CLIMATE CHANGE:
2021 and Beyond

Preparing our communities for the future.

Great Lakes and St. Lawrence Cities Initiative Presents:

Report Out: Mayors Advisory Council on Coastal Resilience

August 2021

Welcome

Introduction

- Mayor Brian Saunderson (Co-Chair) – Collingwood, ON

Coastal Resilience Needs Assessment Survey

- Dr. Ann Witmer – Lecturer / Research Scientist at University of Illinois
- Alex Timmons – Research Engineer at University of Illinois

Identifying Coastal Needs

- Councillor Clare Latimer – Chatham-Kent, ON
- Mayor Shaun Collier – Ajax, ON
- Mayor Gino Moretti – Saint-Anicet, QC
- Mayor Jim Carruthers (Co-Chair) – Traverse City, MI

Next Steps

- Mayor Jim Carruthers (Co-Chair) – Traverse City, MI

Understanding the Problem

Caledonia, WI | Source: The Journal Times

Mackinac Island, MI | Source: Crain's Detroit Business

- **Variability –** Water levels in the Great Lakes-St. Lawrence River basin are naturally variable with cyclical highs and lows.
- **Severity –** Climate change is exacerbating these fluctuations with recent years reaching record high water levels.
- **Damage –** High water levels, paired with severe storm events and wave action, are leading to greater erosion and flooding events.
- **Threat –** Erosion and flooding threaten public and private properties, critical infrastructure, and recreation / tourism potential.

Addressing Coastal Resilience

- **Initiated Advisory Council in January 2021**
- **Meet monthly with topics covering:**
  - Physical and socioeconomic impacts of climate change
  - Intergovernmental collaboration
  - Regional policies
  - Presentations from coastal and climate experts
  - Group activities to explore and identify coastal needs
- **Coastal Resilience Needs Assessment Survey**

Preliminary Findings from the Coastal Resilience Needs Assessment Survey

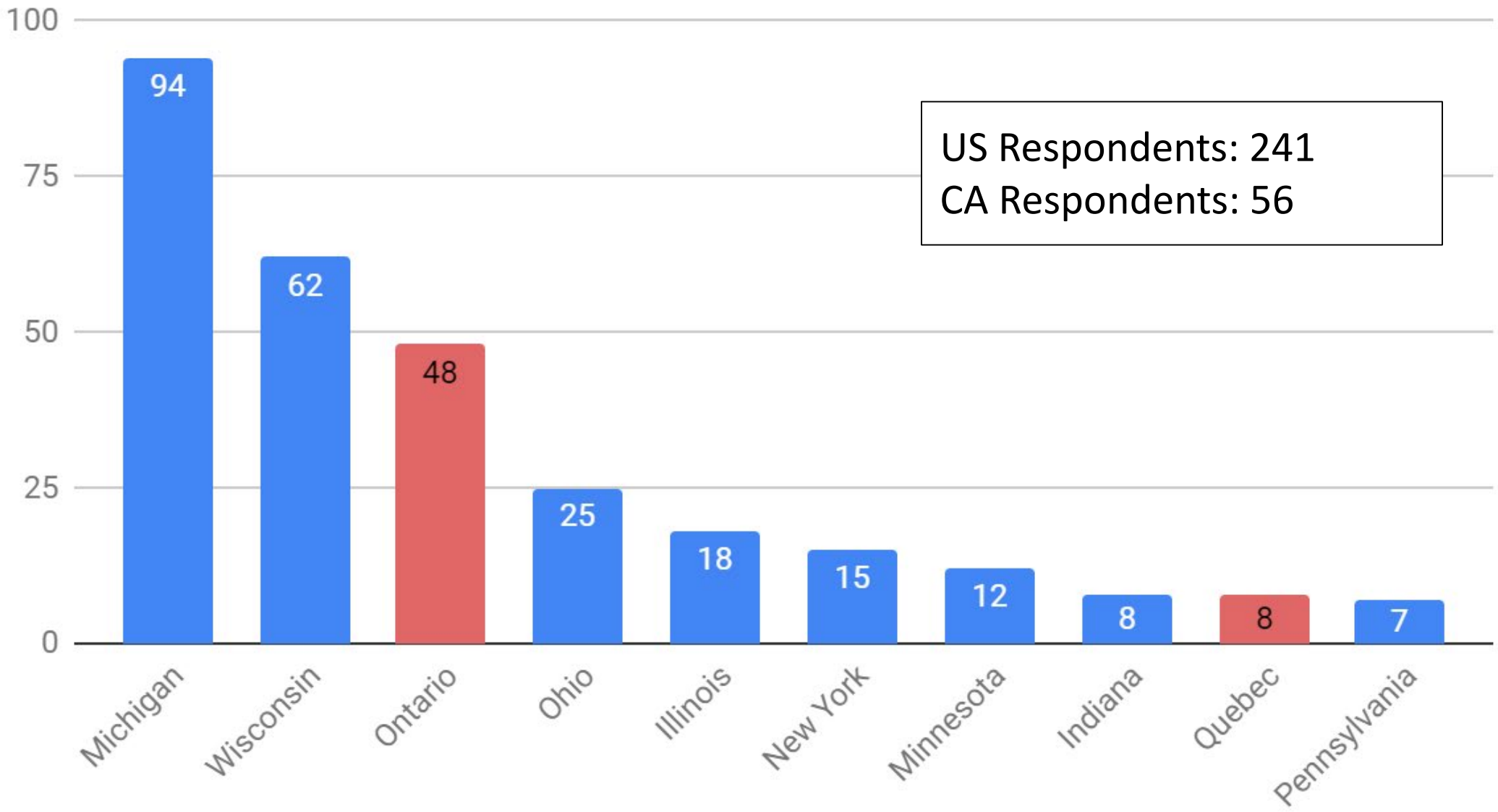
GREAT LAKES AND ST. LAWRENCE CITIES INITIATIVE
L'ALLIANCE DES VILLES DES GRANDS LACS ET DU SAINT-LAURENT

CLIMATE CHANGE: 2021 and Beyond
Preparing our communities for the future.

Respondent Demographics

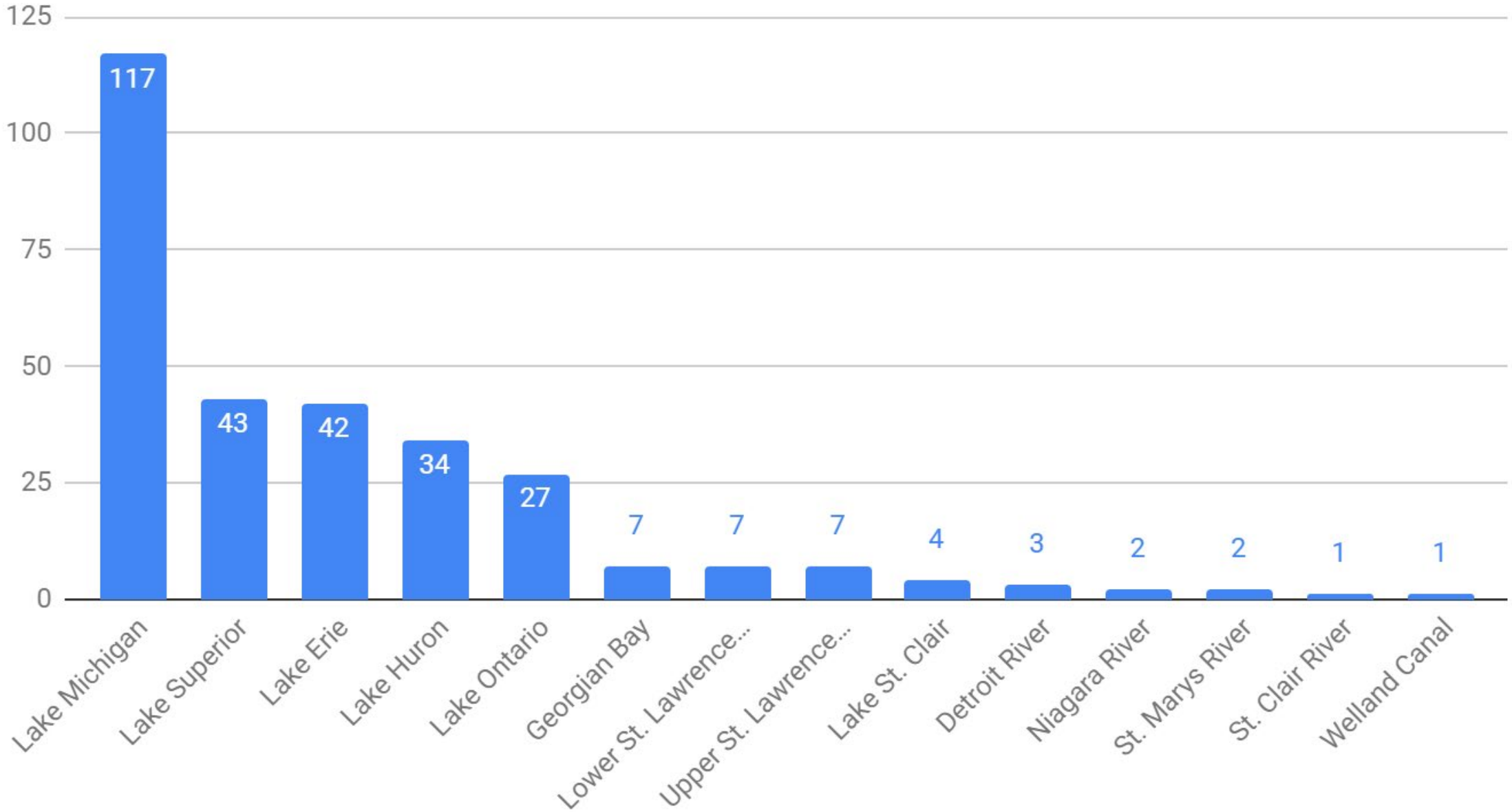
GREAT LAKES AND ST. LAWRENCE
CITIES INITIATIVE
L'ALLIANCE DES VILLES
DES GRANDS LACS ET DU SAINT-LAURENT

