



COASTAL STORMS PILOT PROGRAM STAKEHOLDER NEEDS

Linking Stakeholder Decisions
& Science Activities



- ▣ Why it matters
- ▣ Sources
- ▣ Linkages:
 - Stakeholder Decisions
 - Stakeholder Information Needs
 - Science Needs





Why Stakeholder Needs Matter

LCC science activities aim to inform landscape-scale conservation and resource management

➔ 'Start with the end in mind'

- ▣ Framing for the Conceptual Model Discussion
- ▣ Identify potential 'Clientele' for specific Science Activities
- ▣ Influence WALCC's prioritization of Science Activities



Sources of Stakeholder Needs

WALCC FY12 RFP

- ▣ 'Identify 3 Decision Makers who would use this information'
- ▣ For each proposal, WALCC asked up to 3 Decision Makers to identify
 - Their decisions in the next 3-5 years for which the results of the proposed project would be of direct use
 - Their highest priority information needs, and the motivating decisions, related to changes in coastal storms and their impacts



Linkages

Decision Makers

Scientists

Table 1 ↔ Table 2 ↔ Table 3



Table 1: Stakeholder Decisions

Community Planning; Coastal Infrastructure	Species Management
Update Borough Comprehensive Plans	Subsistence species management
Update Village Comprehensive Plans	Other species management
Coastal Infrastructure design, assessment, siting (e.g., northern port) & project planning	Species Recovery planning
Determine barge access routes	Threats analysis in listing decisions
Cultural resource planning and mapping	Industry Oversight
Land Management	Environmental Assessments (NEPA)
Long term planning for Federal conservation unit land management (Refuges, Parks, etc.)	Permitting for development
Revising unit logistics and safety planning	Emergency Warning / Response
Access to subsistence resources	Oil spill planning and response
Management of federally designated critical habitat	Extreme weather event warning system



Table 2: Stakeholder Info Needs

System Component or Process	Stakeholder Information Needs
Coastal Flooding: operational now-casting	Identify Resources at risk
	Prioritize Areas at risk
	Assess mitigation strategies
Coastal Flooding: hind-cast, forecast (incl. inundation, deposition, salinization, etc.)	Assess Changes in Historic frequency, magnitude, extent
	Project future frequency, magnitude, extent
	Identify Resources at risk
	Prioritize Areas at risk
	Assess mitigation strategies



Table 2: Stakeholder Info Needs, cont.

System Component or Process	Stakeholder Information Needs
Coastal Erosion: operational now-casting	Identify Resources at risk
	Prioritize Areas at risk
	Assess mitigation strategies
Coastal Erosion: hind-cast, forecast	Assess Changes in Historic frequency, magnitude, extent
	Project future frequency, magnitude, extent
	Identify Resources at risk
	Prioritize Areas at risk
	Assess mitigation strategies
Sea Level Rise & coastal subsidence	Account for in prioritizing Areas & Resources at risk of flooding, erosion, etc.

Table 3: Science Info Needs

Coastal Hazard Topic	AOOS 'Information Need'
Storm Forecasting	Higher resolution ocean model coupled w/ atmospheric processes to reduce subjective interpretation
	Improved information on: tides, water level, winds before & during storm events
	Web cams & state of sea walls
	Wave/swell & wind observations upstream
	Improved bathymetry for model predictions
	Improved coastal DEM for better inundation & flooding predictions
Sea Ice	Observational platform for tracking ice and thickness through clouds (when MODIS is unavailable)
	Info on wave/sea ice interaction and local sheltering effects
	Improved sea ice thickness and concentration information



Table 3: Science Info Needs, cont.

Coastal Hazard Topic	AOOS 'Information Need'
Digital Coast	Address gap between bathymetry and topography
	Precise beach elevation measurements (vertical control)
Erosion & Shoreline Change	Network of monitoring buoys to better understand interaction between land and sea
	Onshore and offshore boreholes to measure and monitor permafrost
	LIDAR data along coast (for DEM, etc.)
Shoreline Observations	Beach characteristics, waves, wind
Data Access	ID existing databases and make discoverable
Digital Coast	Address gap between bathymetry and topography
	Precise beach elevation measurements (vertical control)



Linkages

Decision Makers

Scientists

Table 1



Table 2



Table 3



**Identify Science Activities,
Priorities,
Collaboration Opportunities,
etc.**