



Community Resilience Research and Practice: From “Me” to “We” to “3D”

We all stand to benefit from advancing community resilience

Environmental disasters, such as the 2010 Deepwater Horizon oil spill and Hurricanes Katrina and Sandy, have prompted U.S Gulf Coast communities to lead the way in coping with, managing, and adapting to severe disruptions.

The Consortium for Resilient Gulf Communities (CRGC) is taking an *adaptive systems* approach to community resilience. An adaptive systems approach recognizes that, in some situations, crises can become windows of opportunity for improvement even though they may also produce negative outcomes. This approach emphasizes that communities are embedded in dynamic environmental, demographic, social, and technological conditions.

Resilience Paradigms: Adaptable for Unprecedented Disasters

The table below shows three paradigms of resilience research and practice.

Resilience research and practice paradigms

Individual Resilience <i>Me</i>	Community Resilience <i>We</i>	Adaptive Systems <i>3-D</i>
<ul style="list-style-type: none"> • Emergency kits • Emergency plans • Individual education and training • Individual stockpiles • Individual/household oriented messages 	<ul style="list-style-type: none"> • Assessing and addressing community vulnerabilities • Developing community partnerships • Training, educating, and engaging communities • Strengthening community preparedness networks/ social connections 	<ul style="list-style-type: none"> • Assessing and addressing interdependencies • Organizing research and outreach around core functions • Being responsive to feedback

As the first column in the table suggests, individual resilience tends to focus on the logistics and preparations (i.e., supplies, plans, or training) for surviving a catastrophe. In the second column, the focus on community resilience recognizes that disasters are inherently sociological processes that play out over long periods of time.

Research and practice under the first two paradigms has tended to focus on past events as a guide for responses to current disaster events. This approach is adequate if each new disaster is much like previous disasters, but it fails when disasters result in unprecedented conditions. An example is when several disaster events occur simultaneously or in close succession, with diverse or multiplied impacts.

The adaptive systems paradigm departs from this theme by recognizing that individuals and communities are embedded in dynamic environmental, demographic, social, and technological conditions. Emphasizing multiple, changing dimensions allows resilience building to capitalize on unexpected changes following a disaster.

“3D” Adaptive Systems Resilience in Action in the Gulf Coast

An adaptive systems approach allows the Consortium to develop, explore, and field-test several promising tenets:

An adaptive systems approach can clarify interdependencies. Natural and social resources are vital to the health and wellbeing of Gulf Coast communities. Illuminating interdependencies and linkages across multiple spatial scales helps the Consortium to identify multiple points of entry for enhancing resilience.

An adaptive systems approach to resilience can bridge the science-society gap. The Consortium’s approach consists of four interlinked functions that are responsive to the dynamic context of partner communities and stakeholders. These functions assure that science is informed by experience, and resilience-building activities are informed by science.

An adaptive systems approach can be improved through feedback. The Consortium evaluates both processes and outcomes to identify the strengths and weaknesses of an adaptive systems approach to building resilience. Feedback ultimately strengthens research and outreach activities by encouraging course corrections as the Consortium evolves.

- Engage in dialogs
- Educate, train
- Connect relevant stakeholder groups

- Identify problems, goals, response mechanisms
- Identify relevant resources
- Meet stakeholder needs



- Synthesis documents
- Data, models
- Papers, briefs, presentations
- Evidence-based resilience strategies

- Provide commentary
- Illustrate trade-offs
- Evaluate outcomes and impacts

CRGC Activities Build Resilient Communities via Four Key Functions: Support, Respond, Generate, Be Critical

For more information, watch out for: Finucane, M.L., Blum, M.J., Ramchand, R.R., Parker, A.M., Shanthi, N., Clancy, N. Cecchine, G., Chandra, A., Slack, T., Hobor, G., Ferreira, R.J., Luu, K., Lesen, A. (2017). Advancing community resilience research and practice: Moving from “me” to “we” to “3-D”. Under review.