Location of Jurisdiction

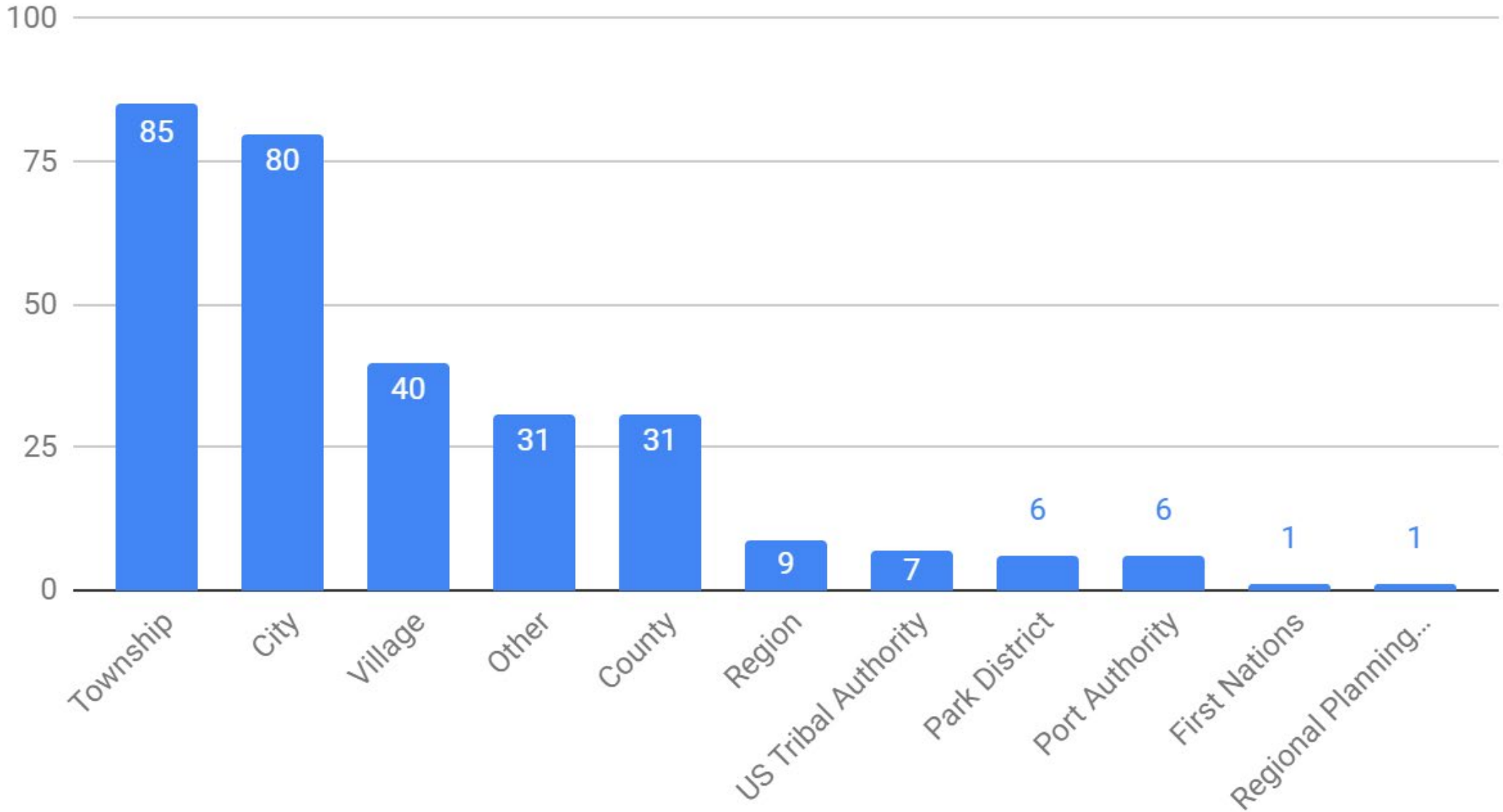


US Respondents: 241
CA Respondents: 56

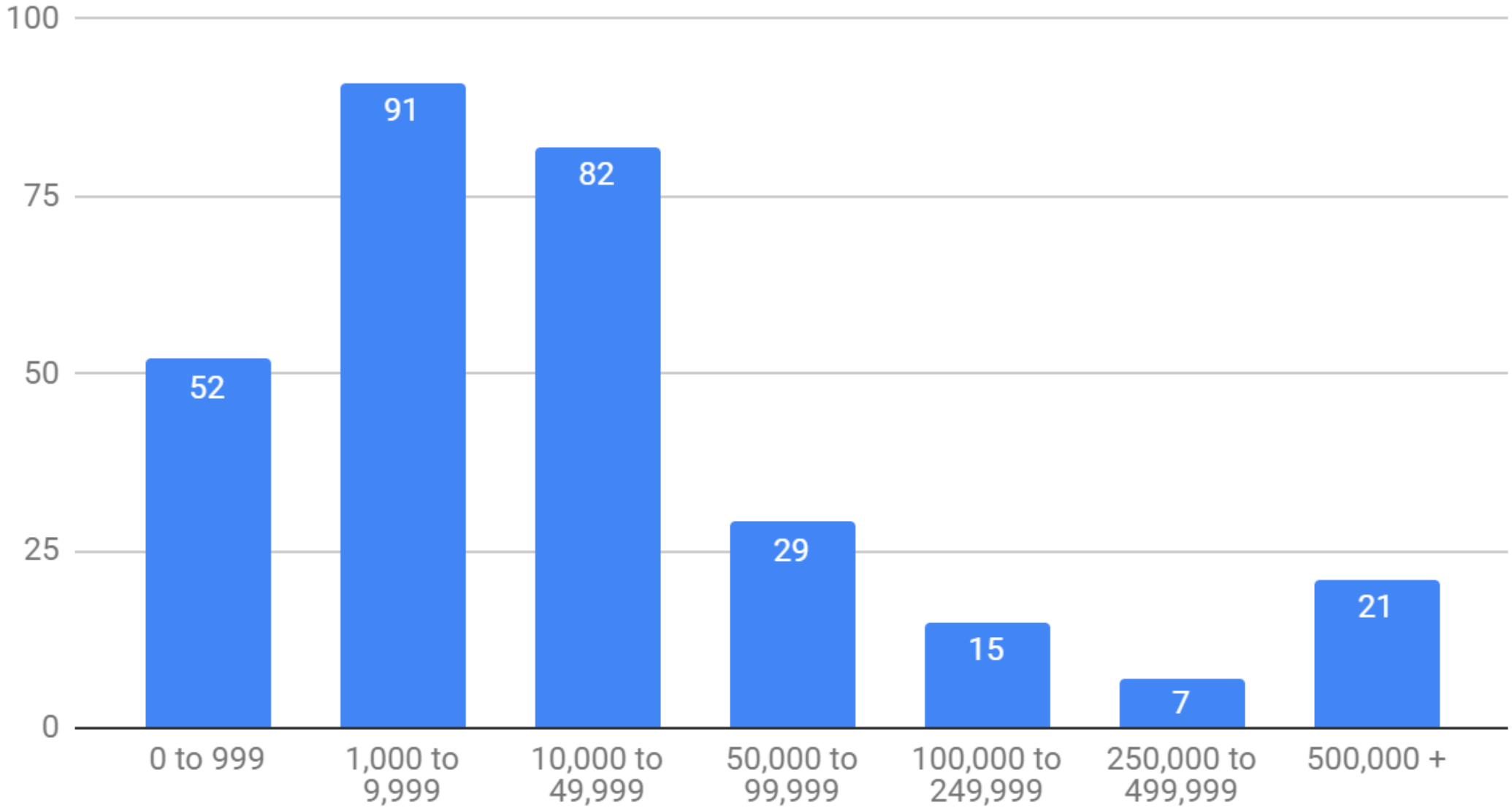
Great Lake or Connecting Channel



Type of Jurisdiction



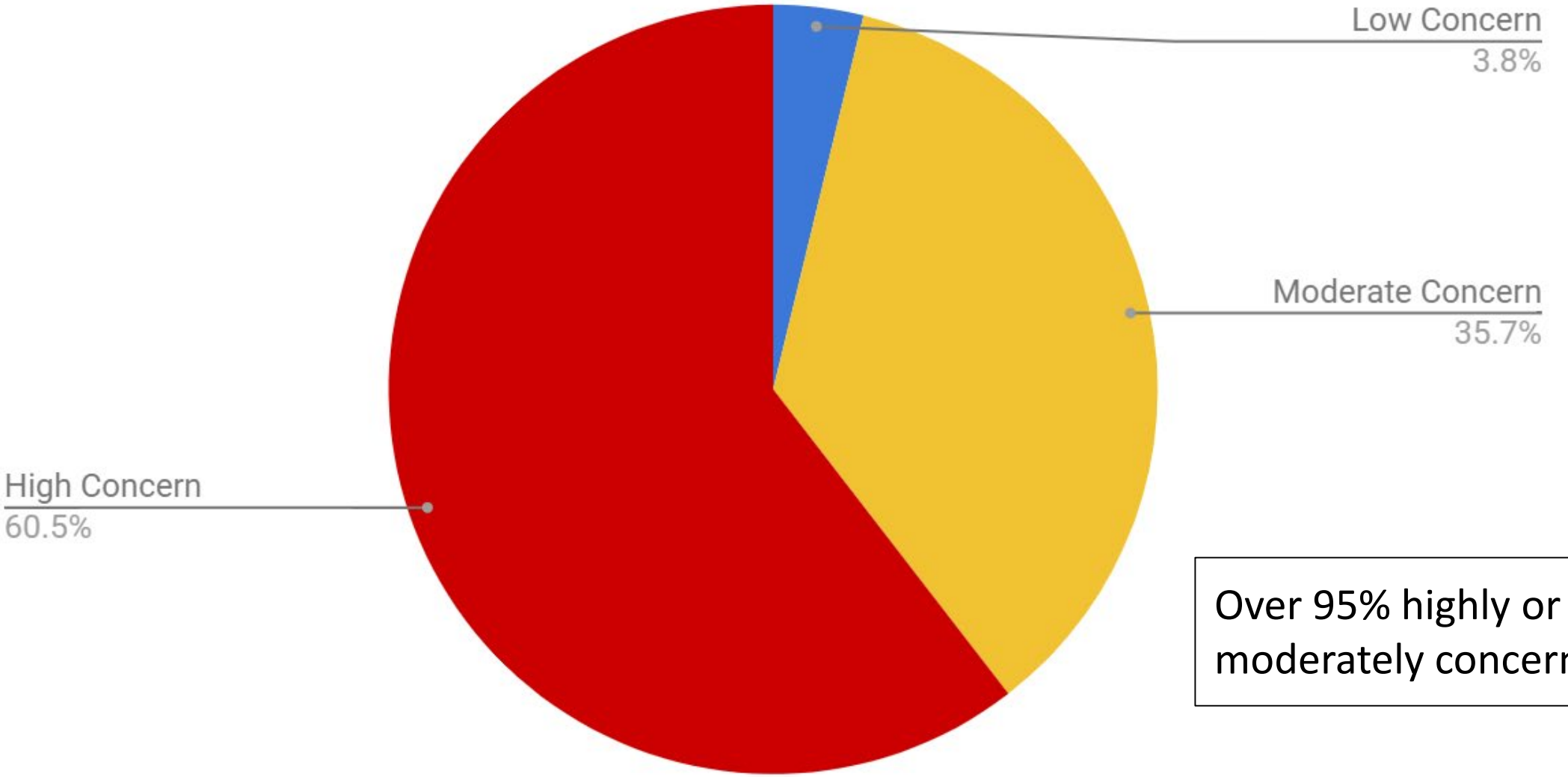
Estimated population of jurisdiction



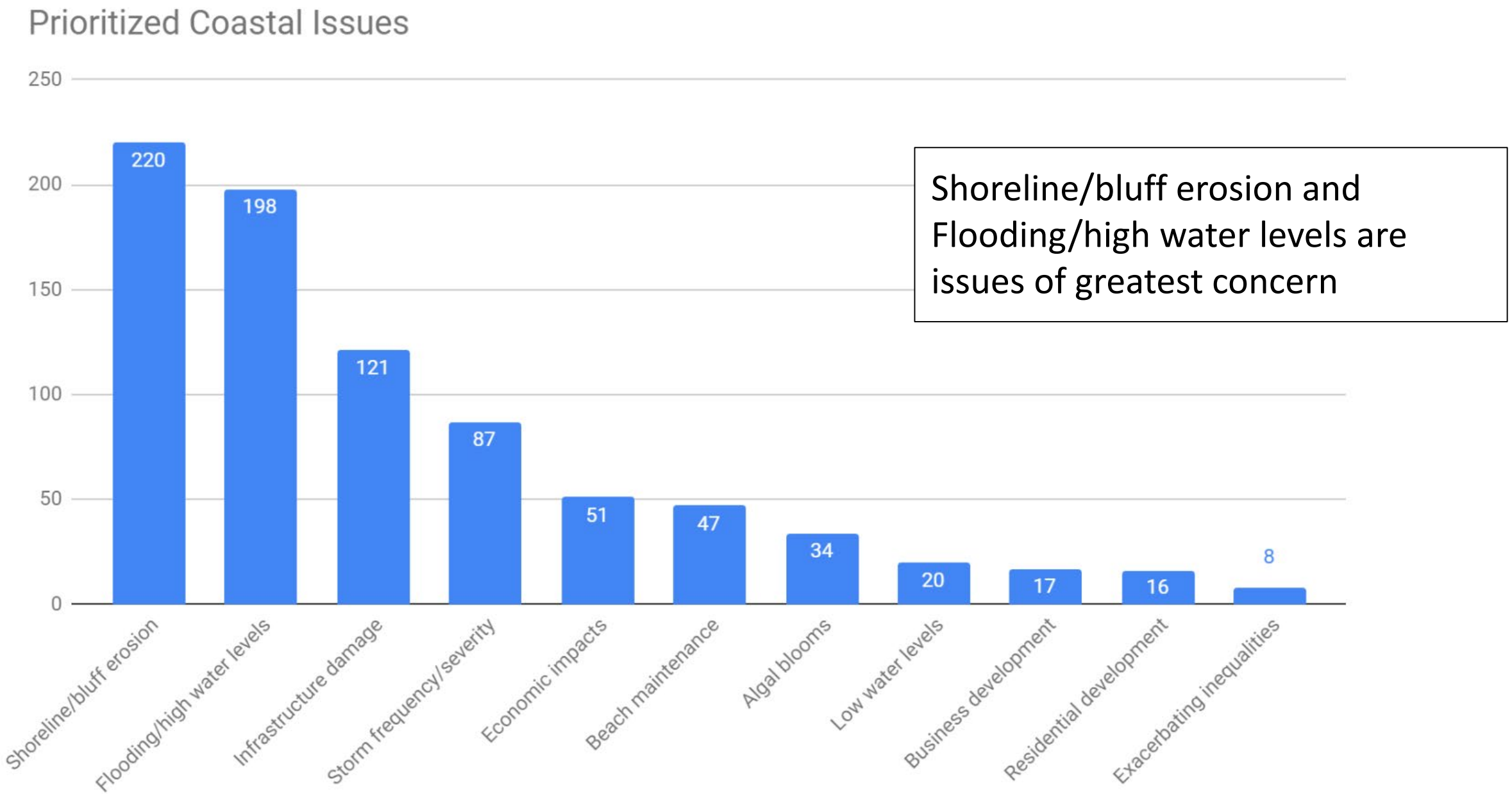
Top Concerns and Priorities

GREAT LAKES AND ST. LAWRENCE
CITIES INITIATIVE
L'ALLIANCE DES VILLES
DES GRANDS LACS ET DU SAINT-LAURENT

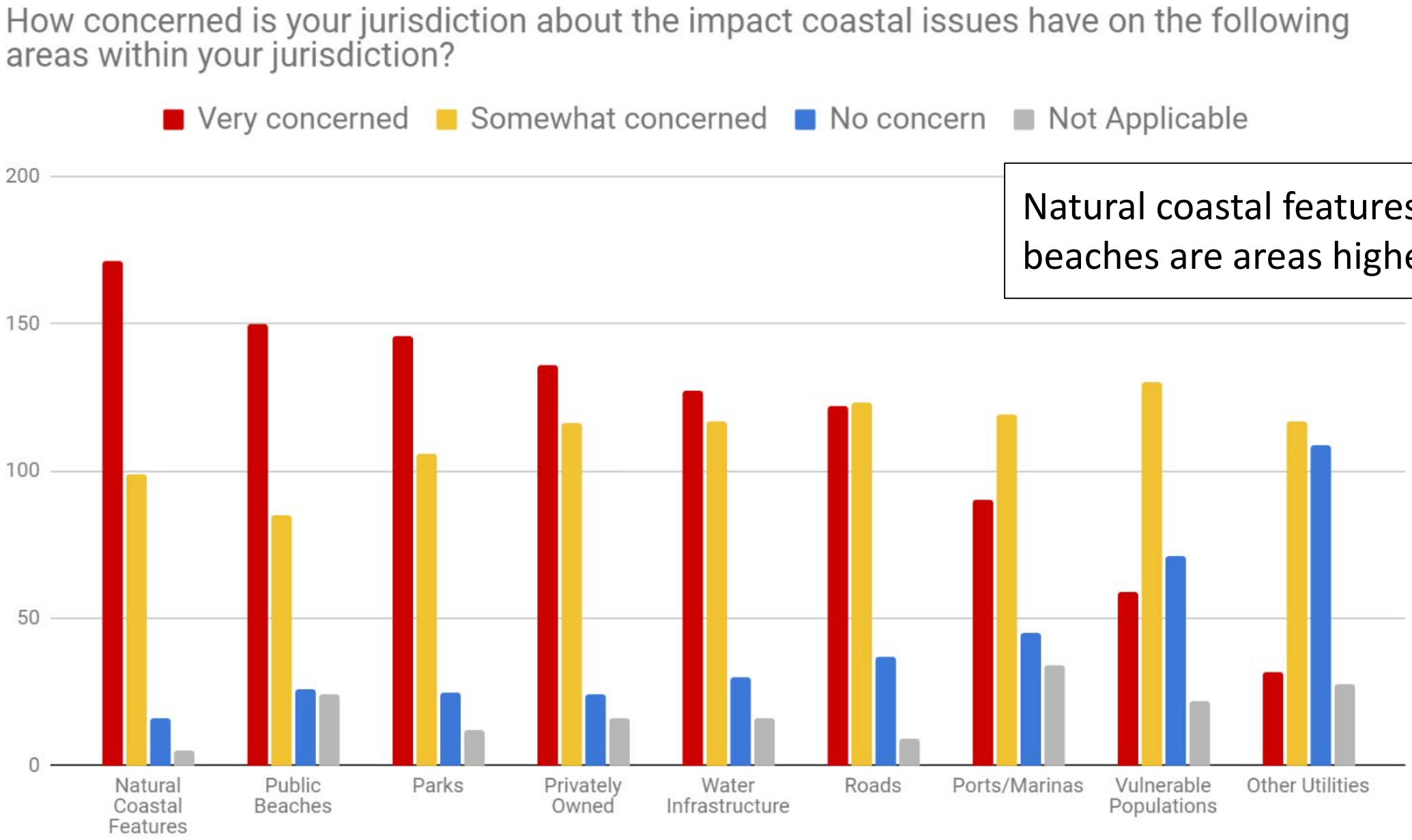
How would you characterize the level of concern in your jurisdiction today about coastal issues?



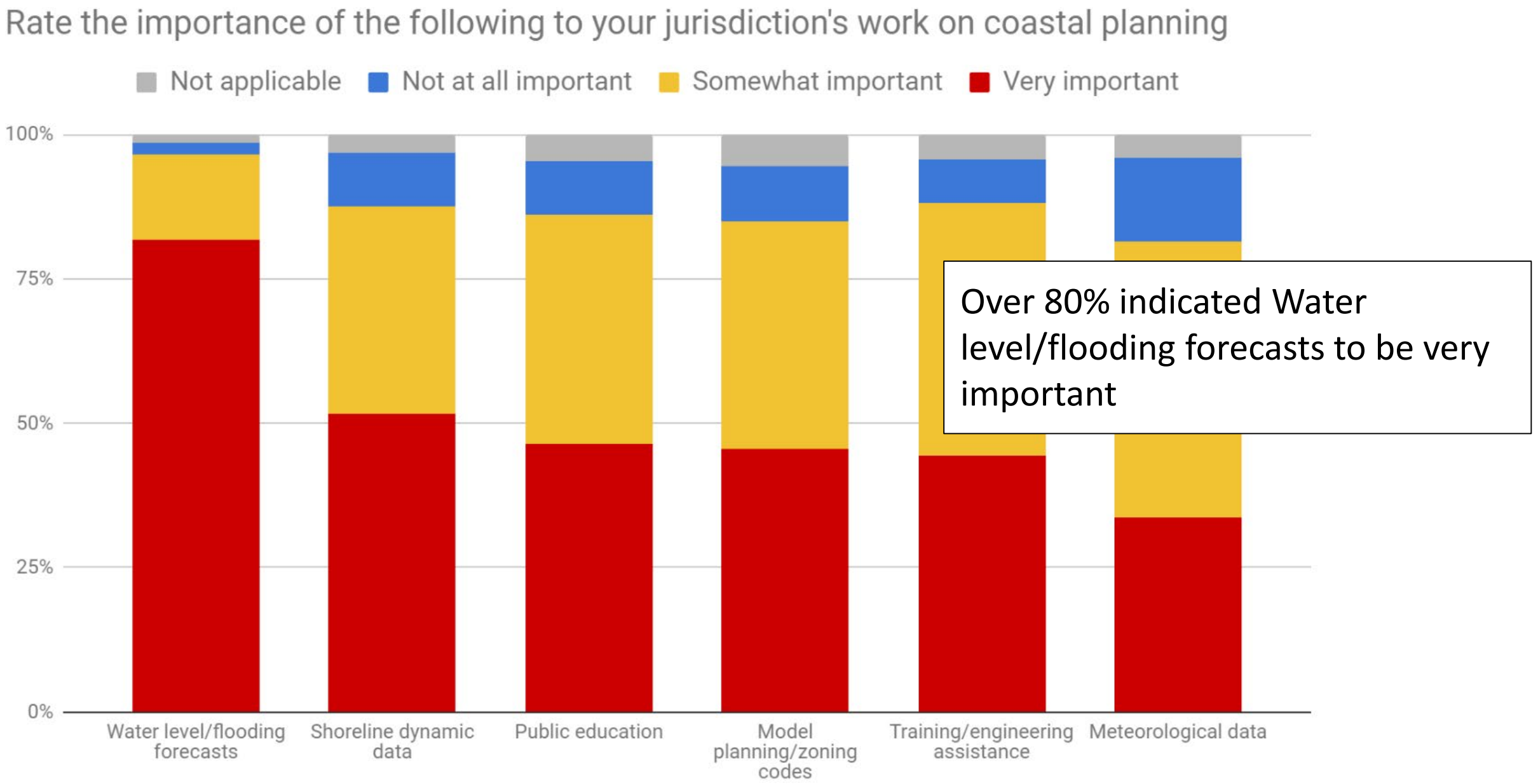
Over 95% highly or moderately concerned



Shoreline/bluff erosion and Flooding/high water levels are issues of greatest concern



