

## **Coastal Science from the Perspective of State and Local Coastal Management Agencies**

### **Submitted to:**

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Coastlines and People Initiative Scoping Workshop

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### **Idea in a nutshell:**

The goal of this white paper is to communicate the perspective of state and local coastal managers and agency scientists with regards to academic coastal science, with the intention of informing the program managers of the emerging Coastlines and People effort to best serve coastal communities as well as academic research. Truly collaborative relationships between coastal managers and academic researchers provide crucial venues for embedding scientific knowledge into implementation of coastal-hazards-related operations and management programs. Existing programs such as the National Estuarine Research Reserve program, state coastal zone management programs and NOAA Sea Grant offer examples of successful collaboration between academic research and state local stakeholders and agencies.

### **Background:**

State and local coastal managers have unique connections to and perspectives on coastal environmental hazards and how they impact people and communities. However, there is often still a gap between the coastal agency practitioners and academic coastal scientists. This gap can be due to differing priorities, a lack of sufficient communication, or misunderstandings of institutional capacities. Academic scientists are often working at a larger geographical scale, or project coastal change over longer timescales than may be immediately relevant to coastal managers and their stakeholders. For example, while sea level rise scenarios projected over 100

years are important and relevant to long-term policy development, a manager may be working with coastal homeowners who, at most, have 30-year mortgages and thus may find it hard to communicate the real risk of coastal property ownership with the available 100-year data. Similarly, many coastal management decisions are made at the spatial scale of individual properties, and therefore coarsely-gridded geospatial data on coastal hazards is insufficient information for decision-making.

### **Opportunities:**

When coastal academic researchers work in concert with local and state coastal managers, many opportunities in innovative research and collaboration can arise.

- Coastal managers often have close **professional and personal connections** with the leaders and policy-makers in coastal communities, and thus they can help facilitate trust-building between researchers and local stakeholders.
- Many coastal managers are well-versed in **project management** and public meeting facilitation, and can serve in such roles on collaborative research projects.
- Coastal managers can also offer clear guidance on what mitigation approaches are **feasible** (e.g., financially, politically, socially, temporally).
- State and local agencies usually offer state-wide web-mapping services of data clearinghouses through which researchers can **disseminate** their geographic datasets.
- For researchers interested in **citizen science** projects, coastal managers can help facilitate data collection and advertise their research programs.
- If academic researchers are interested in **crisis management**, state and local agencies can provide opportunities for them to witness coastal-hazards related crisis management drills and operations.
  - CoPe hubs can help organize geographically-comprehensive **rapid response monitoring** and data collection for extreme events (e.g., comprehensive beach profiling pre- and post-storm along a stretch of coastline) through multiple collaborators at different agencies and institution

- State and local coastal management agencies can also offer opportunities for graduate students to learn more about possible **career paths** outside of academia that leverage their knowledge of coastal systems.

### **Recommendations:**

The following is a list of specific recommendations for encouraging truly collaborative and mutually-beneficial research and outcomes with state and local coastal management agencies.

- Continuous collaboration and communications with coastal managers throughout the research project. Importantly, this should include **co-development** of research questions and involvement in the proposal writing, as well as a chance for coastal managers during the research process to shape what “actionable science” looks like for a particular issue (e.g., appropriate spatial and temporal scales, data formats, etc.)
- Accessible (e.g., timely and open-access) data and resulting reports.
- **Data at an actionable scale** (i.e., on the scale of individual tax parcels) and/or guidance on how to appropriately downscale results for state and local agency scientists
- When making implementation recommendations, recommend a **spectrum of solutions** based on budget, environment, capacity, equity, etc.
- When evaluating proposals, give more weight to PI’s with either a **history of collaboratively working with stakeholders**, or detailed letters of support from state & local collaborators (especially marginalized communities/stakeholder) at the pre-proposal stage.
- An NSF-funded **scientific liaison** who works at the state, county or municipal level as a research coordinator.
- **White papers and/or executive summaries**, as state and local government employees most often do NOT have access to the scientific literature. Executive summaries facilitate easy sharing of important results to administrators and policy-makers.