

**An early draft of document was discussed by CSC leadership with NCSU faculty, staff, and students, as well as NCCWSC staff, at a meeting on September 21, and revised to reflect input from those discussions**

### **Possible SECSC organization framework for viewing cycle 1 and organizing cycle 2 proposal**

Overall, the SECSC is organized to accomplish the following goals:

- Convene conversations among decisionmakers, scientists, and managers to identify: key ecosystem adaptation decisions driven by climate and land use change, the values and objectives that will be used to make decisions, and the research-based information needed to assess adaptation options.
- Provide decision-focused, researched based information that supports wise global change adaptation decisions.
- Build the capacity of natural resource professionals, university faculty, and students to understand and frame natural resource adaptations decisions and develop and use research-based information to make adaptation decisions.

The framework that follows portrays three key elements of a SECSC organizational identity that focus SECSC activities on behalf of these goals. These elements have been shaped by experience during the first five years of the SECSC existence. They have also been shaped by the March 2015 Report to the DOI Secretary by the Advisory Committee on Climate Change and Natural Resource Science (ACCCNRS), the de-facto federal advisory group of the CSC network. ACCCNRS first recommendation to the Secretary was that the “co-production of actionable science is the core programmatic focus of the NCCCWSC (National Climate Change and Wildlife Science Center, the USGS program that manages the 8 regional CSCs)-CSC enterprise.”

#### **A. Convener of conversations about global change in the SE**

The SECSC, along with LCC, USDA Hub, and the 3 SE RISAs, are convening these conversations about adapting to global change among managers and other interested parties at many scales; these conversations are the foundation for SECSC decision-focused science activities. In general, these conversations have three goals:

- to build awareness among diverse management partners about each others existence and key goals and values;
- to encourage the development of networks among partners who may not have been aware of each other or have worked together before;
- to foster general understanding of GC processes, the spatial and temporal footprint of these processes, and resources to learn more, including what might be thought of as “information concierge” activities.

No one organization in the SE has the responsibility to carry out this convening function and the lack of communication and coordination among these diverse partners remains one of the biggest bottlenecks to effective and efficient climate adaptation activities.

#### **Potential SECSC Cycle 2 emphases**

*One of the possible niches for the SECSC going forward is to take a more active role in coordinating awareness among agencies such as the LCCs, the Tribes, the USFA Hubs, and the 3 RISAs about each other's global change science and management goals, legal mandates, current individual agency areas of emphasis, potential redundant resource allocations, and future topics and activities that may serve as a unique niche for any given agency. The Southeast Conservation Adaptation Strategy (SECAS) effort of the LCCs and Region 4 of the FWS will be an important venue for exploring these individual agency missions and for coordinating functions like science planning, and research implementation in a ways that is efficient and effective from the perspective of the entire SE.*

*Another potential SECSC convening/coordination niche is to work with other public agencies and NGOs to continue to identify science based tools and research approaches that can help agencies address emerging management challenges, such as dynamic reserve design, decision analysis, and decisionmaking under uncertainty. The SECSC should continue to work with LCCs, the Hub, and RISAs to share best practices, and to support functioning communities of scientific and management practice. And the SECSC has an important role in the convening and understanding the applied science and management education needs related to global change adaptation of both students and management practitioners.*

*Information concierge activities are likely to continue into the second SECSC cycle. This is essentially an information transfer/translation activity, where SECSC staff and colleagues provide data and information needed to understand the footprint and impacts of global change processes at a variety of scales.. This is somewhat extension-like in terms of staff activity and has proven to be time consuming, cumulatively, even though responding to individual requests may only take from a few hours to a few days. Although many of these activities fall upon research scientists, a key information transfer mechanism during cycle 1 has been the monthly newsletter. One niche to explore here is coordination with other agencies to provide concierge activities in a more efficient manner, taking advantage of relative strengths of different SECSC partners.*

