

Matching technology to audience needs: Lessons learned from the Carolinas Coastal Climate Outreach Initiative

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Carolinas Coastal Climate Outreach Initiative purpose:

Stakeholders in coastal North and South Carolina are becoming more concerned about the impacts of climate variability and change, but most are not familiar with how to tailor climate information for their local-level decision-making. In 2006, the S.C. Sea Grant Consortium and N.C. Sea Grant programs formed a partnership on coastal climate extension with the Carolinas Integrated Sciences & Assessment center (CISA) to address this need through the Carolinas Coastal Climate Outreach Initiative (CCCOI). CISA is the NOAA Regional Integrated Sciences and Assessments (RISA) center for the Carolinas. The current regional climate extension specialist (CES) has worked since 2008 to help local and regional stakeholders identify relevant climate information and integrate it into local decision processes. As the link between science and society, the CES both conducts outreach activities and contributes to CISA climate-related research.

Here, we present examples of critical lessons learned from our failures, successes, and challenges with using technology to assist local-level decision-makers who need climate information:

- Ensure desired technology is easily accessible to target audience
- Tailor technology use to audience's willingness and ability to overcome the technological learning curve
- Pre-plan for required upkeep to sustain audience use of technology

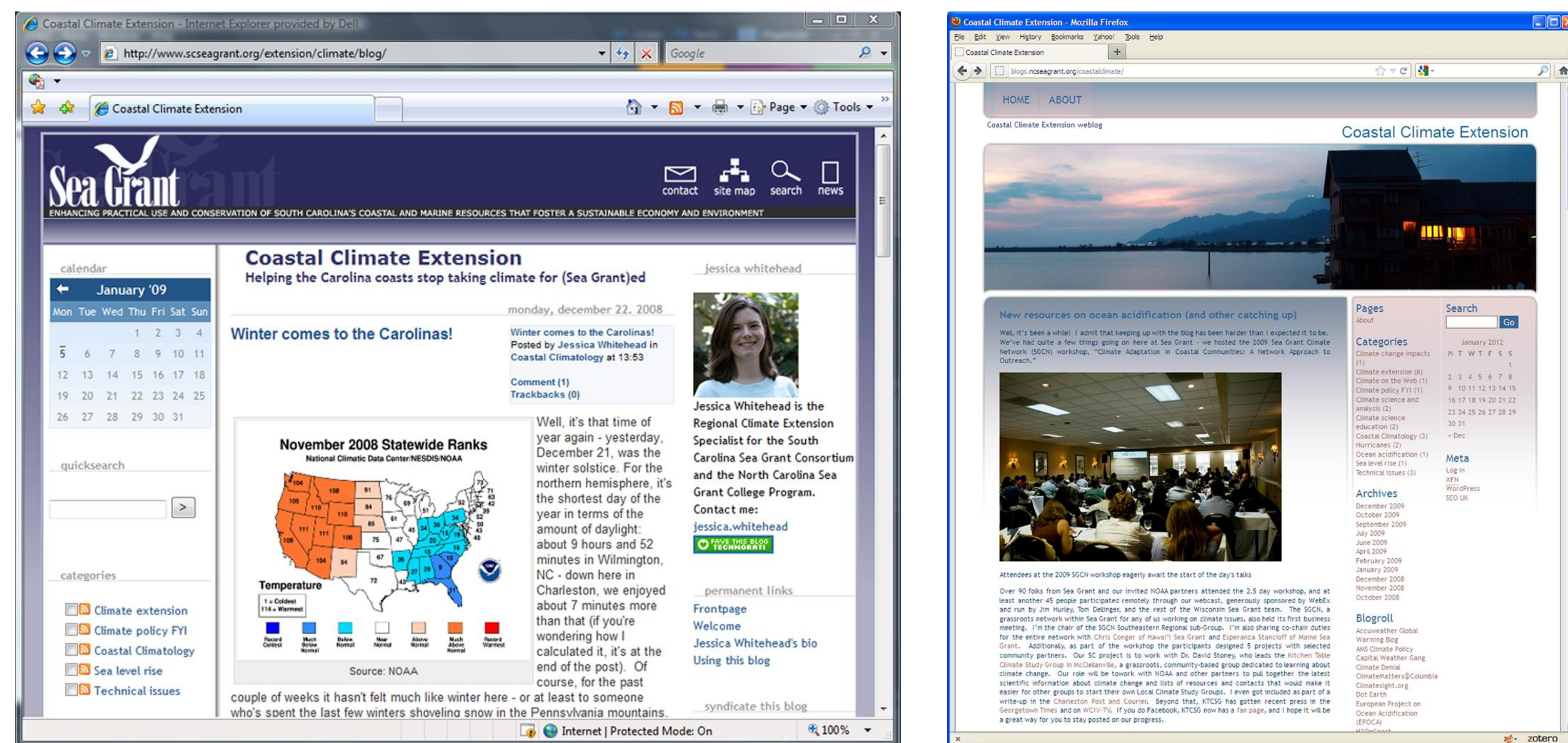


Figure 1: The Coastal Climate Extension Blog was published Oct. 2008 – Nov. 2009. Changing its host in spring 2009 led to declining readership.

Why did the Coastal Climate Extension blog fail?

- Moved to new host, which precipitated large reduction in readership
- Based on feedback from CES advisory committee, discontinued in January 2010
- Blog format not widely preferred for information use by target audience in anecdotal interviews
- Poor target audience access: potential readers reported restricted access to blog at places of employment and had no interest in reading on personal time at home

The Vulnerability-Consequence Adaptation Planning Scenario (VCAPS) Process: Successful use of participatory diagramming for decision support:

VCAPS is a facilitated process for groups of local decision-makers to create diagrams of management scenarios under stresses like climate change and natural hazards. Participants receive information about relevant climate impacts, then work together with the assistance of a scribe to discuss the consequences of impacts to management concerns, as well as management and individual decisions that can be made to minimize negative consequences. The scribe captures the discussion as a computer diagram in real time, allowing participants to give instant feedback on the diagram's structure and contextual factors that should be considered. VCAPS diagrams are created using the Visual Understanding Environment (VUE) software developed by Tufts University (<http://vue.tufts.edu/>).