Natural coastal features and Public beaches are areas highest concern


Rate the importance of the following to your jurisdiction's work on coastal planning
Not applicable
Not at all important
Somewhat important
Very important
100%
75%
50%
25%
0%
Water level/flooding forecasts
Shoreline dynamic data
Public education
Model planning/zoning codes
Training/engineering assistance
Meteorological data
Over 80% indicated Water level/flooding forecasts to be very important

Resources and Support

GREAT LAKES AND ST. LAWRENCE
CITIES INITIATIVE
L'ALLIANCE DES VILLES
DES GRANDS LACS ET DU SAINT-LAURENT

Anticipated future expenditures over the **next 5 years** for coastal impacts

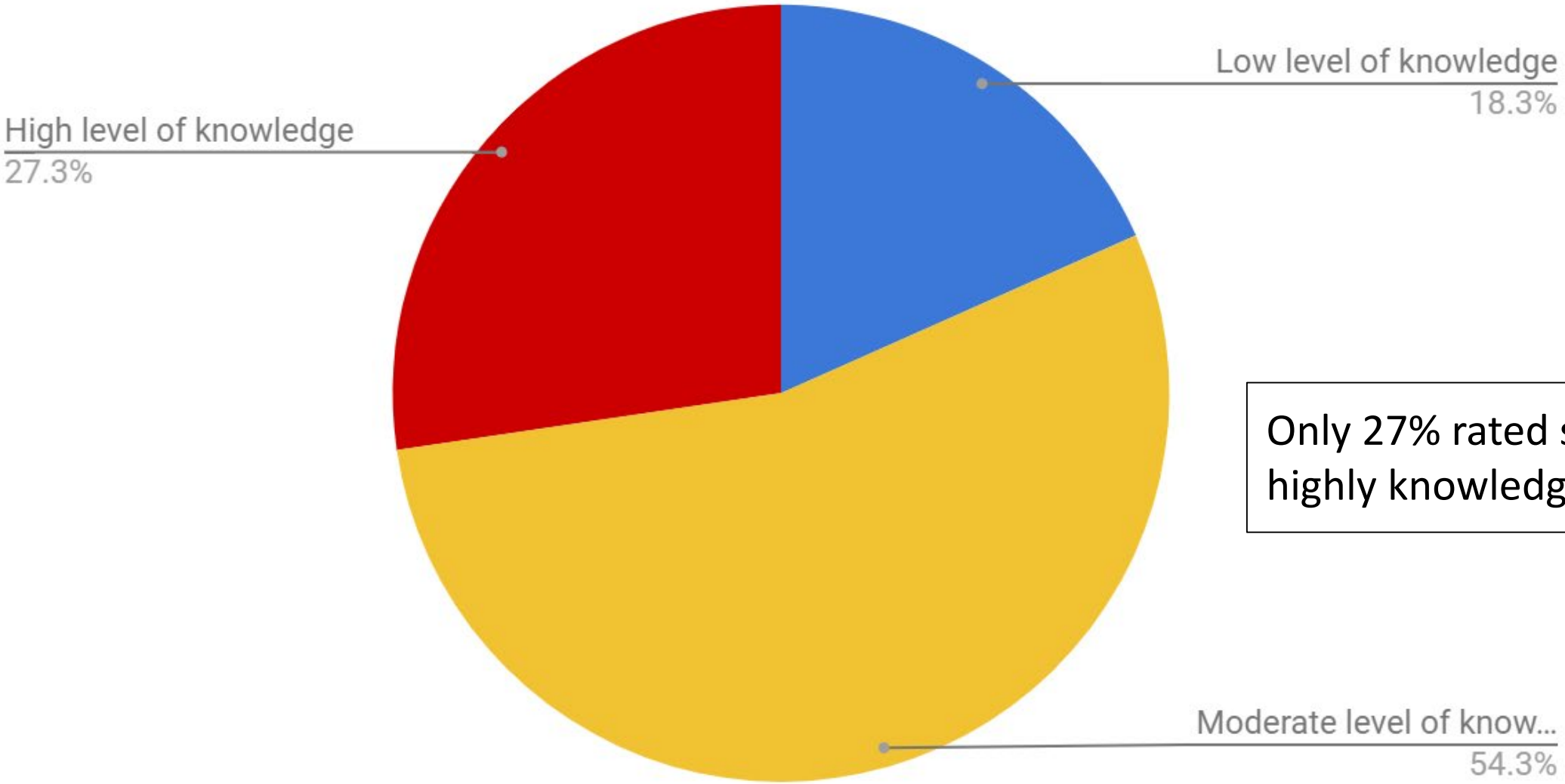
(Underrepresentation of actual need)