*The SECSC may continue to explore how to foster continued development of a university-wide "Global Change Forum" at NCSU. Support might include housing NCSU-supported (part-time) staff, sharing communication resources, etc.*

*Following consultation with tribes at the USET Fall 2015, a desire expressed by Tribes is to connect with SECSC science planning directly rather than through the LCCs. This is largely because they do not have the staff to participate in the LCCs at this time but do wish to shape the science agenda of the SECSC in a way that might lead to activities (funded science projects; capacity building (e.g., support of USET science workshops for tribes) that will help the tribes become more aware of the footprint of global change and how GC affects their interests, become more active in developing and using TK/IK, and, potentially, develop more productive partnerships with those outside their tribal domain.*

*Finally, the SECSC should take a more active role in collaboration with other agencies to explore the most efficient and effective allocation of communication resources. Where these resources are allocated both to communicating the outcomes of science and practice projects (includes translation) and to the development and sharing of improved global change science communication techniques for students, faculty and practitioners.*

## **B. Providing decision-focused, research based global change science**

Cycle 1 SECSC experience indicates that global change science needs in the SE exist along a continuum. At one end of the continuum, many SECSC colleagues/partners are still trying to understand what GC will look like and what the footprint of GC will mean for the things that matter to them. These needs may exist at all temporal and spatial scales. At the other end of the continuum, there is clear acceptance that GC processes and impacts exist, but there may be uncertainty about what the right management decision is in the face of these processes and impacts; science supported by the SECSC at this end of the continuum is explicitly decision-focused.

**“Actionable science” can take place anywhere along this continuum.** SECSC synthesis and background information projects help develop global change “basic information infrastructure” that enables organizations and individuals to understand what global change processes look like (now and in the future) at a variety of scales and begin to understand the implications of these GC processes for places and resources that have value for individuals and society. While applied research activities supported by the SECSC are not necessarily connected with a specific management decision identified by the LCCs, these help managers (and individuals) “get their head around” the footprint of GC and begin to become aware of and understand potential decision problems brought about by this GC footprint. Building a basic GC information infrastructure has been a primary emphasis of SECSC cycle 1 project funding.

At the other end of the continuum projects are explicitly decision focused. These projects involve stakeholders in many or all phases of specification of the problem and major elements of the research approach; at this end of the continuum, the science effort tends to involve co-specification of the project elements among both scientists and decision makers and stakeholders. Cycle 1 SECSC experience suggests that science projects at the decision specific end of the continuum require both convening and background/overview activities; these may need to occur before the decision project can begin (i.e., before a climate adaptation problem/decision can even be fully articulated). Cycle 1 experiences also indicate that substantial project management time/expertise and flexibility and creativity are required from project investigators; AS projects are time intensive.

### Potential SECSC Cycle 2 emphases

*Possible cycle 2 science topics could include things like: land cover change; connectivity; reserve design; biodiversity; coastal resilience; drought; ecosystem services (esp connected to reserve design projects, including using carbon sequestration funds to help refuges and parks work with partners to establish more sustainable physical footprints to carry out refuge/NPS missions..*

*Key cycle 2 partners doing complementary work:  
SALCC (SA blueprint) and others LCCs doing their own blueprints.*

*RISAs*

*NIDIS*

*Hub*

*Carolinas RISA VCAPS*

**C. GC actionable science capacity building** -- The SECSC provides or coordinates training and professional development activities that increase the capabilities of academics (students and faculty) and professionals to understand and global change processes and their impacts, in general, and also bring these abilities to their own research or professional work domains.

Potential SECSC Cycle 2 emphases

*In addition to continuing our GCF effort, possibilities include a variety of resident and webinar type courses that could contribute to professional development of audiences like state managers/scientists (e.g., fish and game; DEM). From a NCCWSC/DOI perspective there are some real political and budgetary upsides to increasing our usefulness to states in the SE.*

*Following the example of the AKCSC, hiring a communication professional to embed, as appropriate, in CSC science projects to identify and complete appropriate communication tasks.*