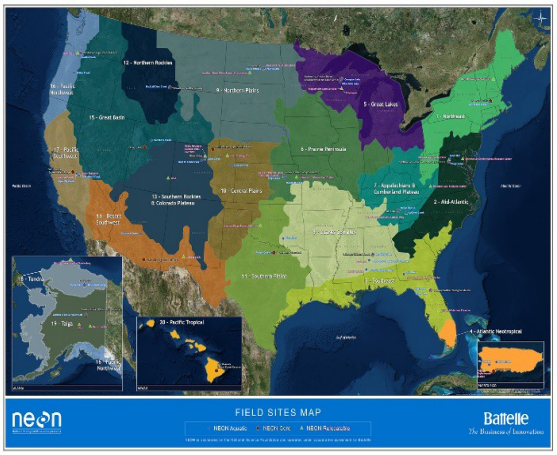
A community-based approach to CoPe hub development

Simona Perry, Cora Johnston, and Jessica Elinburg

Many of the goals of CoPe, especially broadening participation, community involvement, and enhancing education and engagement, may be most effectively achieved through a community-based approach to establishing hub missions and processes. An effective community-based approach assumes and will require knowledge of and collaboration with local communities. To meet this assumption and enable effective development of CoPE hubs, we propose a multi-phased and grounded inductive approach (Cutter et al. 2008; McLaughlin & Dietz 2008) that uses rapid community assessment (Schrekenberg 2010) to inform hub development and implementation.

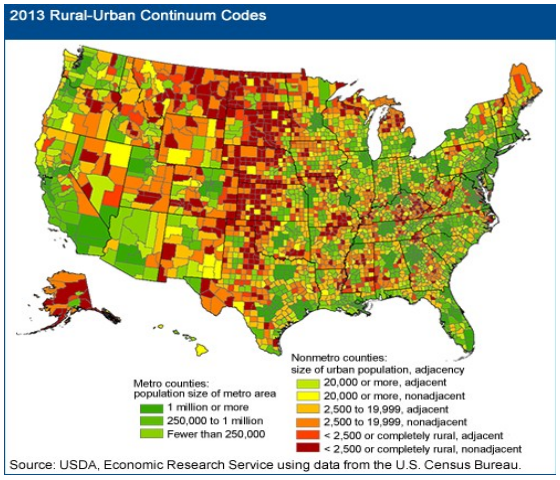
Specific, differentiated recommendation

In order to inform the placement, foci, and mission of hubs, hub development should begin with an initial phase of rapid community assessment (RFP 1), followed by a hub proposal that responds to the results of phase 1 (RFP 2).



Phase 1: Rapid community assessment

Goal: Plan and conduct rapid community-based assessments in selected coastal zone areas to develop indices of vulnerability, qualitatively and quantitatively describe soc ial, economic, political, ecological, and physical contexts, and identify social actors and networks that can be leveraged to guide hub placement, foci, and mission.



Process: Coasts are delineated by zones, beginning with NEON's ecoclimatic zones for guidance (Figure 1a). Proposals are invited within these ecoclimatic zones. Proposals must be presented by a science-community partnership. Community partner(s) include, among others, local governments, NGOs, educators, faith-based organizations, and/or service providers. Applications must indicate 1) their place on the rural-urban continuum (Figure 1b), and 2) how the assessment will fill a distinct niche (e.g., type of coastal impacts or hazards, population composition) while providing insights of broader relevance. Upon award, standardized rapid assessments to determine grounded, community-based metrics

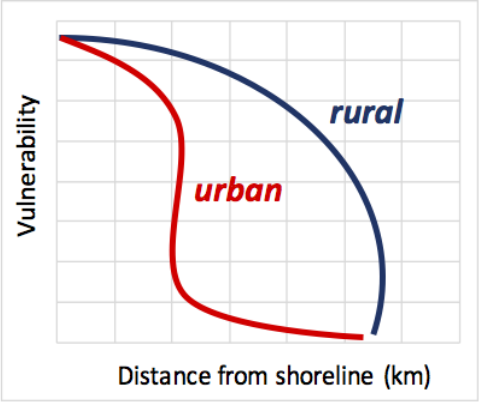


Figure 2: Mock up of differences in vulnerability (or a more complete index) by community context.

.

of vulnerability will be conducted by experienced social science practitioners[1] in collaboration with the science and community partners. These approaches may include surveys, focus groups, townhall meetings, interviews, and other social science data gathering activities appropriate to the cultural context. The goal is a rapid "strike team" and community brainstorming approach, similar to the CoPe scoping sessions.