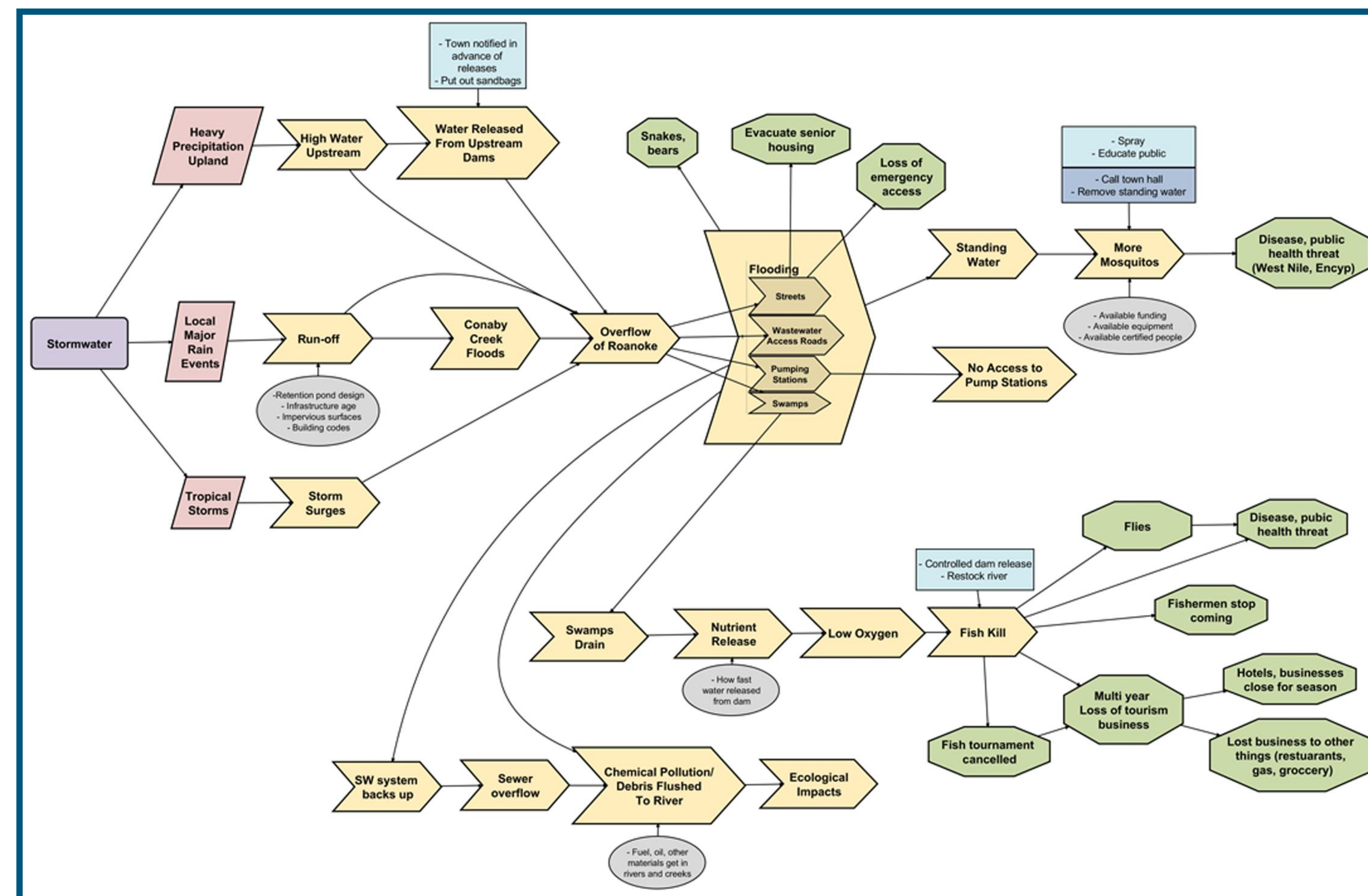


Figure 2: Partial VCAPS diagram produced in Plymouth, N.C., on October 5, 2011, after one two-hour diagramming session. Diagram elements include management stressor (purple rectangle), climate stressor (pink parallelogram), impacts (yellow arrows), consequences (green octagons), town-level decisions (light blue rectangle), resident decisions (darker blue rectangle), and contextual factors (grey ovals). Participants expanded on the graph the next day, resulting in a more comprehensive diagram that included concerns about deteriorating infrastructure.

Why is VCAPS successful?

- Encourages decision-makers to integrate local knowledge with climate information
- Promotes critical thinking and learning about the system and feedbacks
- Builds trust among local decision-makers and with trusted local level scientific partners
- Technology tailored to leave burden of using it in hands of facilitators

(Webler, T., et al. Progress on new tools for participatory climate adaptation planning at the local level in the United States. In preparation for submission to Weather, Climate, and Society.)

Online networking and the Sea Grant Climate Network:

The Sea Grant Climate Network (SGCN) is a grassroots organization of Sea Grant extension, communications, and education personnel who are working climate issues into their programming. Network membership also includes closely related and potential Sea Grant partners from academia, government, and the private sector. The SGCN held its first nationwide workshop in November 2009. Since then communications have been through monthly steering committee conference calls and online professional networking through a members-only site on Ning.

