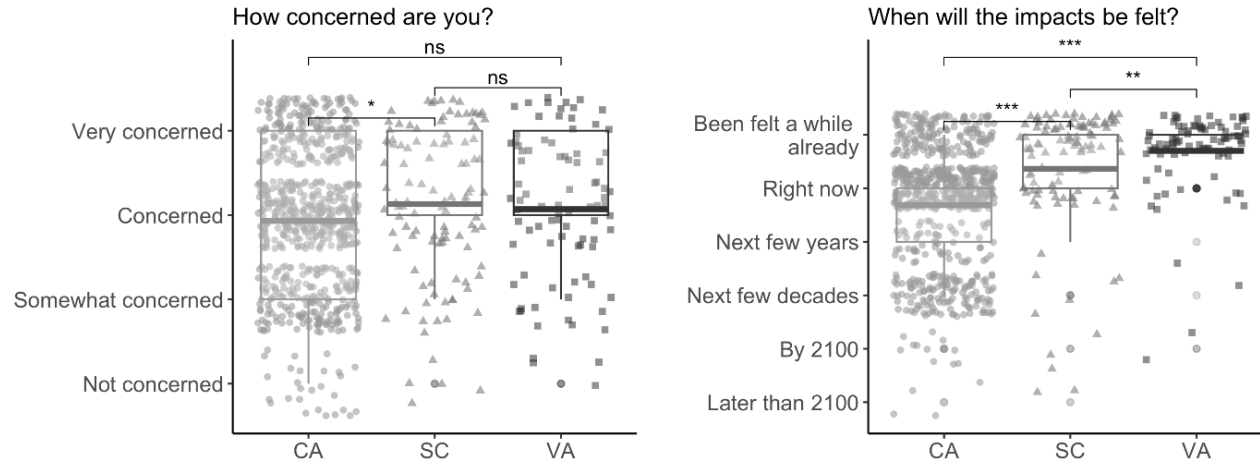
<https://www.bayadapt.org/bay-currents/>



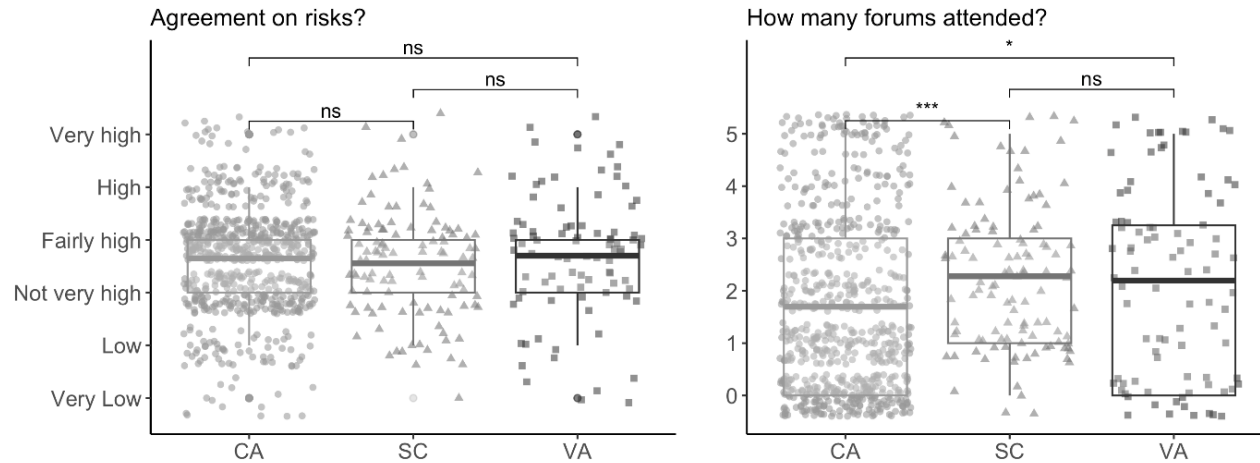
CALIFORNIA
IS NOT THE
ONLY
PLACE!