Outcomes: Practitioner-reported metrics of vulnerability and risk, including community-generated coastal challenges with inferred needs, and a schematic of a community social network identifying dominant routes of knowledge transfer, socio-economic-political networks, and community gatekeepers and leaders. The goal of a rapid approach is information gathering to ensure prompt availability for use during hub proposal development, or Phase 2. From application to reporting Phase 1 should take no longer than one year. The results should be made open and available for use in hub development and may be presented in a format that is also of use to planners and practitioners (e.g. for resource allocation).

Phase 2: Hub proposals

Goal: Leverage the results of Phase 1 to propose the geographic placement and mission of candidate CoPe research hubs.

RFP specifications: The call for hubs, whatever their form, should require that proposed hubs address interests, needs, or vulnerabilities identified in Phase 1. Proposals should also include a plan for leveraging community assets, resources, and networks identified in Phase 1 to ensure community inclusion in the hub structure and activities. In order to encourage creative use and the broader relevance of Phase 1 results, Phase 2 proposals should not be restricted to the geographic location of individual rapid

Figure 1: *Existing classifications should guide the distribution of community assessments.* ***(A)*** *NEON zones to guide community assessment proposals https://www.neonscience.org/field-sites.* ***(B)*** *USDA urban-rural continuum mapping https://www.ers.usda.gov/data-products/rural-urban-continuum-codes/documentation.aspx; see also the*

1 These practitioners could be part of an NSF-designated pool of applied social scientists.

community assessments. Synthesis- or problem-based missions that bridge communities and localities are encouraged. To enhance use of existing data and prevent duplication, new data collection should be justified to meet an existing or emerging community challenge and/or need identified in Phase 1.

Impact and values

Separating the rapid community assessment from the hub proposals will provide a grounded approach for hub placement, foci, and mission. The process should facilitate hub proposals that address emerging challenges and needs that span geographic regions and explicitly engage a continuum of rural-urban communities in the design, mission, and processes of coastal hubs.

The deliverables from rapid community assessments will be of direct value to planners and practitioners.

The phased strategy will enhance the effectiveness of hubs by using a grounded approach to ensure that community context, attributes, and challenges are considered in all phases of hub development and implementation.

Reasoning and supporting evidence

This approach will help address a known synthesis and application need identified by Boruff et al. 2005:

> "…overall vulnerability of coastal counties cannot be determined without the union of social, economic, built-environment, and physical characteristics. Yet the methods for combining these components are not widely used at present by coastal scientists and policy makers, rendering hazards assessments incomplete and mitigation plans untenable for many places."

The need-based requirement for any new data collection will help ensure that plentiful existing data should be leveraged, un-siloed, and not duplicated.

Grounded, inductive social science research and rapid assessment methods used in developing areas (Adger 1999; Schrekenberg 2010) can inform our approaches to U. S. coastal assessments.

Coastal issues, needs, and research potential vary greatly by landscape and development condition (Figure 2; Romieu et al. 2010). The rural-urban continuum provides an established, well-researched index by which to distribute efforts across those varying landscapes and communities (Butler 1990). Differences in these communities will require different approaches for outreach and hub integration; a hub will be more effective if its development explicitly recognizes and addresses the particular challenges and needs of local or host communities.

References

Adger, W. N. (1999). Social vulnerability to climate change and extremes in coastal Vietnam. World development, 27(2), 249-269.

BJ Boruff, C Emrich, and SL Cutter. 2005. Erosion Hazard Vulnerability of US Coastal Counties. Journal of Coastal Research: Volume 21, Issue 5: pp. 932 – 942. https://doi.org/10.2112/04-0172.1

Butler, M. A. (1990). Rural-urban continuum codes for metro and nonmetro counties (Vol. 9028). US Department of Agriculture, Economic Research Service, Agriculture and Rural Economy Division.

Cutter, S. L., Barnes, L., Berry, M., Burton, C., Evans, E., Tate, E., & Webb, J. (2008). A place-based model for understanding community resilience to natural disasters. Global environmental change, 18(4), 598-606.

McLaughlin, P., & Dietz, T. (2008). Structure, agency and environment: Toward an integrated perspective on vulnerability. Global Environmental Change, 18(1), 99-111.

Nance, M. L., Denysenko, L., Durbin, D. R., Branas, C. C., Stafford, P. W., & Schwab, C. W. (2002). The rural-urban continuum: variability in statewide serious firearm injuries in children and adolescents. Archives of pediatrics & adolescent medicine, 156(8), 781-785.

Romieu, E., Welle, T., Schneiderbauer, S., Pelling, M., & Vinchon, C. (2010). Vulnerability assessment within climate change and natural hazard contexts: revealing gaps and synergies through coastal applications. Sustainability Science, 5(2), 159-170.

Schrekenberg, K. (2010). Social assessment of conservation initiatives: a review of rapid methodologies (No. 22). IIED.