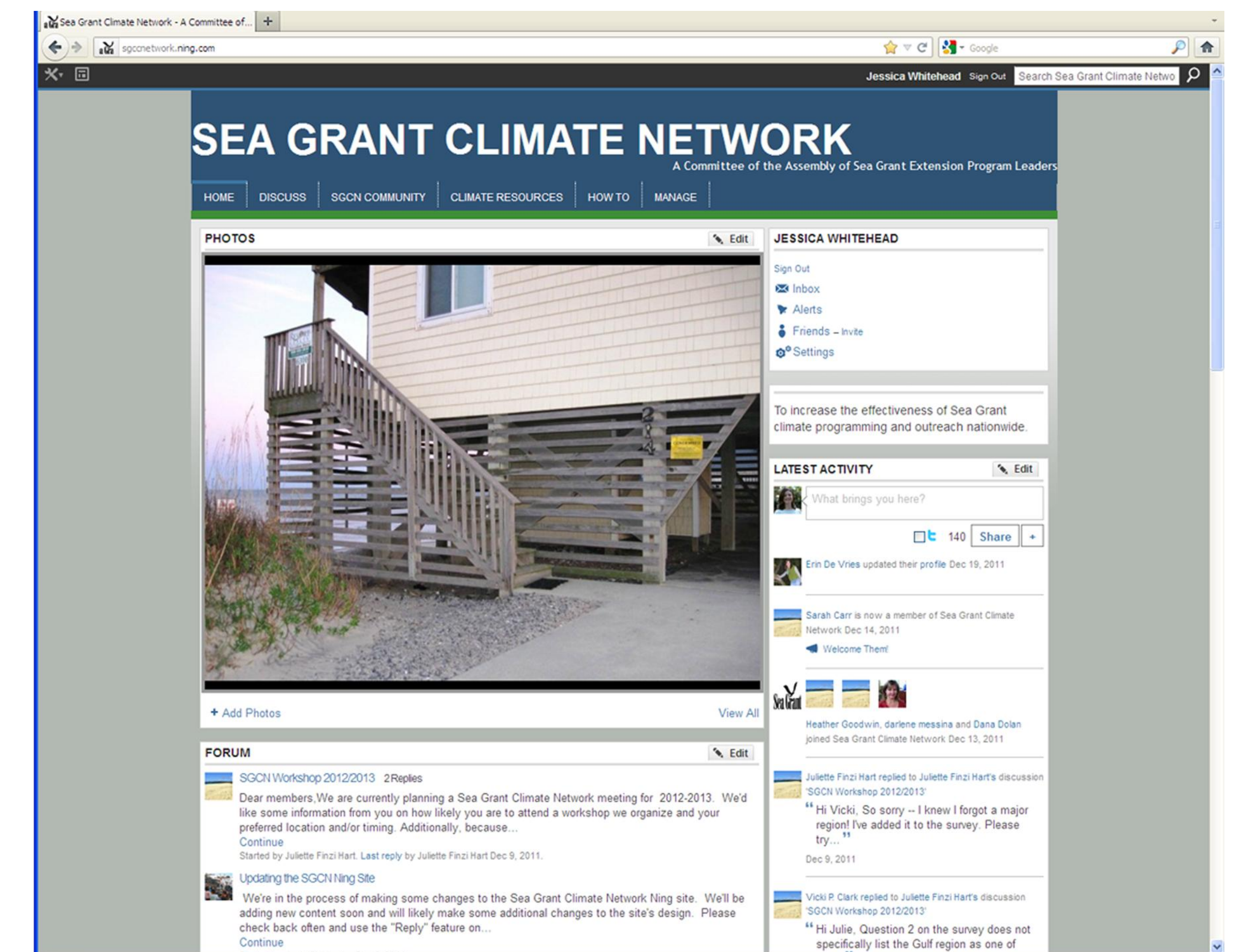


Figure 3: The Sea Grant Climate Network uses a private professional networking site through Ning to share resources and promote discussion among its over 300 members.

What are the challenges to the SGCN in using online professional networking?

- Collaboration easier when SGCN members working toward a goal, such as workshop planning or responding to information requests
- Ning traffic lighter when members do not have specific tasks or are concentrating on other work
- SGCN continues to work to find new ways of using the Ning site, including to plan a second Sea Grant climate workshop in 2013
- Dedicating steering committee members to maintaining site helps refresh resources and discussion topics – but must be planned and coordinated

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