Overview

The Vulnerability, Consequences, and Adaptation Planning Scenarios (VCAPS) process is a facilitated conversation that produces scenarios, represented by diagrams, linking climate and weather changes to local consequences. The diagrams also show opportunities for appropriate adaptation actions. Diagrams of causal pathways are created during the conversation using a concept-mapping program. They are projected onto a large screen at the front of the room for all to see. VCAPS works best with a diverse group of participants who are knowledgeable about a community or region. Participants usually include elected officials, staff from local and state government, regional planners, business owners, interested residents, and other interested groups or organizations. Multiple meetings are usually held. During the conversations, people engage with scientists to clarify their understandings and assumptions and answer questions about climate change and adaptation challenges their community will face in the future. VCAPS encourages people to explore myriad environmental, economic, health, social, and other impacts that may emerge in their community. At the start of the process, participants are given projections of future climate and weather that their community should be prepared for, such as increased precipitation, more intense storms, heat waves, droughts, and wildfires. The projections are based upon the best available science for the region. Climate change can lead to numerous impacts on a community. Local people know best how their community will be affected. VCAPS brings people with different perspectives and experience together and organizes their knowledge into an integrated diagram.

Because the diagram shows how climate and weather changes create harm in a community, the group can easily identify opportunities for action to help make their community more resilient to an uncertain future. Many people can benefit from VCAPS. Local government can improve its emergency services and ensure that key utilities such as water, sewer, electricity, and transportation remain operational. Individuals and organizations can take actions to protect their health, property and livelihoods.

The VCAPS Diagramming Framework

VCAPS Objectives

The VCAPS process is intended to help communities become more resilient to weather and climate change. During VCAPS, community members:

• **Engage** in dialogue about future weather and climate threats.
• **Summarize** and integrate local knowledge and experience about how the community will be impacted.
• **Identify** gaps in data, knowledge, or understanding.
• **Think** strategically about how to prevent harm by taking action in both the short and long-term.

VCAPS was developed and piloted by Carolinas Integrated Sciences and Assessments (CISA), the Social and Environmental Research Institute (SERI) and the South Carolina Sea Grant Consortium.
The Process

VCAPS is lead by a multi-person team consisting of a facilitator, climate expert, diagramming scribe(s), and note taker. While VCAPS can be implemented in a one-day workshop, it often works best with a series of meetings. The climate expert briefs the group on climate science information relevant to their region and poses questions for consideration during the discussion of impacts and management options.

The participants decide where to focus their attention. The facilitator then guides discussions that collectively produce diagrams illustrating impacts of climate and weather on critical infrastructure, housing, livelihoods, etc. Discussions are informed by local knowledge and preferences and by the best available science. Through the diagramming process, participants identify actions to prevent impacts, to adapt in way that reduces the severity of potential impacts, or to increase resilience to potential impacts.. The group distinguishes actions taken by government entities from those taken by private individuals and organizations. The results of the VCAPS process can be used by community leaders to determine where to allocate funding and resources.

Where Has VCAPS Been Applied?

In 2011, VCAPS was initially tested and refined through its application in two South Carolina coastal communities. Since then, it has been applied in additional communities with the assistance of research, outreach and extension partners. To date, the following communities have benefited from its application:

• Sullivan’s Island, SC
• McClellanville, SC
• Beaufort, SC
• Plymouth, NC
• Plymouth, MA
• Boston, MA
• New Bedford/Fairhaven, MA
• Wellfleet, MA
• South Thomaston, ME
• Orange Beach, AL
• Dauphin Island, AL

In addition, training workshops have been conducted to show local planners and extension agents the benefits of using the scenario-building approach to identify climate change adaptation strategies.

I would say that it brings to light—as a regulator—what I should be thinking about when looking at new proposed projects and how they should be designed with regards to more frequent storms and sea level rise. —Town Official

People bring in very different backgrounds, very different sets of experiences all trying to communicate around what can be a very complex area, so [diagrams] being very visual and going from one step to another, very cause/effect oriented, they level the playing field for everyone there. —Regional Planner

For additional information on VCAPS, visit the Social and Environmental Research Institute website at www.seri-us.org/VCAPS.