US Responses: **$1.95B USD**

CA Responses: **$0.26B USD**

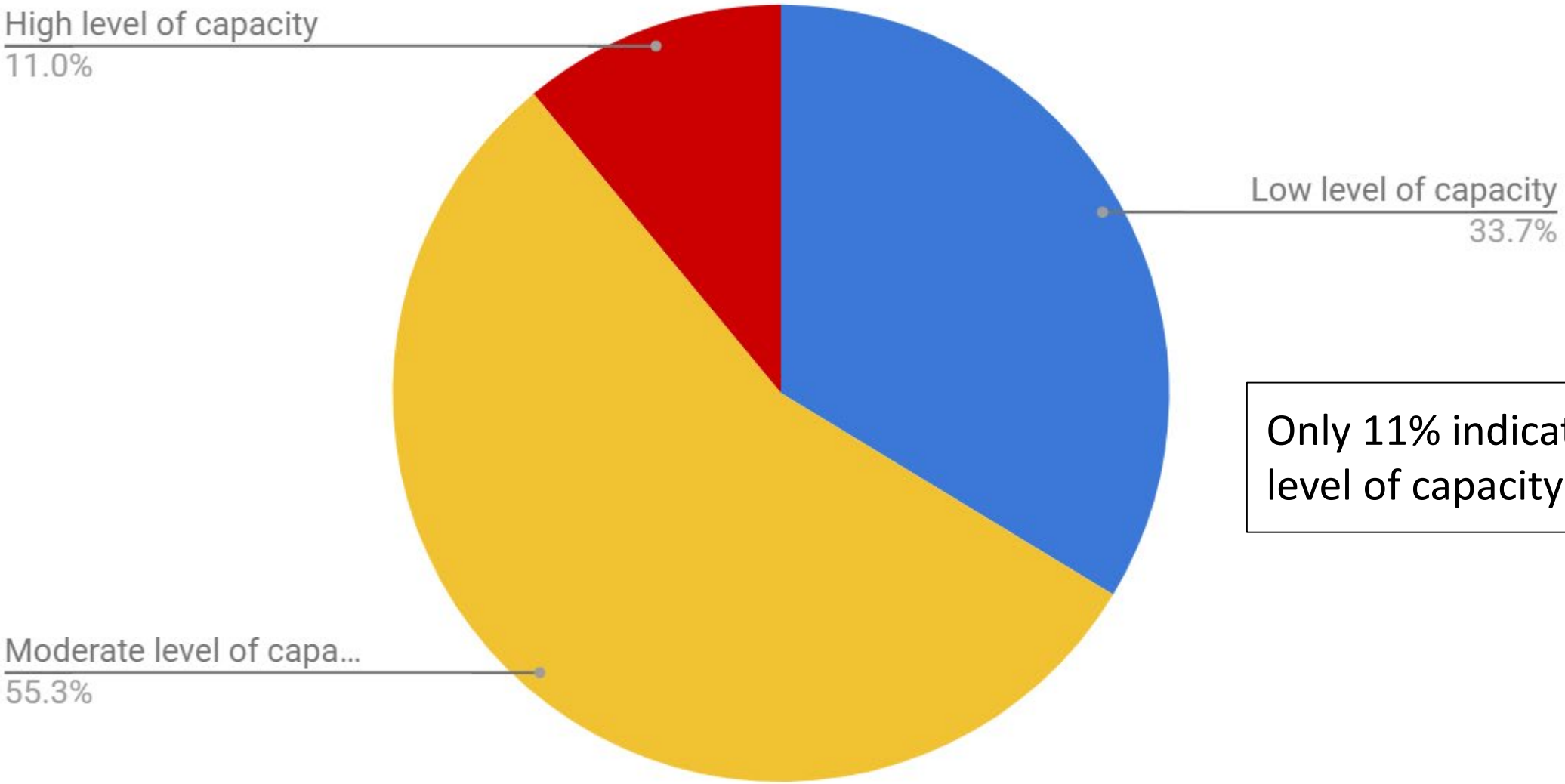
Total: **$2.21B USD**

Rate the general level of knowledge the staff in your jurisdiction have regarding coastal issues

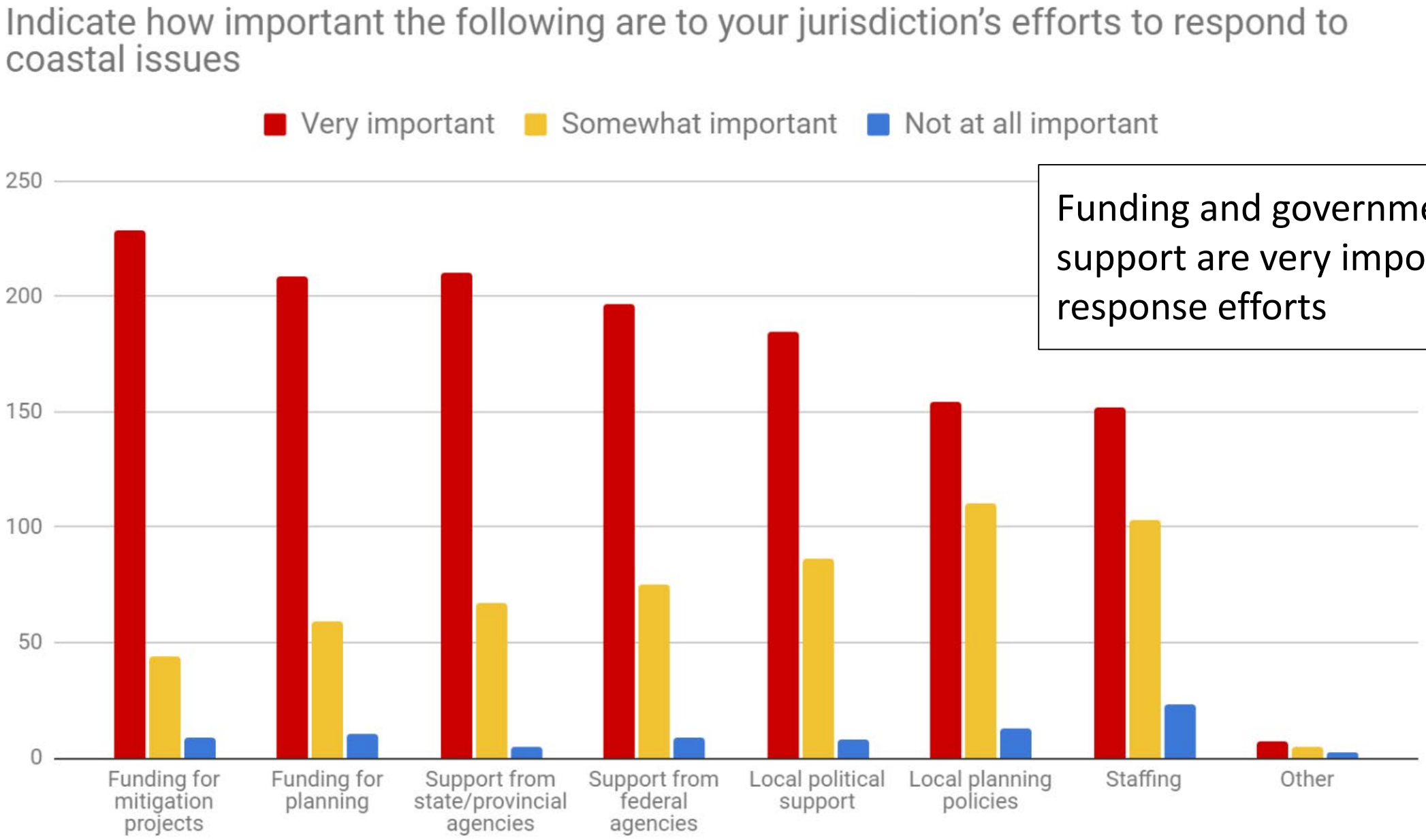


Only 27% rated staff as highly knowledgeable

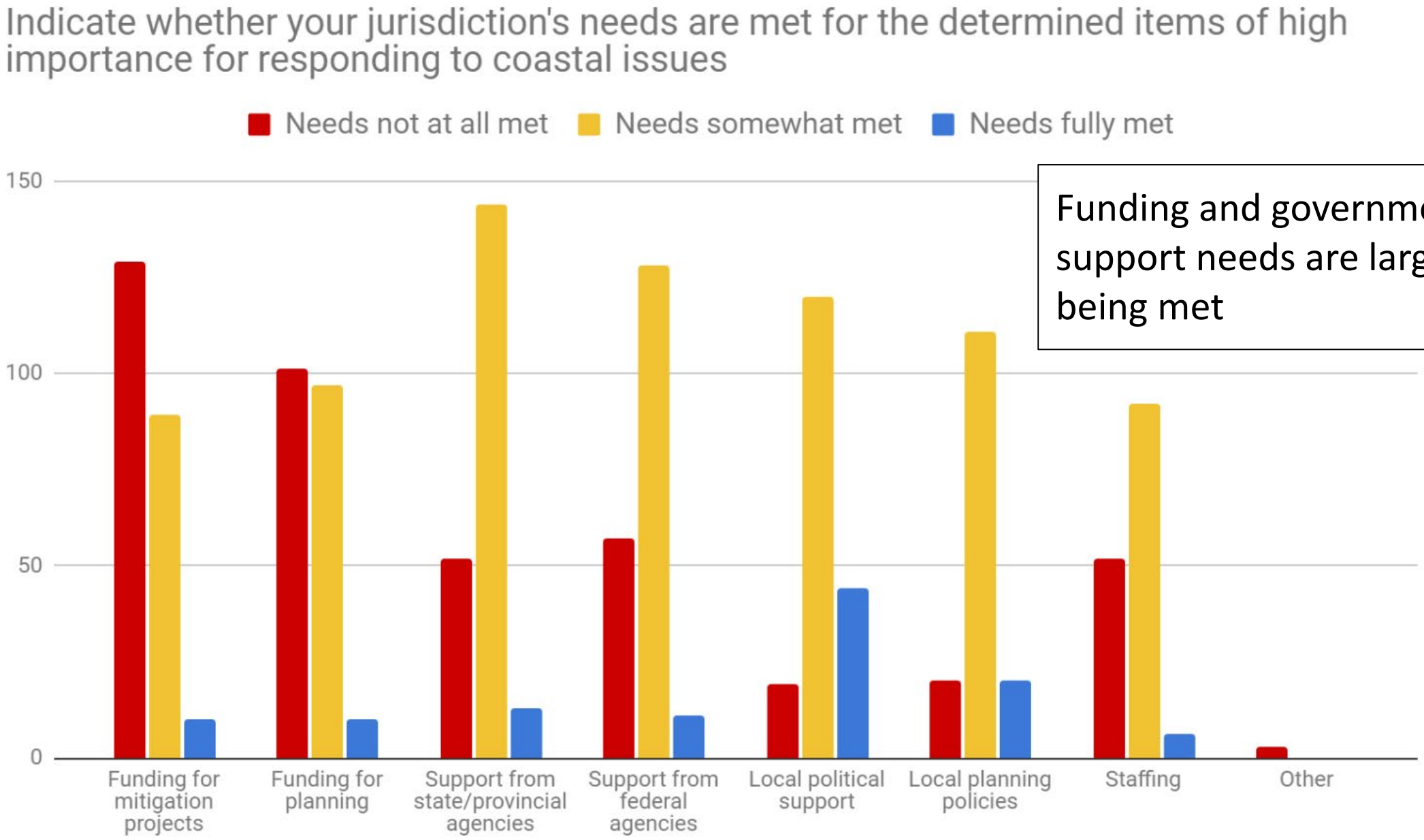
Rate your jurisdiction's capacity to plan for and respond to coastal issues



