



Getting Coast Smart:

A Consensus-Building Approach to Engaging Communities to Address Climate Change Risks

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In the United States, coastal communities face many immediate challenges, including declining fish stocks, rapid population growth and aging infrastructure. Yet over the next 50 years, some communities must face the potential threat of their own extinction due to climate change.

Climate change is expected to cause rising sea level, more frequent storm surges, coastal subsidence, changing patterns of rainfall (including drought), loss of fragile coastal wetlands, saltwater intrusion into agricultural areas and emergence of new diseases. It will require substantial expenditures to replace vulnerable infrastructure, build new physical barriers, shift inappropriate land uses to safer locations, guarantee water and food supplies, and ensure structures are built to appropriate standards. At-risk communities may also have to impose restrictions on individual landowners, deal with problems of uninsurability and beef up emergency preparedness and public health protocols.

Despite these potential threats, there are numerous barriers to taking corrective action. First, the extent and timing of these threats are hard to predict at the local level. Second, severe threats such as inundations mainly lie in the future, not right now. Many residents and officials do not see why they should worry about climate change when they face declining tax revenues, failing schools and potholes right now. Those who remain skeptical that climate change is happening at all reinforce this view. Finally, most of the media and policy focus to date has been on mitigation—how to reduce carbon emissions so that we can avoid a climate catastrophe—and not on adapting to the very real risks that coastal communities face.

We think it is possible to overcome these challenges and do better than react later and hope for the best today, as long as communities can build broad public support for a package of risk management activities. Many states and communities have already started. Maryland, for instance, has a Coast Smart Initiative that is engaging local coastal stakeholders around climate risks (<http://maryland.coastsmart.org>). In our view, consensus building—including joint fact finding—is the key tool for focus-

ing attention on the risks associated with climate change and possible adaptation measures. Only widespread public engagement will yield public support for efforts to reduce vulnerability and enhance resiliency.

We suggest that any coastal community that wants to confront the climate change threats that it faces consider the following six steps:

1. Frame the problem as one of forecasting and managing risks.
2. Build political will through broad engagement rather than public education alone.
3. Develop creative ways to start a public conversation around climate risks.
4. Seek federal and state technical assistance to model and assess vulnerability and strategies for enhancing resiliency.
5. Work to develop a state framework for adaptation planning and funding while preserving local autonomy.
6. Link scientific understanding with public understanding through joint fact finding.

Frame the problem in terms of risk, rather than certainty. Citizens will likely disagree about the need to respond now to expected impacts from climate change. In our view, it is best to frame possible adaptation measures in terms of the benefits they offer today, such as jobs created, new development encouraged, and insurance costs reduced, regardless of when and whether the most damaging events occur. We call this a “no regrets” approach. Coastal communities, for example, might want to use the threat of climate change as a reason to finally rebuild aging infrastructure, and relocate certain facilities away from the water’s edge in the process.

The Alaskan coastal village of Newtok voted to relocate its 340 residents nine miles inland because of rising sea levels and frequent flooding. Other Alaskan communities have not made such radical choices to date. The key is to avoid a discussion about whether climate change is happening, and

rather to focus the conversation on the probabilities, the likely impacts and their severity, and thus, what no-regrets options are available.

Build political will through broad engagement rather than public education alone. At the local level, it will not be enough for a few smart folks in city hall, from the state capital or in Washington, D.C., to define the problem and propose solutions. The solution is not simply to educate those who do not understand; rather, communities will do best when they allow citizens to engage and learn alongside one another and experts from a range of disciplines. The problem of formulating a risk management or adaptation plan is simply too complex—and involves too many tradeoffs—not to involve all those who will likely be affected. Professional facilitators can assist this consensus-building process.

Develop creative ways to start the conversation and build public engagement. Communities need innovative tools to get over the initial hump of skepticism and disinterest. As an example, in Maryland, the state government hosted a Coast Smart Summit for coastal mayors, planners, business leaders, environmentalists and other stakeholders. More than 170 participants role-played the difficult conversations communities will face to take consensus-based action around climate risks such as sea-level rise and storm surge. The simulation, developed by the MIT-

actions they might take. Whatever technical and policy choices they make, communities also will need help explaining their pros and cons. At the same time, most cities and towns do not need nor want to be told what to do.

Again, Maryland is one state trying to strike this balance and provide local governments a viable framework for moving forward. The Department of Natural Resources is working with coastal counties to update Comprehensive Plans and implement recommendations from the Climate Action Plan, offer technical expertise, and make modest grants.

Link scientific understanding with public understanding through joint fact-finding. As defined by Field et al., Joint Fact Finding (JFF) is an approach to information gathering that presumes both expert knowledge and local knowledge are important (Field, Susskind, Van der Wansem. *Joint Fact Finding, in Integrated Resource and Environmental Management: Concepts and Practice*. Oxford University Press, 2007). JFF also assumes that citizens and stakeholders need to be involved in adaptation planning from the beginning—helping to spell out the questions they want answered, discussing these questions with technical experts, and cross-examining those who produce studies. Joint fact-finding is both a process of joint education and joint inquiry. And, it is much more likely that the information it produces will be trusted by local citizens, and thus usable by local decision makers.


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USGS Science Impact Collaborative (<http://web.mit.edu/duspl/epp/music>), the Consensus Building Institute and Maryland's Department of Natural Resources, demonstrated the key challenges and policy options coastal communities face and gave momentum to the state's Climate Action Plan.

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Few communities have the financial, scientific or staff resources to assess the risks they face from climate change or to formulate adaptation plans. Each state, and perhaps the federal government, needs to offer incentives and technical assistance. The state environmental agency can provide communities with modeling assistance to do scenario planning that takes into account the vulnerabilities and possible sources of resiliency. New York is among states already doing this planning.

Develop a state framework for adaptation planning while preserving local autonomy. Climate change is an unbounded problem, covering issues ranging from public health to public safety to public infrastructure and private property rights. Most municipalities simply cannot construct an overarching framework for thinking about adaptation. States have an important role to play in offering tools and ideas that can inform local planning. Communities need information on the

Ultimately, adaptation planning will be far more successful in some jurisdictions than in others. We still have much to learn. But, we believe the six steps we propose will serve as key principles to increase the likelihood of success for effective engagement and public conversation in communities. 



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