

Sea Level Rise / Compound Flooding

Barriers:

1. **Data Challenges:** Insufficient data, particularly regarding SLR impacts on groundwater, contamination of wells, rain fall and compound flooding, and limited access to publicly available data. In addition, we need more fine-scaled data.
2. **Data Management:** Challenges with data curation and interconnection between datasets, with concerns about overwhelming small communities with excessive data.
3. **Inundation Concerns:** Current and future concerns about inundation due to sea-level rise (SLR) and compound flooding.
4. **Uncertainty:** [Understanding and addressing uncertainty](#) in model projections related to SLR.
5. **Funding:** Limited funding for studies and projects related to SLR adaptation.
6. **Decision Making:** Need for guidance on how to prioritize studies and projects, weighing the pros and cons of different approaches.
7. **Competing Needs:** Balancing competing needs such as road usage vs. habitat preservation.
8. **Jurisdictional Complexities:** Challenges posed by jurisdictional complexities and permitting.
9. **Legal Issues:** Legal hurdles such as takings and gaps in local permit information.
10. **Public Engagement:** Addressing misinformation on climate change and effectively communicating with the public.
11. **Long-Term Planning:** Balancing long-term planning with short-term realities.
12. **Sustaining Momentum:** Ensuring sustained momentum after events or triggers, such as building moratoriums.

Successes:

1. **Building Moratorium:** Benefits of building moratoriums in SW Washington in high erosion areas.
2. **NOAA SLR Mapping Tool:** Connect with Bret Folger (bret.folger@noaa.gov) at NOAA if you have questions about this tool.
3. **MyCoast App:** Utilization of tools like the MyCoast app for crowd-sourced data collection.
4. **Engagement Strategies:** Increased engagement through exposure, art, community engagement, and storytelling about local events. Need to bring in more people (agriculture community and Washington Public Ports Association for example)
5. **Planning Framework:** Utilization of a consolidated planning framework for SLR adaptation.
6. **Co-Beneficial Projects:** Implementation of co-beneficial projects combining restoration efforts with SLR adaptation.
7. **Increased Funding:** Increase in funding from various sources like the BIL and IRA.
8. **CoSMoS:** Utilization of tools like CoSMoS for modeling and planning.
9. **Guidance from State Level:** Guidance and support from state-level organizations, but we need more. Bring back and Utilize groups like the [Shoreline and Coastal Planner Group](#) for collaboration and support.

Community Outreach

Barriers:

1. **Funding:** Lack of sufficient funding for community outreach initiatives.
2. **Limited Capacity:** Limited capacity within communities to engage in outreach efforts.
3. **Restrictive Policy:** Policy constraints that hinder effective outreach efforts.
4. **Over/Under Saturation:** Concerns about information overload and repetitive engagement leading to diminished impact. On the flip side, ignoring certain areas when doing outreach can lead to alienation or not fully understanding community priorities.
 - a. **Alignment of Decision Makers:** Ensuring alignment among decision-makers for effective outreach.
 - b. **Silos:** Breaking down silos between different stakeholders and organizations.
5. **Equity:** Ensuring equitable access to outreach efforts and resources.
 - a. **Community Priorities:** Aligning outreach efforts with the priorities of different communities.
 - b. **Trust and Familiarity:** Building trust and familiarity with the community.
 - c. **Language Barriers:** Addressing language barriers to ensure effective communication.
6. **Distant Geography:** Challenges posed by distant geography in reaching communities.
7. **Political Differences:** Navigating political differences to facilitate outreach efforts.

Successes:

1. **Local Champions:** Leveraging local champions and finding local partners to drive outreach efforts.
2. **Partnerships:** Forming partnerships and sharing success stories to enhance outreach impact.
3. **Time for Connection:** Allowing time for meaningful connections with the community.
4. **Accessible Resources:** Creating accessible resources to reach a broader audience.
 - a. **Resource Translation:** Translating resources into accessible formats for better understanding.
5. **Informal Interactions:** Utilizing informal interactions to engage with the community, buy someone coffee and have a chat.
6. **Free Prior and Informed Consent:** Ensuring the involvement of communities through free prior and informed consent processes, this builds trust and informs how their knowledge will be used.

How Can CHRN/COHORT Support This Work:

1. **Centralized Data Home/Resource Hub:** Establishing a [centralized platform for data and resources](#) related to community planning to streamline access and information dissemination. Always interested to hear from the community how the CHRN resource library can be of more help. Additionally, creating resources and checklists for plans like

hazard mitigation plans (HMPs), and shoreline master programs (SMPs) would also be helpful.