	Sea-level Rise Vulnerability	Political Culture	Institutional Capacity
San Francisco Bay, CA	Moderate expected sea-level rise, heavily urbanized coast with critical infrastructure.	Accepts climate change is occurring and caused by humans, sea-level rise is viewed as a key coastal issue.	High institutional capacity with a well-developed polycentric governance system. Home Rule but also high levels of regional coordination.
Tri-County (Charleston) Area, SC	High levels of expected sea-level rise and frequent flooding; a mix of urban, suburban, and rural. Vulnerable critical infrastructure.	Mix of climate skeptics and climate change believers who recognize the increase in flooding events.	Low to medium institutional capacity with few developed polycentric institutions or networks. Home Rule and lack of regional coordination.
Hampton Roads, VA	High levels of sea-level rise and frequent flooding; primarily urban with suburban and rural localities around the urban core. Vulnerable defense and military assets.	Mix of climate skeptics and climate change believers that accept sea-level rise is occurring, and flooding is a key concern. Strong belief that the responsibility is local.	Medium institutional capacity with long-standing polycentric governance institutions and increasing emphasis on regional coordination for adaptation but bounded by Dillon Rule constraints.

Shared motivation (H1)



Principled engagement (H2 & H3)

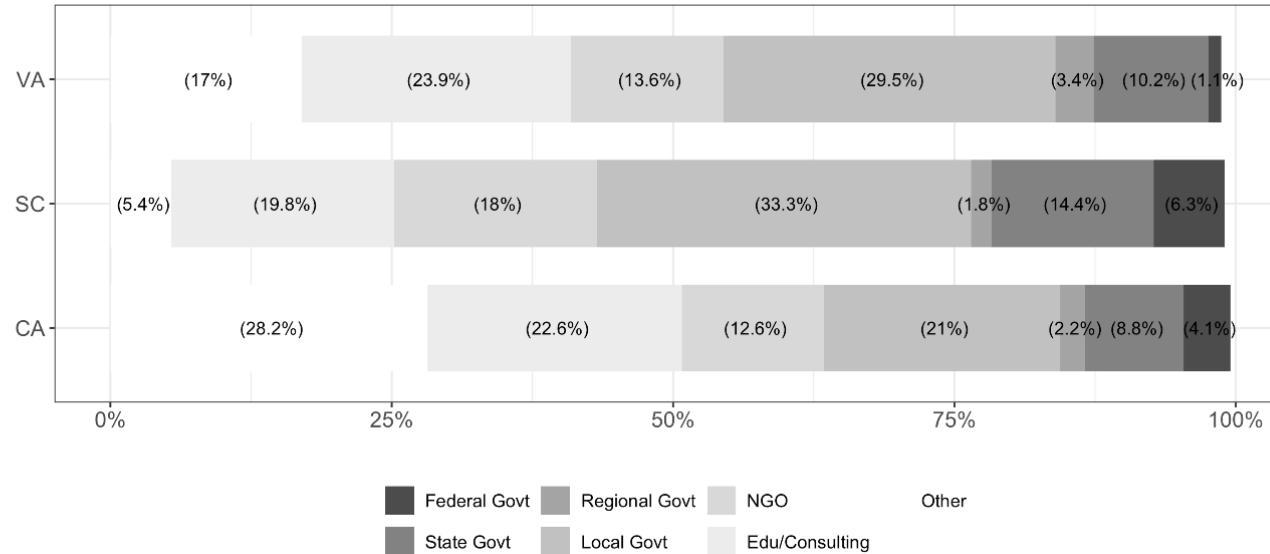


MOTIVATION AND
ENGAGEMENT: SLR IS
PSYCHOLOGICALLY
“CLOSER” ON EAST
COAST

Capacity for joint action (H4-H7)