Only 11% indicated a high level of capacity



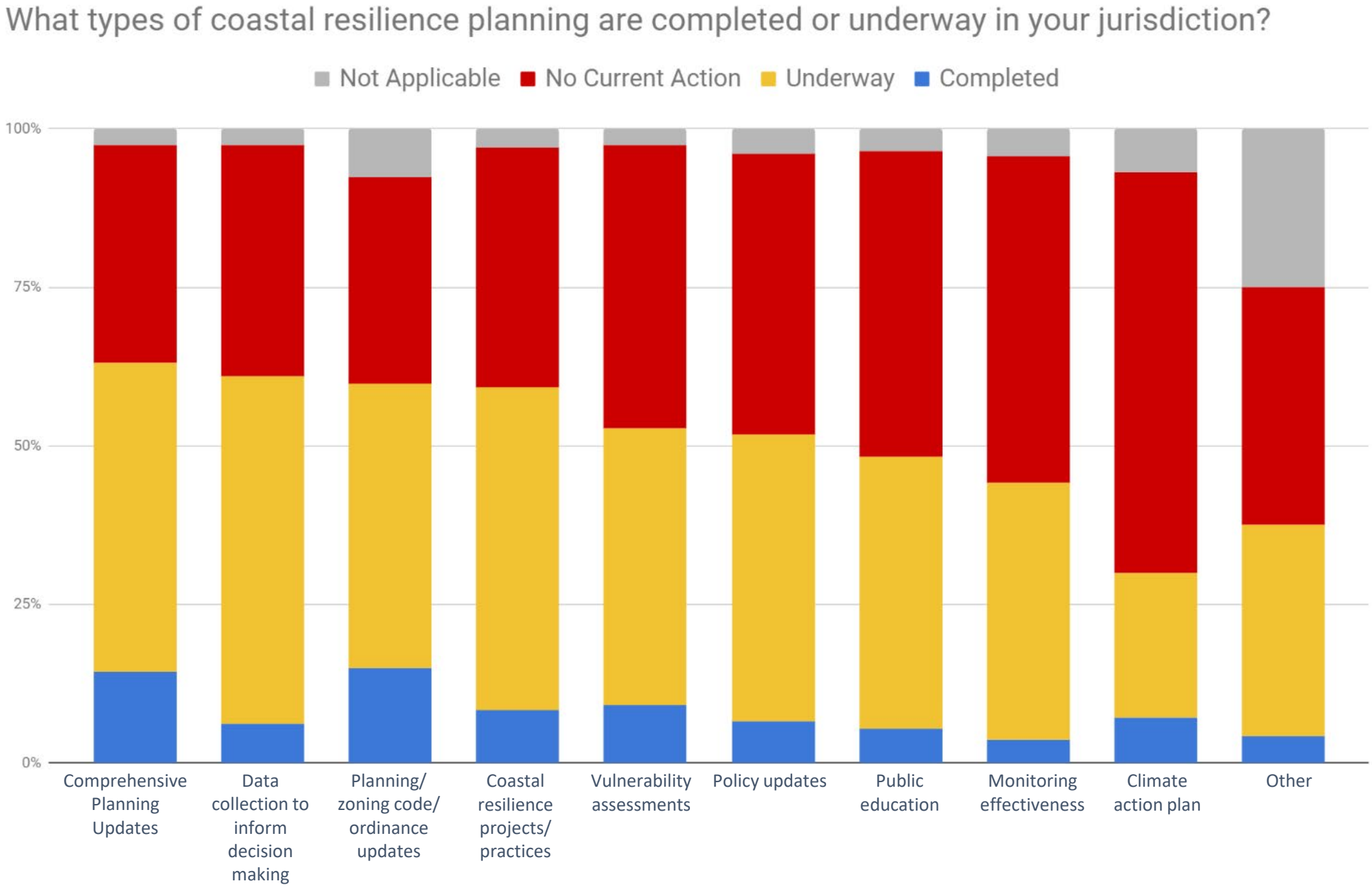
Funding and government support are very important to response efforts

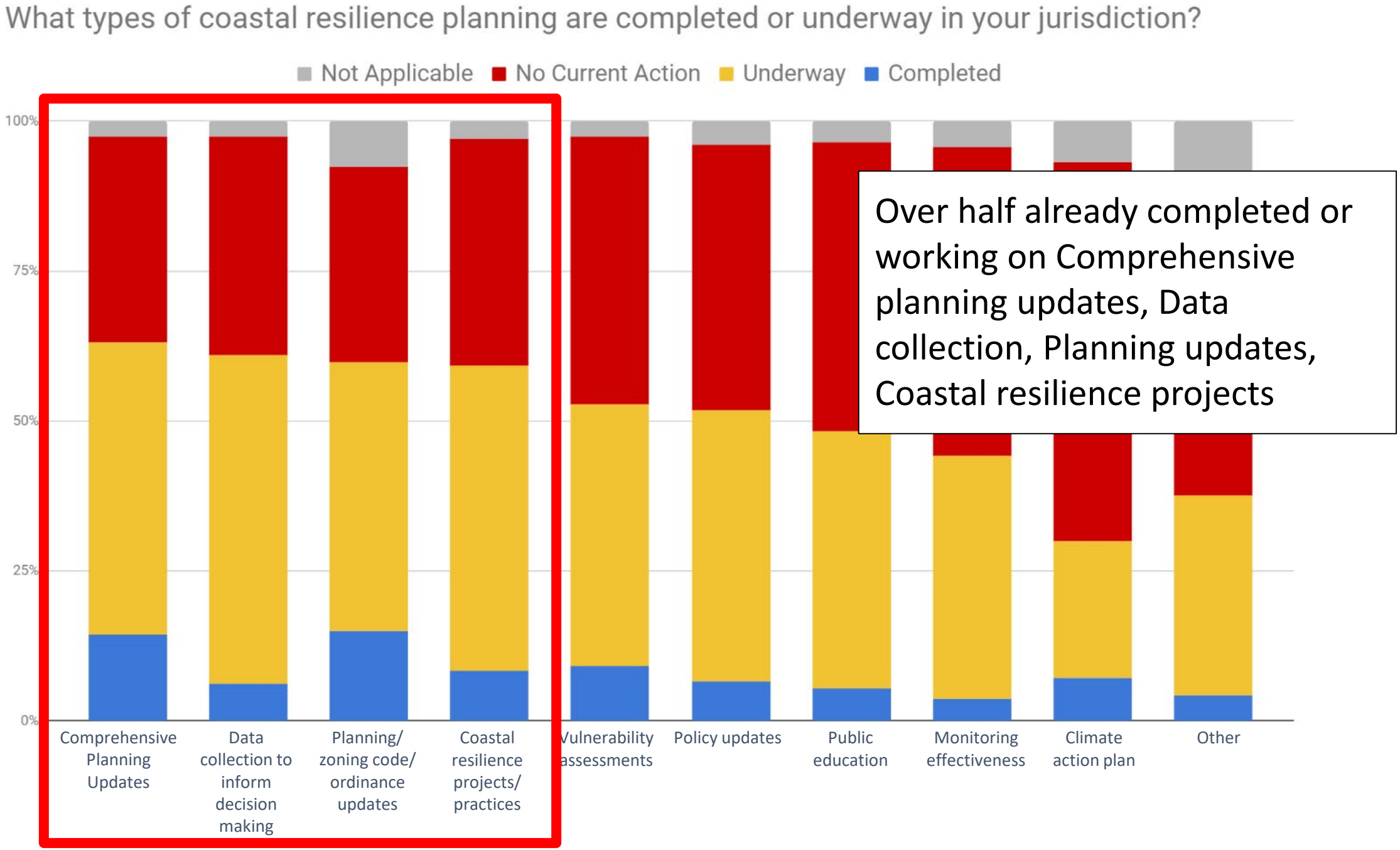


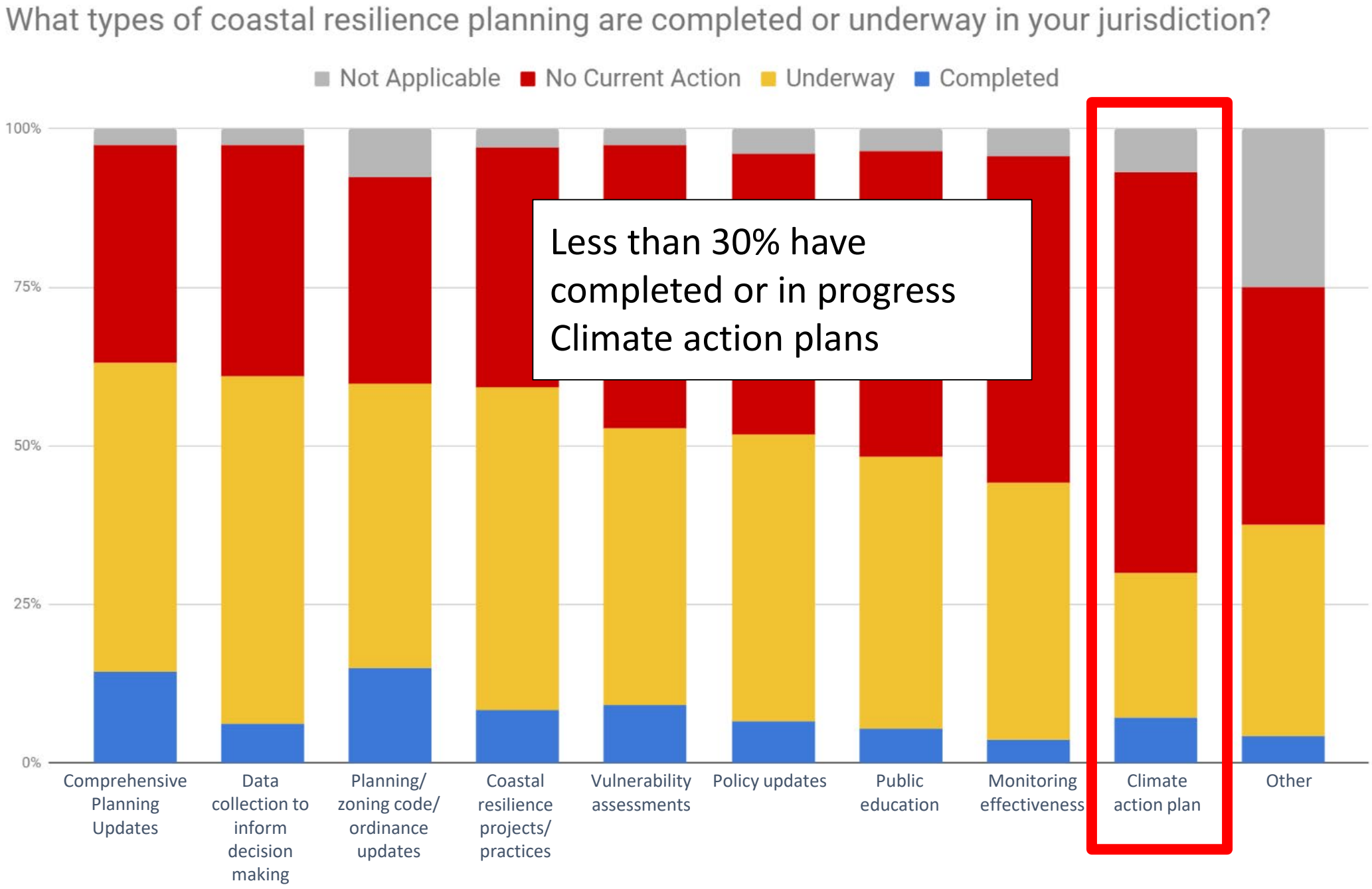
Funding and government support needs are largely not being met