2. **Training Programs:** Collaborating with NOAA and [Coastal Training Program](#) to develop and implement training programs aimed at creating local subject matter experts who can contribute to resilience efforts.
3. **Connecting Funding to Communities:** Facilitating the connection between available funding sources and communities in need, ensuring that financial resources are allocated effectively for resilience projects. (This is a priority for COHORT! [Connect with us.](#))
4. **Changing Power Dynamics:** Addressing power dynamics between communities and agencies to ensure equitable participation and decision-making in resilience planning and implementation processes.

Sustainable Economic Growth

Barriers:

1. **Economic Development:** Challenges in balancing economic growth with sustainability goals.
2. **Supporting Population Growth:** Addressing the needs of a [growing cities and towns](#) while ensuring sustainability.
3. **Cost/Benefit Analysis:** Speaking the language of businesses by demonstrating the economic benefits of sustainable practices through cost/benefit analysis.
4. **Impact of Environmental Disasters:** Environmental disasters can lead to business failures, emphasizing the need for [business resilience planning](#).
5. **Lack of Circular Economy:** Challenges in transitioning to a circular economy model that minimizes waste and maximizes resource efficiency.
6. **Pipeline of Job Growth:** Ensuring a sustainable pipeline of job growth, including concerns about unpaid internships. Work with local highschools and college to create programs that help create a pathway to these jobs.
7. **Reliable Energy/Grid Systems:** Ensuring [reliable energy](#) and grid systems to support sustainable economic activities.

Success:

1. **Apprenticeships:** Utilizing apprenticeships as a means to foster sustainable economic growth by providing hands-on training.
2. **Creative Solutions:** Finding creative solutions such as utilizing invasive species like [green crab](#) for fertilizer.
3. **Emerald City Collaborative:** Collaborative efforts like the Emerald City Collaborative to drive sustainable economic growth.
4. **Dynamic Reventment:** Success stories like clamming returning due to dynamic reventment efforts, demonstrating the potential of nature based solutions have co benefits of economic well being.

How Can CHRN/COHORT Support This Work:

1. **Technical Assistance (TA):** Provide technical assistance to businesses to support their transition to sustainable practices.
2. **Connect with Business Leaders:** Strengthen connections with business leaders to better understand their needs and facilitate collaboration on sustainable economic initiatives.

Local Governance / Coastal Development

Barriers:

1. **Data Availability:** Challenges with accessing updated FEMA maps and connecting them to grant funding, as well as the unavailability of CoSMoS data.
2. **Capacity:** Limited capacity in terms of grant writing, staff to manage grants, technical expertise, and managing new planning guidance.
3. **Enforcement of Regulations:** Issues with enforcing existing regulations due to inadequate funding.
4. **Incentives/Education:** Need for incentives and education to help people understand planning processes and identify different solutions.
5. **Messaging:** Challenges with messaging, including the language used and the technical nature of guidance documents.
6. **Confusing Permitting and Grant Process:** Complex, patchwork of different requirements, overlapping jurisdictions.

Success:

1. **Technical Assistance:** Providing technical assistance with permitting expertise to support local governance efforts.
2. **Shared Knowledge:** Increasing the community of practice and shared knowledge through initiatives like the [University of Washington Climate Impacts Group](#), CHRN and COHORT.
3. **In-Person Events:** Utilizing [in-person events](#) to facilitate collaboration and knowledge exchange.

How Can CHRN/COHORT Support This Work:

1. **Educational Materials:** Developing materials for school kids to build awareness and interest in coastal resilience, thereby building a future pipeline of resilience practitioners.
2. **Community Engagement:** Engaging with different communities to understand their needs and facilitate collaboration.
3. **Sharing Success Stories:** Sharing success stories to inspire and guide other communities in their resilience efforts.

4. **Interagency Collaboration:** Facilitating interagency communities of practice to foster collaboration and knowledge exchange.

Environmental Justice

Barriers:

1. **Identifying Needs:** Challenges in identifying the specific needs of communities and determining how to address them effectively.
2. **Accessible Resources:** Difficulty in accessing actionable resources and disseminating knowledge without starting from scratch for each new project.
3. **Grant Requirements:** Differences in terminology and requirements in grants that may not align with the needs and priorities of communities.
4. **Limited Access:** Private waterfront areas may limit or block community access, impacting treaty rights.
5. **Agency Discordination:** Lack of coordination among agencies leading to ineffective outreach efforts and potential harm to communities.
6. **Diverse Representation:** Need for better pathways to bring in individuals from diverse backgrounds into environmental justice jobs and avoid tokenism.
7. **Misaligned Priorities:** Conflicting priorities among stakeholders may hinder progress on environmental justice issues.
8. **Trusted Community Liaisons:** Importance of establishing long-term relationships and trust with community liaisons outside of regular funding cycles.