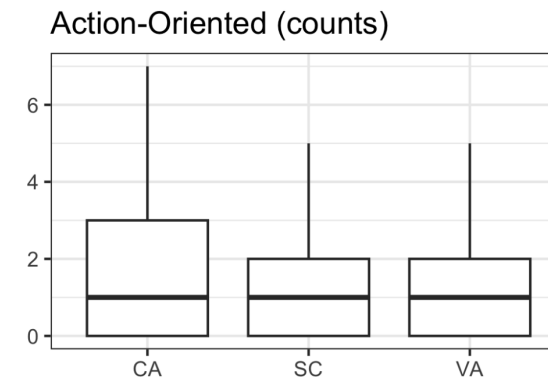
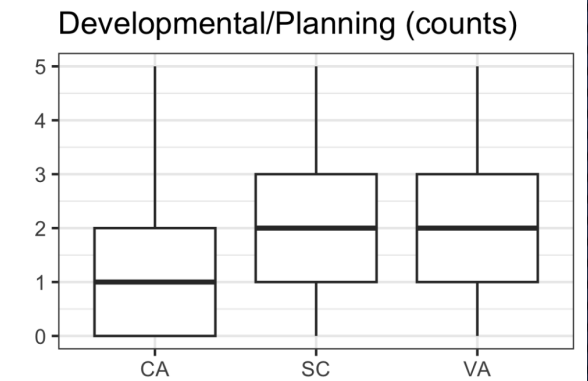
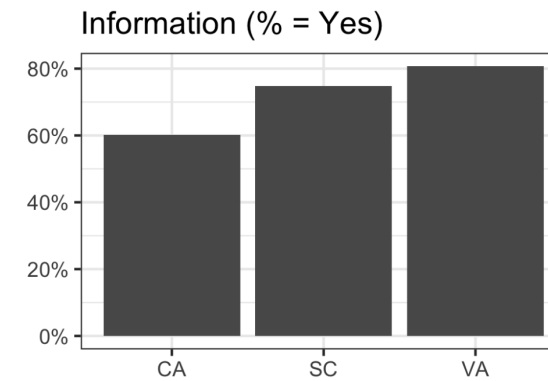
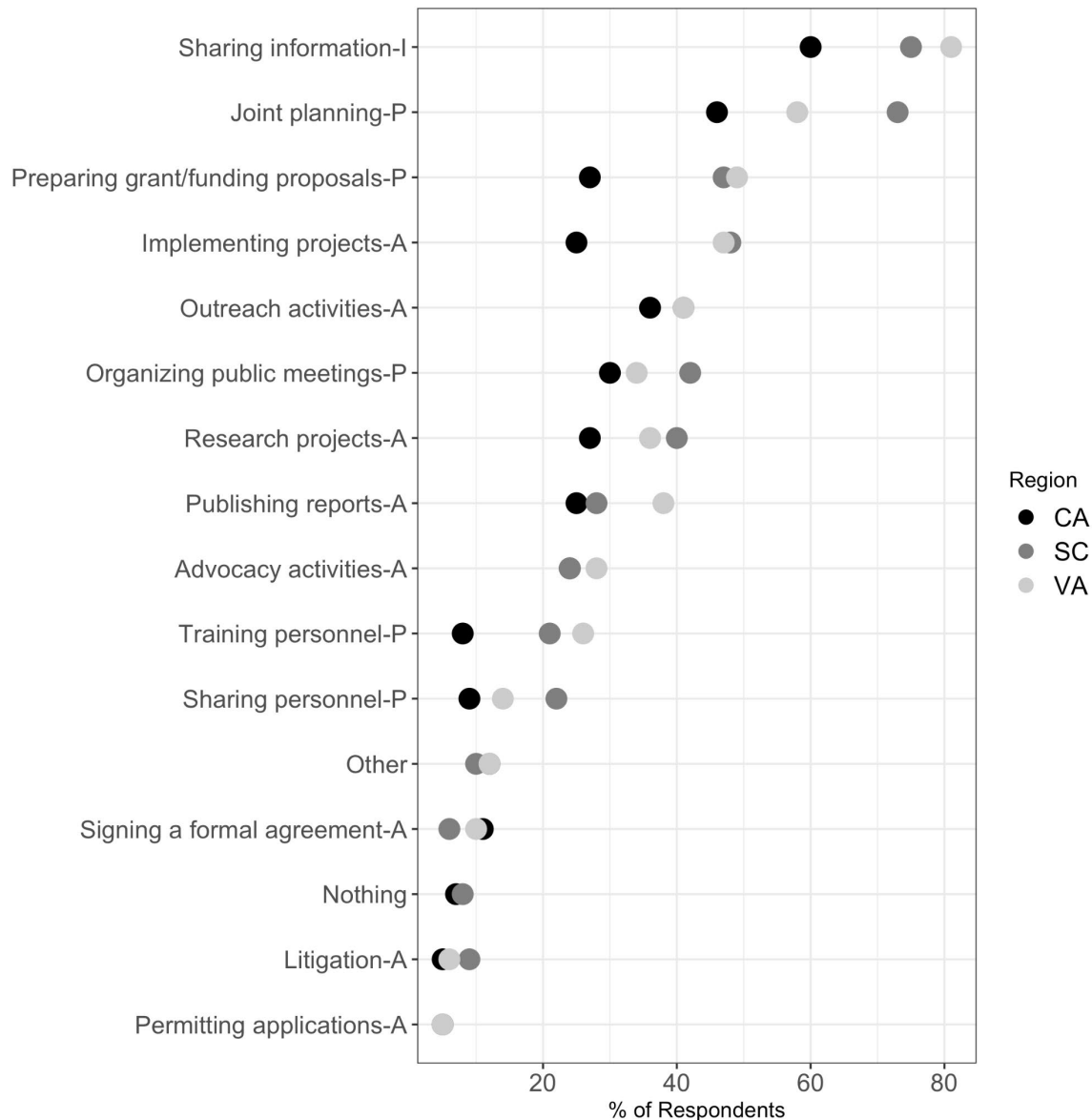