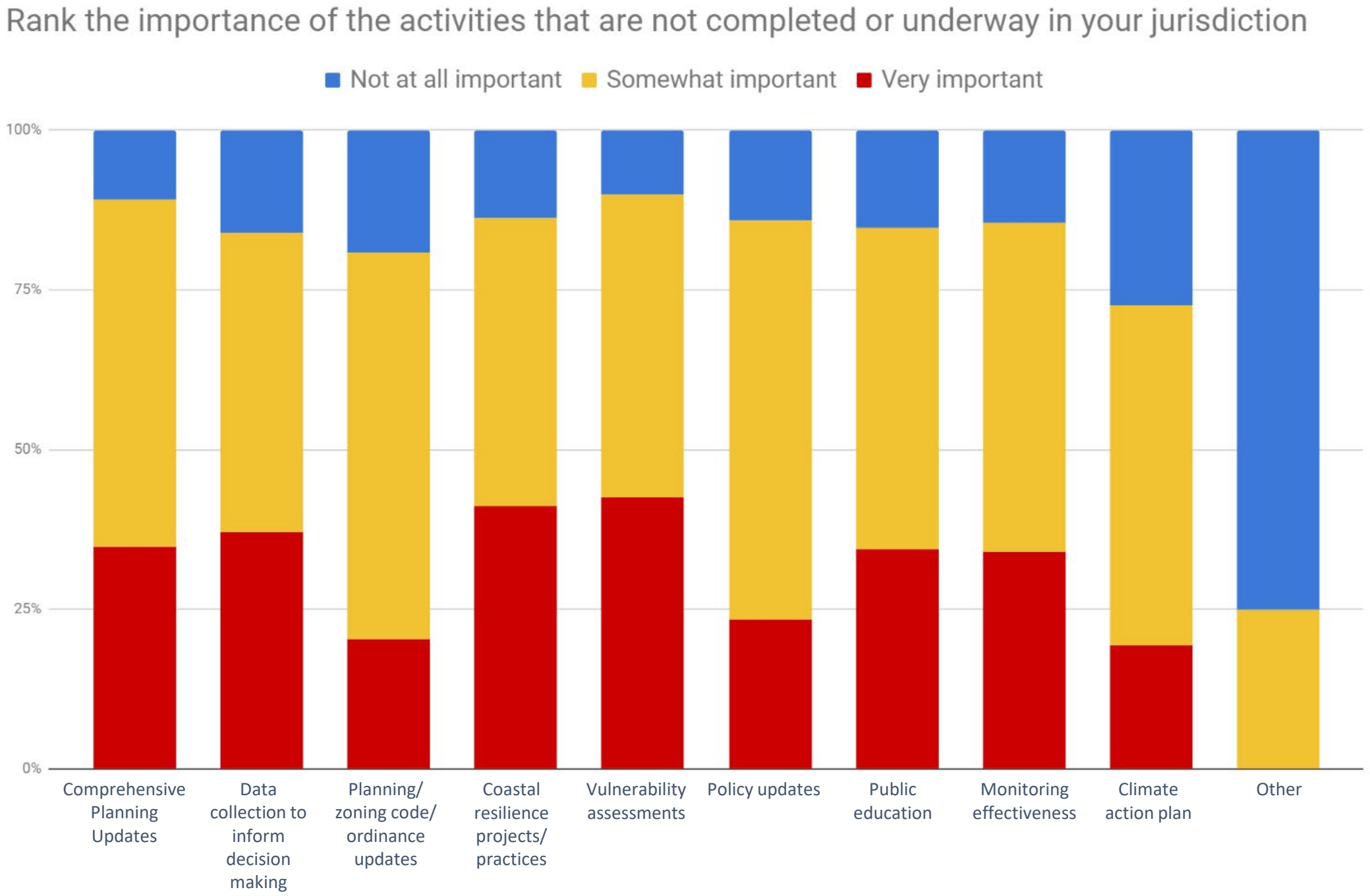
Planning and Response

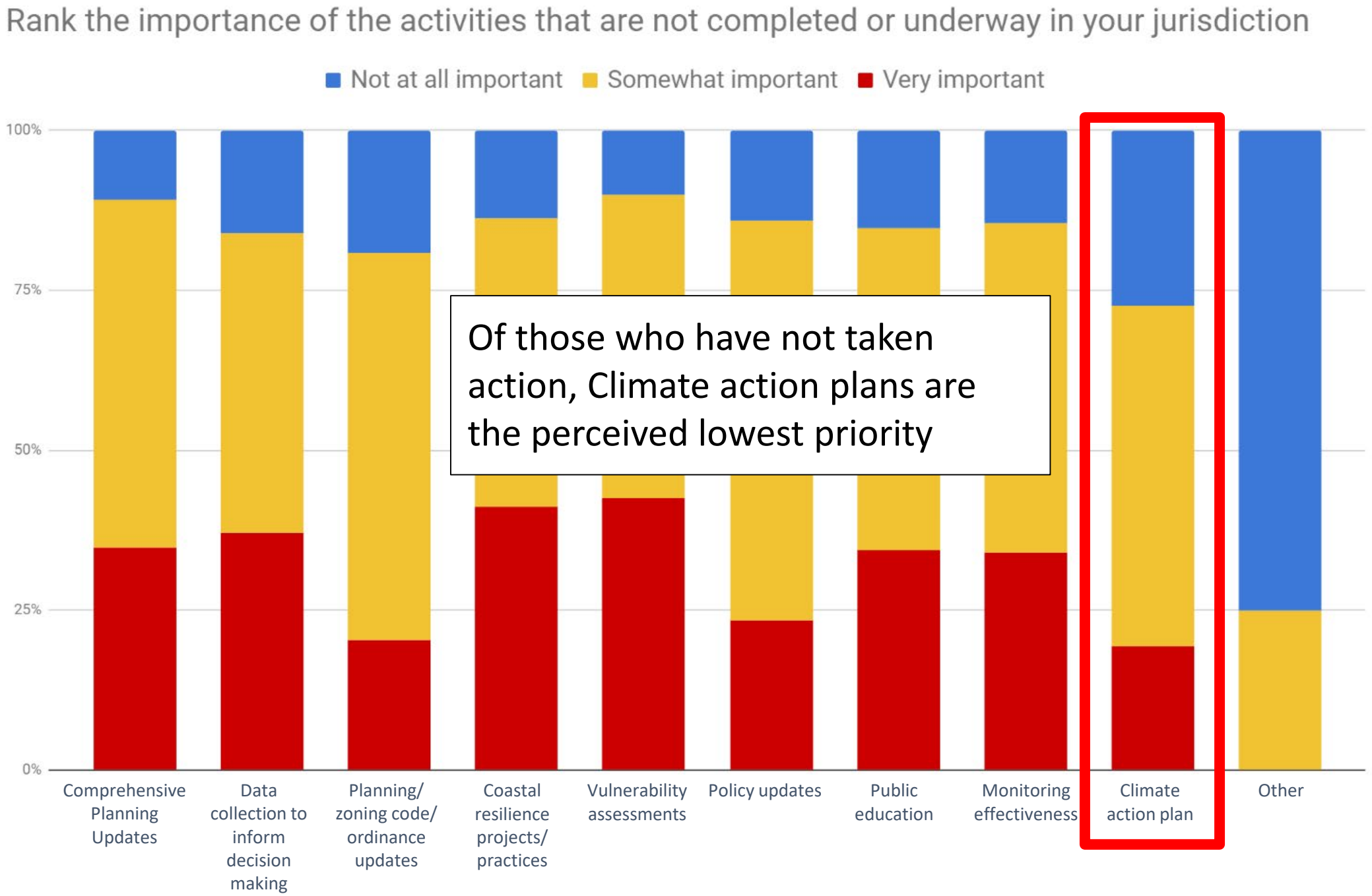
GREAT LAKES AND ST. LAWRENCE
CITIES INITIATIVE
L'ALLIANCE DES VILLES
DES GRANDS LACS ET DU SAINT-LAURENT

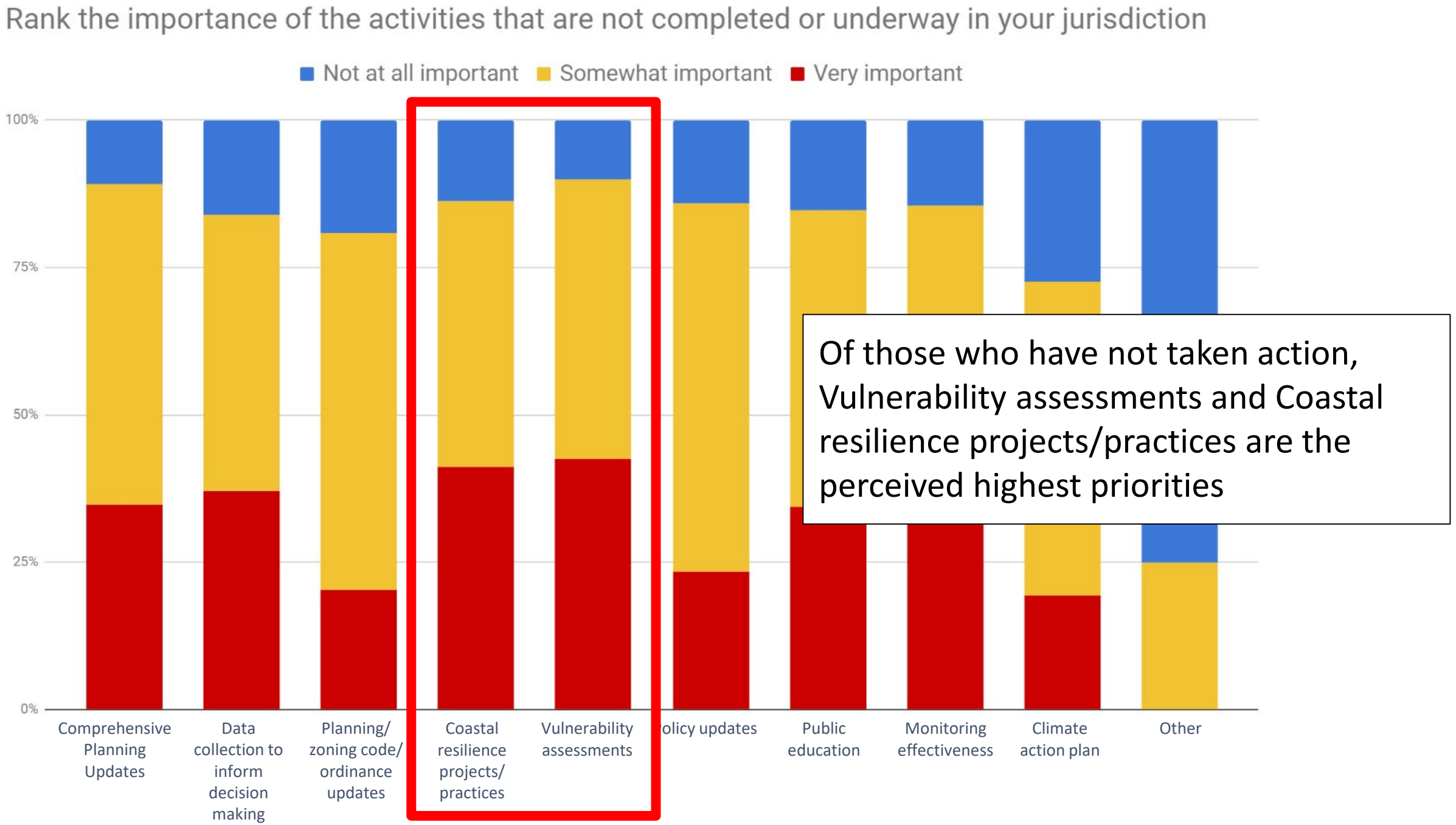

What types of coastal resilience planning are completed or underway in your jurisdiction?
Not Applicable
No Current Action
Underway
Completed
100%
75%
50%
25%
0%
Comprehensive Planning Updates
Data collection to inform decision making
Planning/ zoning code/ ordinance updates
Coastal resilience projects/ practices
Vulnerability assessments
Policy updates
Public education
Monitoring effectiveness
Climate action plan
Other


What types of coastal resilience planning are completed or underway in your jurisdiction?
Not Applicable
No Current Action
Underway
Completed
100%
75%
50%
25%
0%
Comprehensive Planning Updates
Data collection to inform decision making
Planning/ zoning code/ ordinance updates
Coastal resilience projects/ practices
Vulnerability assessments
Policy updates
Public education
Monitoring effectiveness
Climate action plan
Other
Over half already completed or working on Comprehensive planning updates, Data collection, Planning updates, Coastal resilience projects