Successes:

1. **Compensation for Time:** Providing compensation for time spent, including childcare, transportation, translation, and accessibility accommodations.
2. **Creating Shared Understanding:** Implementing Memorandums of Understanding (MOUs) and respecting tribal data sovereignty to formalize agreements on how to operate and collaborate effectively.
3. **Training on Working with Disadvantaged and Vulnerable Communities (DACs):** Increasing training opportunities to improve engagement and collaboration with DACs.
4. **Online Tools:** Understand where overburdened and underserved communities are located with mapping tools such as [CEJST](#) and [WA Health Map](#). Use this information to align project priorities and engagement strategies. Additionally, adding this information in grant request will help strengthen your proposal. And remember, these are high level federal and state maps that are no substitute for on the ground knowledge and connections with communities.

How Can CHRN/COHORT Support This Work:

1. **Annual Meeting Goals:** Setting specific goals/outcomes for CHRN from each annual meeting to guide projects and initiatives.

2. **School Connections:** Connecting with schools to engage students and integrate environmental justice into education using state learning standards and creating lesson plans.
3. **Standing Office Hours:** Offering standing office hours as a low-barrier opportunity for community engagement and support.
4. **Pathways for Diversity:** Creating pathways for more diverse students to enter environmental justice work. (WSG is starting a new coastal resilience fellowship position in 2025.)
5. **Better Onboarding Materials:** Developing better onboarding materials to ensure environmental justice considerations are integrated into project work from the beginning.

Capacity Building

Many of the Barrier and Successes of Capacity Building have been said already above, so I'll just highlight some ways CHRN and COHORT can help

1. **Increasing Awareness of Funding Opportunities.** (Another plug for the [CHRN listserv](#), we share funding opportunities when we hear about them!) Sharing funding databases like [Puget Sound Partnership grant database](#).
2. **Knowledge Retention:** Difficulty in maintaining capacity building efforts and storing institutional knowledge, especially after turnover of personnel.
3. **Grant Writing Support:** Providing grant writing support to members where appropriate to facilitate access to funding for capacity-building initiatives.

Emergency Preparedness

Barriers:

1. **Knowledge/Preparedness:** Communicating the risks of high-risk, low-probability events like tsunamis to coastal communities, including challenges related to liquefaction and potential Cascadia earthquakes.
2. **Evacuation Challenges:** Difficulty in achieving successful evacuations, particularly for communities facing additional challenges such as limited evacuation routes or at-risk populations.
3. **Limited Safe Zones:** Identifying and establishing safety zones, especially in coastal state parks, for at-risk populations during emergencies like tsunamis.
4. **Evacuation Route Accessibility:** Lack of open, well-marked areas for evacuation, especially in heavily forested high ground areas.
5. **Tsunami Information Access:** Fragmented tsunami information resources between Oregon and Washington, highlighting the need for a single accessible location for information.

6. **ADA Compliance for Vertical Evacuation Structures (VES):** Cost and planning difficulties associated with ADA requirements for VES, impacting the ability to provide safe evacuation options for communities.
7. **Communication Challenges:** Different demographic groups have varying communication preferences and capacities during emergencies.
8. **Tsunami Modeling:** Challenges associated with tsunami modeling, including the need for probabilistic modeling to account for "maximum considered" events.

Successes:

1. **Tsunami Mitigation Strategies:** Implementation of strategies outside of VES, including maritime response and [efforts](#) to strengthen infrastructure and empower communities.
2. **Port Infrastructure Development:** [Funding efforts](#) to upgrade and strengthen docks and infrastructure in vulnerable areas like the Makah Tribe's port.
3. **Vertical Evacuation Structures (VES):** [Efforts to streamline](#) VES projects and provide funding support through programs like BRIC and OSPI.
4. **Integration with Other Hazard Events:** Recognizing that tsunami mitigation efforts can also address risks from other hazards like coastal or river flooding, leading to more comprehensive resilience planning.
5. **Resource Accessibility:** Providing important information and mapping resources for decision-makers in local and tribal communities through guides and websites.

How Can CHRN/COHORT Help?

1. **Legislative Support:** Supporting legislative efforts like House Bill 1181 to address climate-related risks and potential synergies between sea-level rise and tsunami risk.