H7: Type of actor



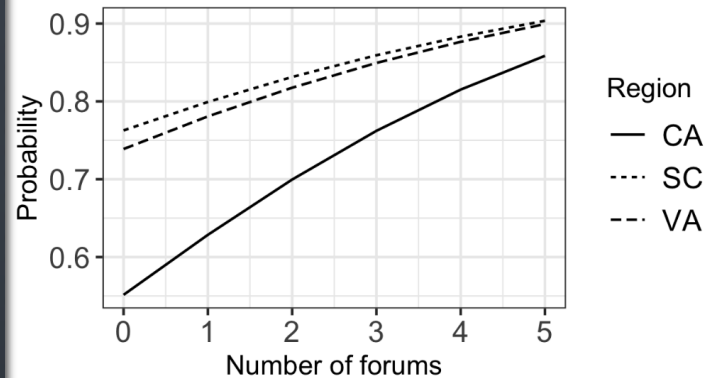
CAPACITY FOR
ACTION:
INFORMED AND
RESOURCED
ACTORS AT THE
HEART OF THE
NETWORK

FROM EASY TO HARD COLLABORATION

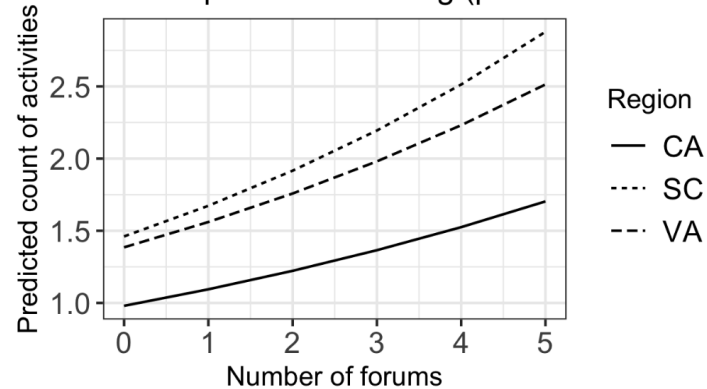


JOINTLY PARTICIPATING IN PLANNING FORUMS DRIVES COLLABORATION

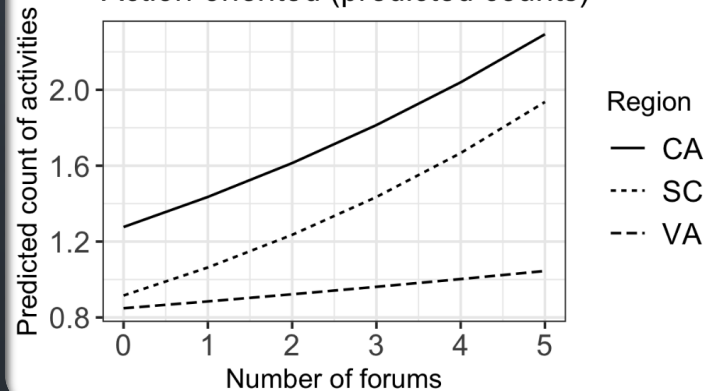
Informational (probability of Yes)



Developmental/Planning (predicted counts)



Action-oriented (predicted counts)



CAN COMMUNITY-BASED ORGANIZATIONS COOPERATE?