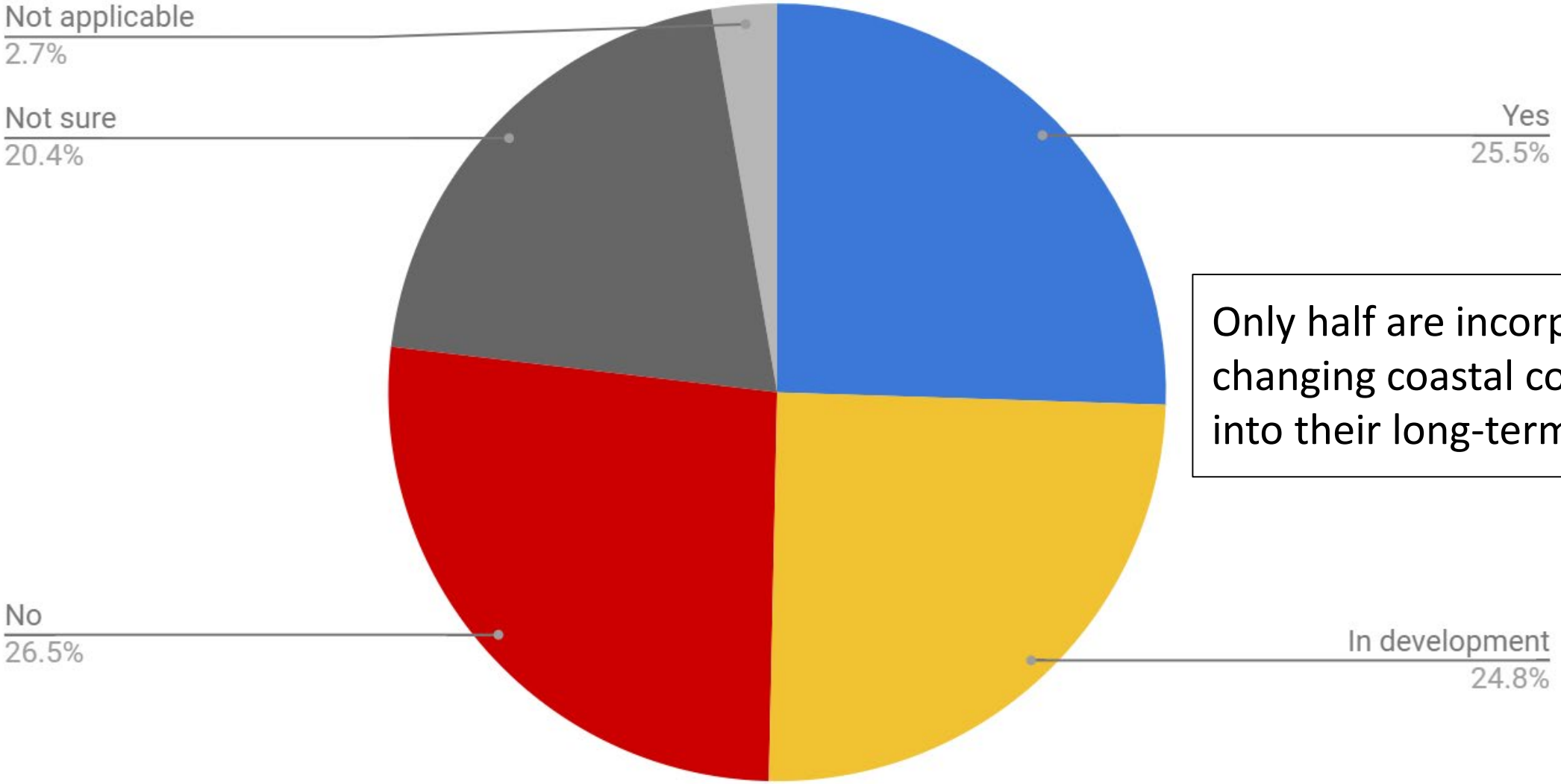

What types of coastal resilience planning are completed or underway in your jurisdiction?
Not Applicable
No Current Action
Underway
Completed
100%
75%
50%
25%
0%
Less than 30% have completed or in progress Climate action plans
Comprehensive Planning Updates
Data collection to inform decision making
Planning/ zoning code/ ordinance updates
Coastal resilience projects/ practices
Vulnerability assessments
Policy updates
Public education
Monitoring effectiveness
Climate action plan
Other


Rank the importance of the activities that are not completed or underway in your jurisdiction
Not at all important
Somewhat important
Very important
100%
75%
50%
25%
0%
Comprehensive Planning Updates
Data collection to inform decision making
Planning/ zoning code/ ordinance updates
Coastal resilience projects/ practices
Vulnerability assessments
Policy updates
Public education
Monitoring effectiveness
Climate action plan
Other


Rank the importance of the activities that are not completed or underway in your jurisdiction
Not at all important
Somewhat important
Very important
100%
75%
50%
25%
0%
Of those who have not taken action, Climate action plans are the perceived lowest priority
Comprehensive Planning Updates
Data collection to inform decision making
Planning/ zoning code/ ordinance updates
Coastal resilience projects/ practices
Vulnerability assessments
Policy updates
Public education
Monitoring effectiveness
Climate action plan
Other

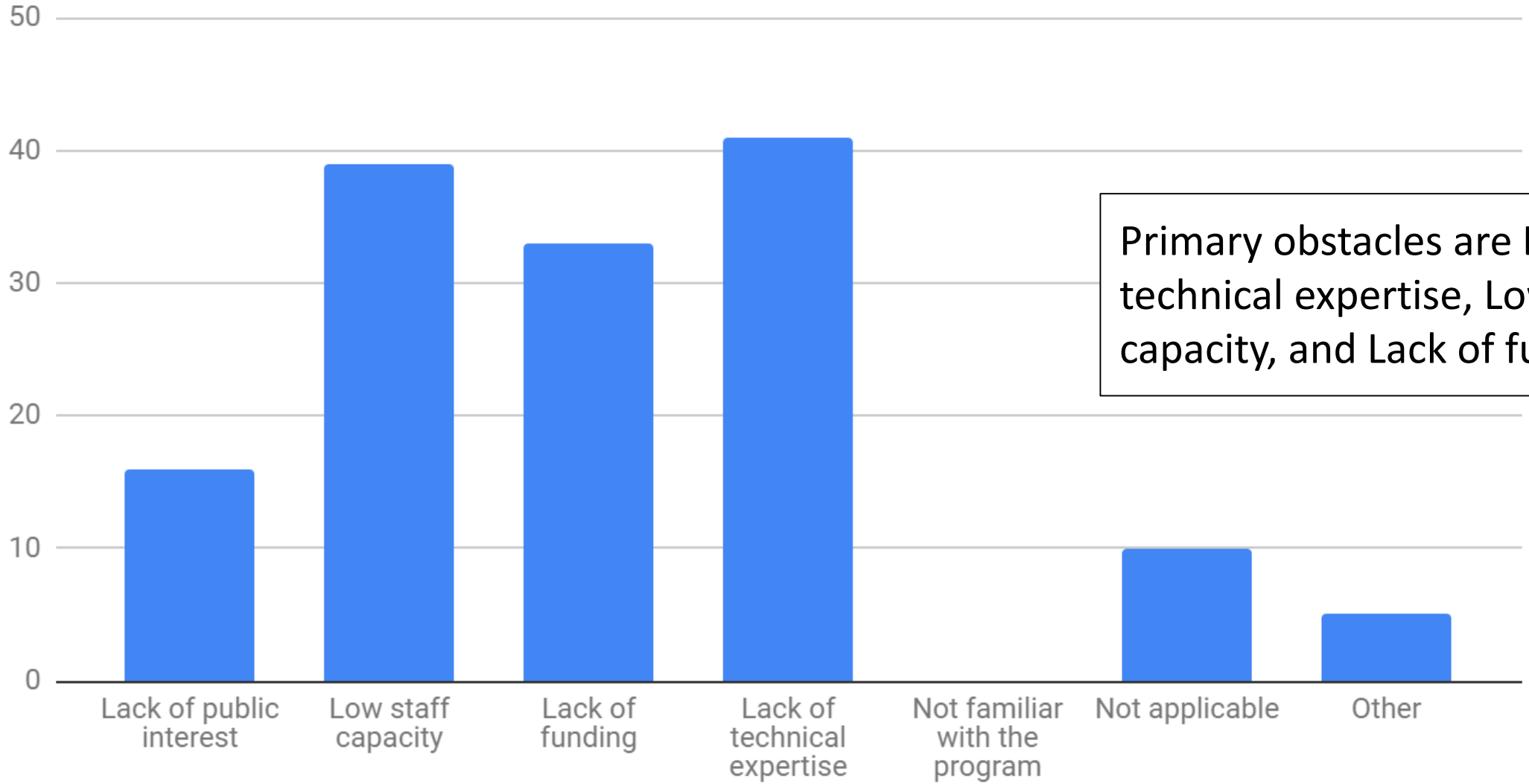

Rank the importance of the activities that are not completed or underway in your jurisdiction
Not at all important
Somewhat important
Very important
100%
75%
50%
25%
0%
Comprehensive Planning Updates
Data collection to inform decision making
Planning/ zoning code/ ordinance updates
Coastal resilience projects/ practices
Vulnerability assessments
olicy updates
Public education
Monitoring effectiveness
Climate action plan
Other
Of those who have not taken action, Vulnerability assessments and Coastal resilience projects/practices are the perceived highest priorities

Does your jurisdiction's long-term planning incorporate strategies to anticipate, accommodate, and adapt to changing coastal conditions?



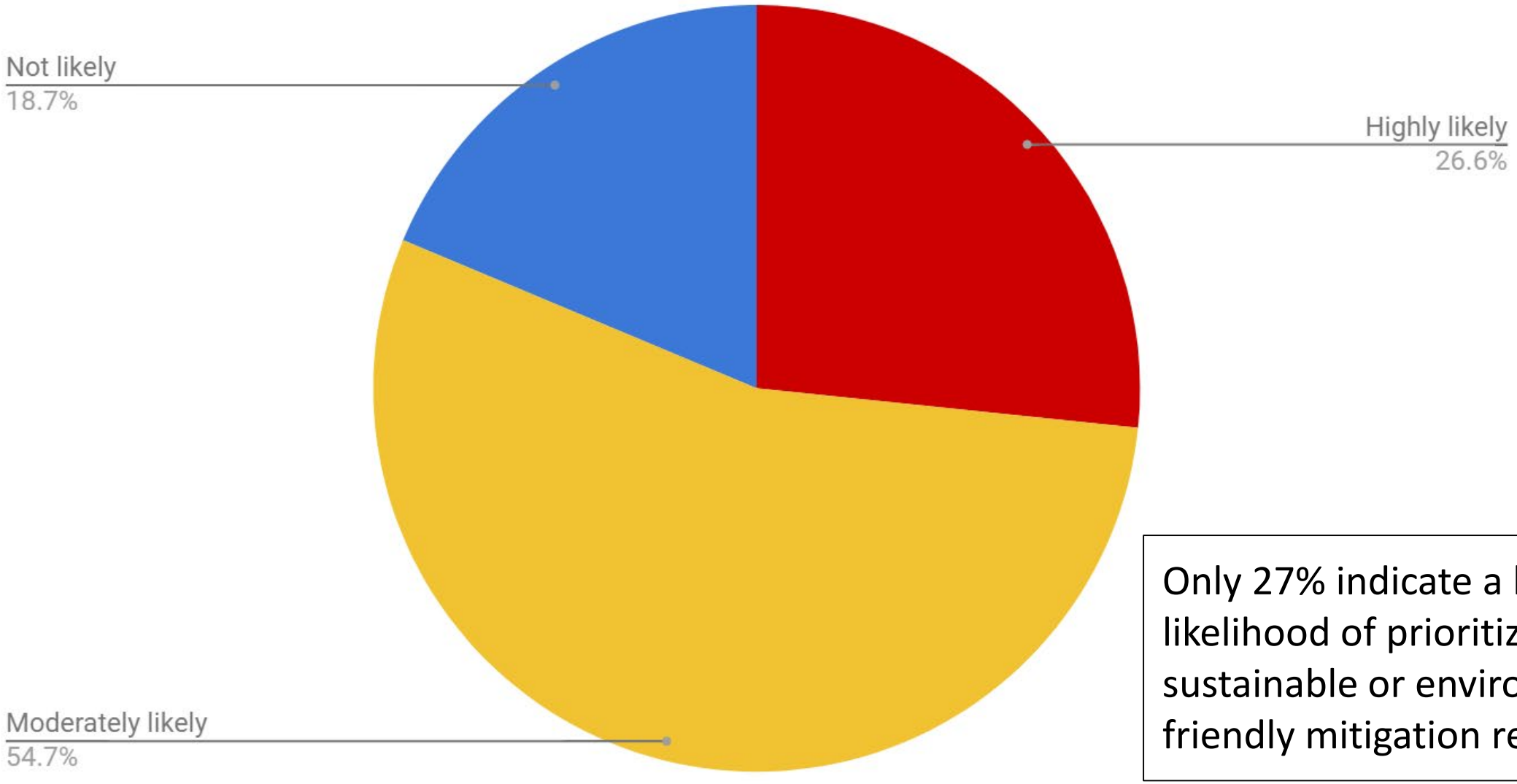
Only half are incorporating changing coastal conditions into their long-term planning

Please select from the following items the reason(s) your jurisdiction is not incorporating strategies to account for changing coastal conditions



Primary obstacles are Lack of technical expertise, Low staff capacity, and Lack of funding

How likely is your jurisdiction to prioritize sustainable or environmentally friendly mitigation responses to coastal impacts, even if it increases cost?