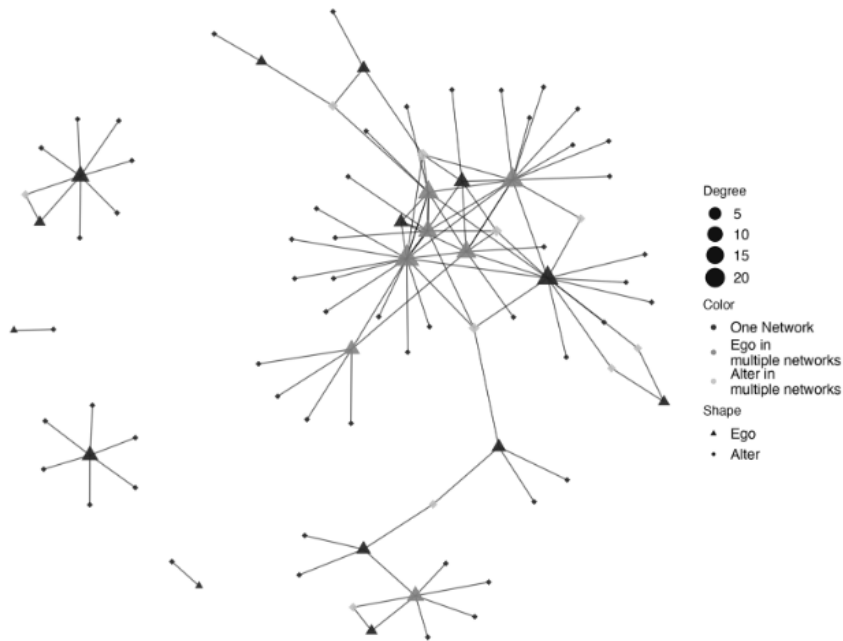
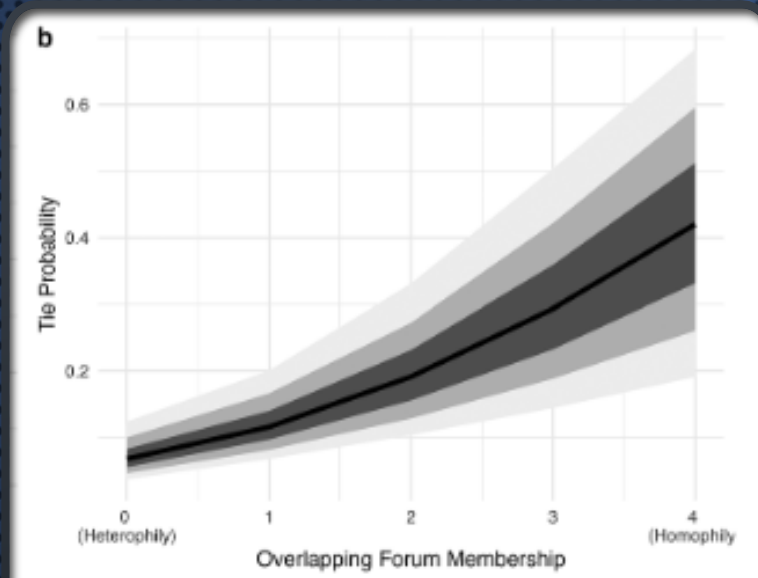
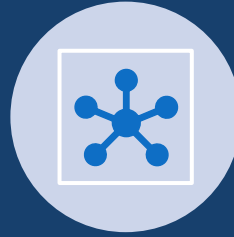


Figure 4. Combined network plot of all 21 ego networks. Overlapping alters and egos are shown in purple and yellow, respectively. Node size is relative to number of collaboratives ties a group has across all ego networks.

- CENTRIFUGAL FORCES: COMPETITION, LOCALISM, PERSONALITIES
- CENTRIPETAL FORCES: SHARED ISSUES, COALITION BUILDING, JOINT FORUM PARTICIPATION

CONCLUSIONS



CLIMATE ADAPTATION
REQUIRES COOPERATION
DUE TO INTERDEPENDENCE



ALL COASTAL REGIONS
FACE SIMILAR
GOVERNANCE
CHALLENGES, WITH SLR
MORE OF A CLEAR AND
PRESENT DANGER ON EAST
COAST



COLLABORATIVE TALK IS
CHEAP; COLLABORATIVE
PROJECTS ARE HARD



JOINTLY ENGAGING IN
PLANNING IS DRIVER OF
COLLABORATION



INEQUITIES IN CAPACITY
FOR JOINT ACTION
EXACERBATES
ENVIRONMENTAL
INJUSTICE IN POLYCENTRIC
SYSTEMS



WE NEED A LOT MORE
COMPARATIVE AND
LONGITUDINAL RESEARCH

PUBLICATIONS

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HUANG, CHIEN-SHIH, AND MARK LUBELL. "HOUSEHOLD FLOOD RISK RESPONSE IN SAN FRANCISCO BAY: LINKING RISK INFORMATION, PERCEPTION, AND BEHAVIOR." *REGIONAL ENVIRONMENTAL CHANGE* 22, no. 1 (2022): 20.