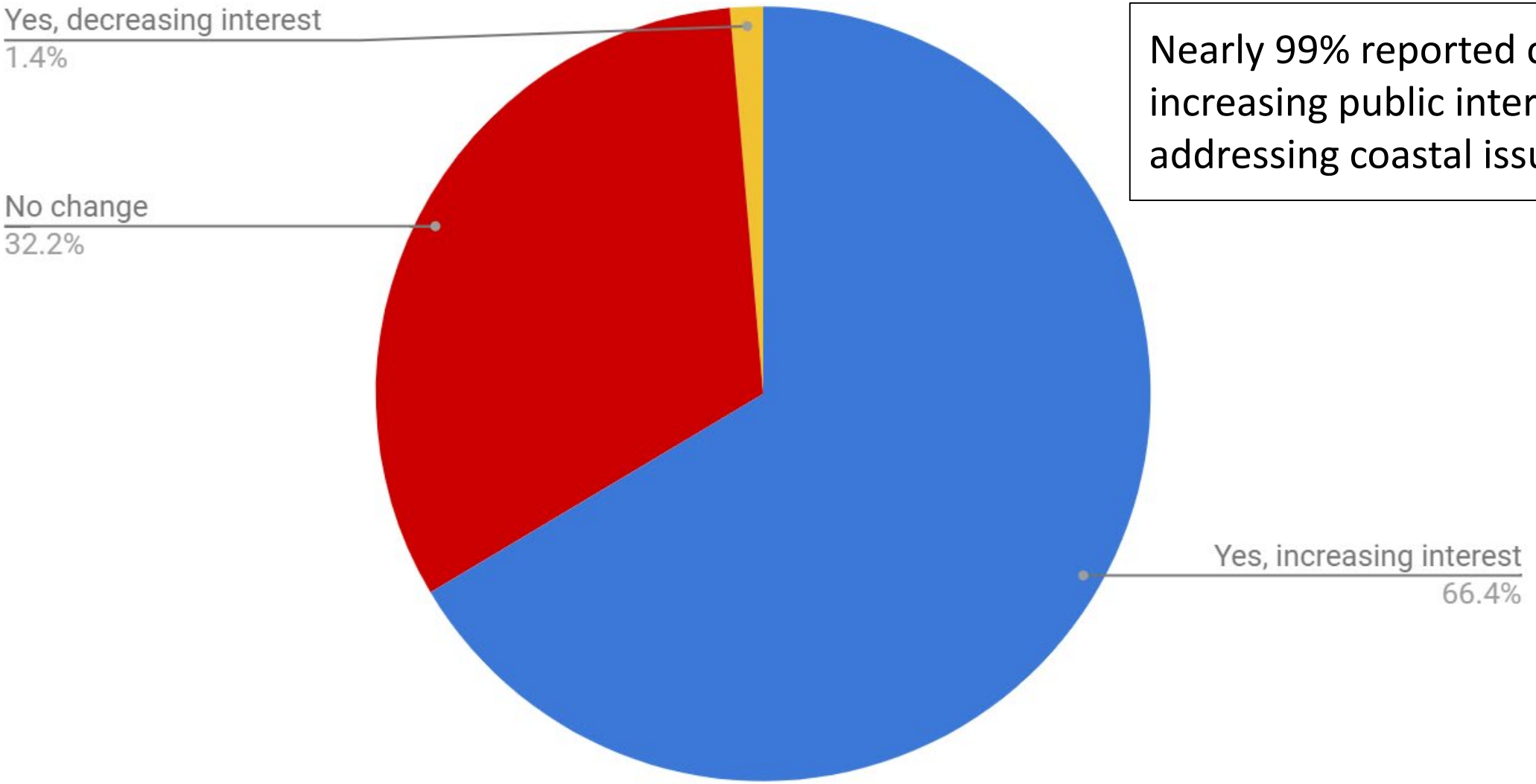


Only 27% indicate a high likelihood of prioritizing sustainable or environmentally friendly mitigation responses

Communication and Engagement

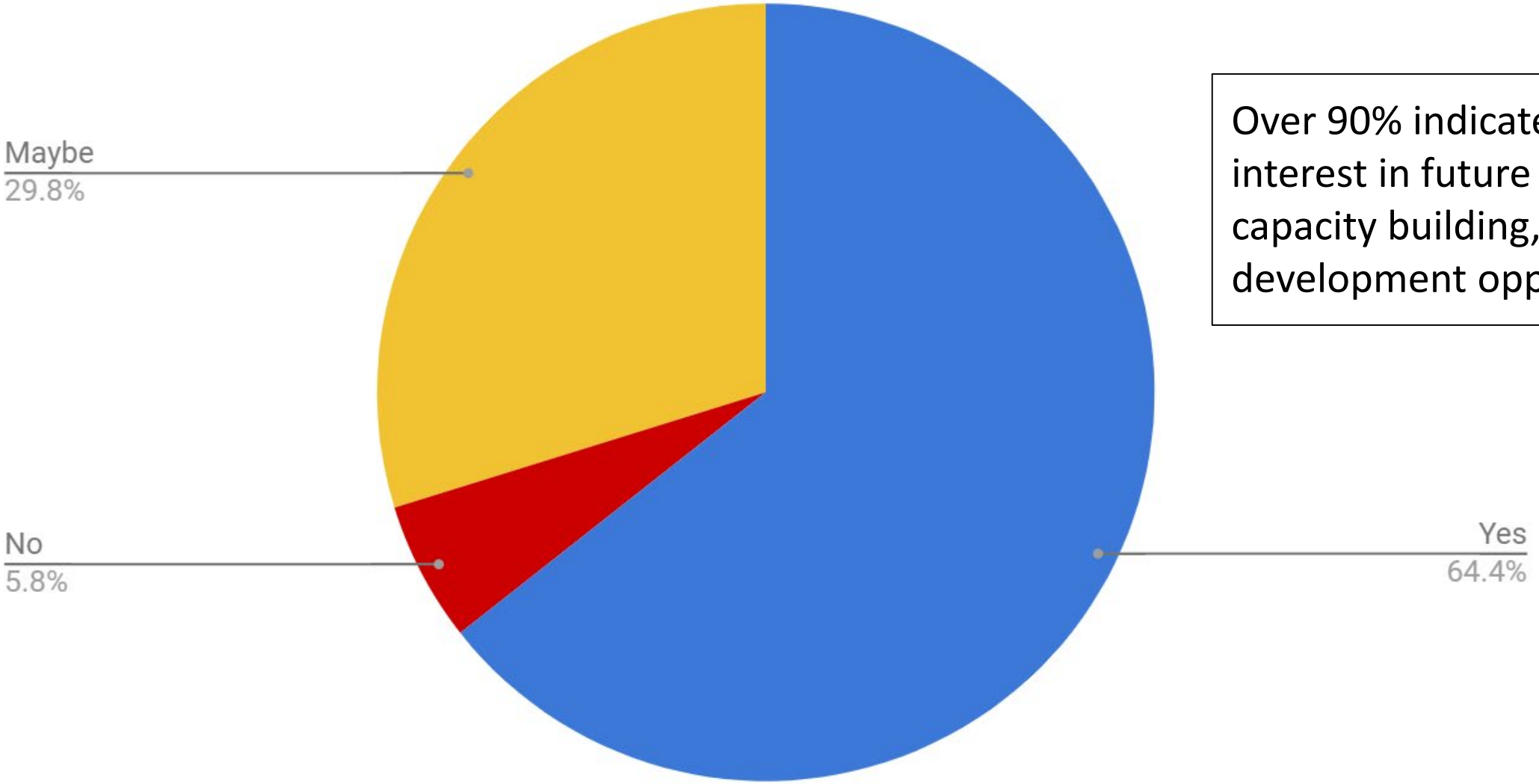
GREAT LAKES AND ST. LAWRENCE
CITIES INITIATIVE
L'ALLIANCE DES VILLES
DES GRANDS LACS ET DU SAINT-LAURENT

Has there been a change in your constituents' level of interest towards addressing coastal issues?

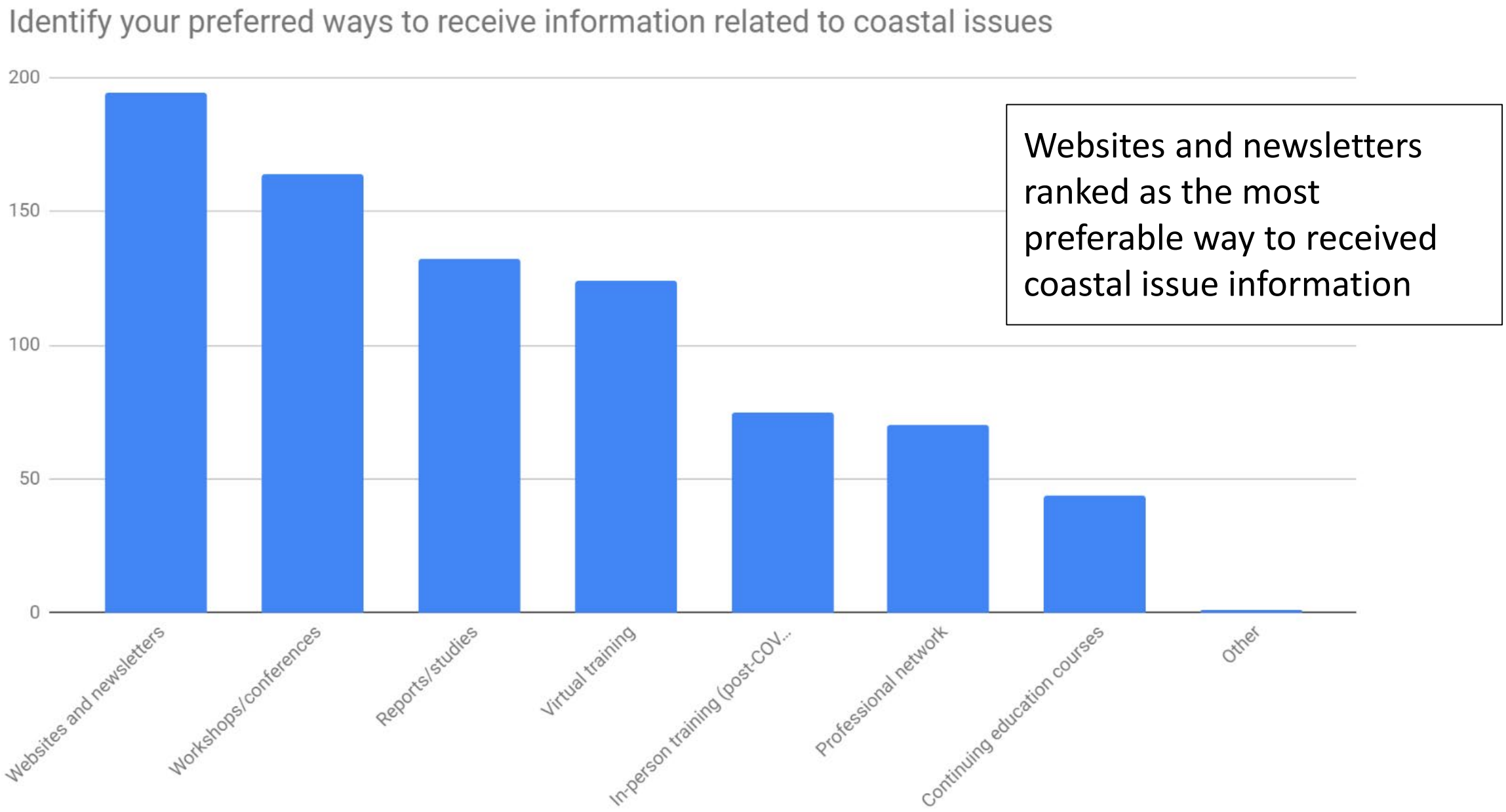


Nearly 99% reported consistent or increasing public interest in addressing coastal issues

Are you interested in future training, capacity building, or partnership development opportunities related to coastal management?



Over 90% indicated an interest in future training, capacity building, or development opportunities



Websites and newsletters ranked as the most preferable way to received coastal issue information

Summary of Coastal Needs

GREAT LAKES AND ST. LAWRENCE CITIES INITIATIVE
L'ALLIANCE DES VILLES DES GRANDS LACS ET DU SAINT-LAURENT

CLIMATE CHANGE: 2021 and Beyond
Preparing our communities for the future.

Coastal Need:
Coordinated Planning and Comprehensive Solutions

- Nature based solutions
- Regional planning and coordination
- Intergovernmental collaboration
- Long-term planning
- Informed decision-making

Coastal Need:
Broad Engagement and Strategic Education

- Nature based education
- Connection to coastal resources
- Private engagement
- Great Lakes Awareness

Coastal Need:
Operational Tools and Complete Data

- Data accessibility
- Data gaps
- Decision support tools
- Best practices for resilience

Coastal Need:
Supportive and Accessible Funding

- Funding deficiencies
- Cost-share requirements
- Funding guidance

Next Steps

- **Begin drafting recommendations in the fall with final report in early 2022**
- **Continue to convene monthly and further explore the following topics:**
  - Nature based solutions
  - Coastal planning and zoning
  - Private property impacts, solutions, and support
- **Maintain partnerships to advance coastal resilience support / research**
- **Advocate for coastal resilience funding in Congress and Parliament**

Thank you!

GREAT LAKES AND ST. LAWRENCE
CITIES INITIATIVE
L'ALLIANCE DES VILLES
DES GRANDS LACS ET DU SAINT-LAURENT

CLIMATE CHANGE:
2021 and Beyond
Preparing our communities for the future.