

**North Carolina State University  
Proposed Charter  
Southern Forest Resource Assessment Consortium**

**To be created under existing  
NCSU Center Industry Research Programs in Forestry**

**a. The name of the proposed Consortium**

Southern Forest Resource Assessment Consortium (SOFAC)

**b. The specific mission, objectives, and goals of the proposed CIL/Consortium**

**Mission:** The Southern Forest Resource Assessment Consortium (SOFAC) will develop forest sector market models for application to forest resource assessments in the South, U.S., and the World.

**Goals:** SOFAC will integrate currently available forest resource data from the USDA Forest Service, Forest Inventory and Analysis (FIA) program and economic theory to model timber supply and demand in the South by local area.

SOFAC economic models will allow use of exogenous or endogenous inputs about supply, demand, land use change, and landowner behavior in the analysis of timber and forest land markets and management.

SOFAC modelers and members will be able to use the SOFAC suite of models and research to simultaneously project timber inventory, supply, and prices for a variety of regions and a variety of timber products across the South, the U.S., and the World.

SOFAC will foster discussion among modelers and members about the appropriate inputs and assumptions in forest projection models and employ these in building timber supply models and timber supply scenarios that represent likely conditions.

SOFAC will continue cooperative university-industry-public agency cooperation in southern and national forest sector economic modeling.

SOFAC will enhance graduate instruction in forest economics and modeling in the South.

**Objectives:** SOFAC will build timber supply models based on prior efforts by the modelers at NC State University and cooperators at the USDA Forest Service, Research Triangle Institute, and University of Georgia.

SOFAC will enhance existing multiple products timber supply modeling that has been developed by NC State modelers in the Multiple Product Subregional Timber Supply (MP SRTS) model.

SOFAC will integrate and update endogenous land use change and reforestation decision components in the ongoing MP SRTS framework.

SOFAC will develop new statistical methods and programs to use the annual FIA SAFIS data, which will form the basis for timber inventory status and projections in the United States.

SOFAC will maintain data on comparative investment returns to plantation and natural forests in the Americas, and integrate these results into estimates of impacts on trade and forest plantations throughout the Americas.

SOFAC will meet annually with industrial and public members and with scientific cooperators to discuss model enhancements and appropriate assumptions for use in modeling each year.

SOFAC will discuss current issues and applications for the economic models each year, and the members will select appropriate applications each year.

SOFAC will report in the research program each year, and publish periodic public reports stemming from its analyses and modeling.

SOFAC will provide funds for graduate research assistantships and train graduate students in forest economics, who can then work for private firms or public agencies in timber supply and forest economics analyses.

### **c. SOFAC's relationship to existing entities at NCSU**

This consortium will be part of the established Center for Industry Research Programs in Forestry programs at the College of Natural Resources (CNR), and will complement other research cooperatives within the Center. Current Center research programs include three Cooperatives: the Forest Nutrition, which focuses on intensive management and silviculture through manipulation of site resources for trees and forest stands; Tree Improvement, which focuses on selection and breeding of superior trees and families of loblolly pine; and the Central American and Mexican Coniferous Resource Cooperative (CAMCORE), which focuses on tree and gene conservation and tree breeding across the southern hemisphere. The newly created SOFAC co-op will add economic modeling and market impact analyses to the preceding biologically-based co-ops.

SOFAC will also cooperate with another established Entity—the Southern Center for Sustainable Forests. This Center covers broad areas of sustainable forest management, including economic, social, and environmental components. SOFAC will contribute to its activities by providing better models for integrated analyses of forest inventories, forest markets, forest management, and environmental and social impacts. The applications of the SOFAC models will directly help us examine questions of forest productivity, sustainability, and environmental effects.

SOFAC will also encourage further cooperation among faculty in the Department of Forestry and Environmental Resources on timber market modeling and social and biological interactions. Furthermore, it will provide funds and projects for cooperation among faculty and graduate students in other disciplines such as economics, agricultural economics, and agriculture. SOFAC also will provide more specific links to external partners and supporting programs. These will include existing partners of the Forest Economics and Policy Research Work Unit of the USDA Forest Service, Southern Research Station, in Research Triangle Park and New Orleans, and the Economic Program at Research Triangle Institute. Other likely external partners will include the Forest Health Monitoring and Risk Assessment group at the Southern Station, and many other external organizations that have funded development of the MP SRTS models in the prior decade, such as the EPA, NASA, NC DENR, or others.

SOFAC also will seek to fund relevant projects at other universities, and has long-standing cooperation with the University of Georgia (UGA) School of Forest and Natural Resources in timber supply, demand, and growth modeling. We plan to continue this cooperation with UGA in modeling efforts, including sharing of responsibility and funds as determined by the membership and scientists on an annual basis.

**d. The name of the proposed director, and a detailed description of any proposed advisory committees or directive boards**

There will be two Co-Directors of the Southern Forest Resource Assessment Consortium:

Robert Abt Professor <a href="mailto:bob_abt@ncsu.edu">bob_abt@ncsu.edu</a> (919) 515-7791	Frederick Cabbage Professor <a href="mailto:fred_cabbage@ncsu.edu">fred_cabbage@ncsu.edu</a> (919) 515-7789
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The SOFAC Consortium is expected to start with a moderate number of members whose representatives will meet annually. When SOFAC recruits more than 10 members, it will create an Advisory Board (AB). The future AB will include representatives from the forest industry sectors with and without woodlands, Timber Investment Management Organizations (TIMOs), small forestry consulting firms, and the USDA Forest Service.

**e. Anticipated sources of funding for the first five years of operation**

Proposed annual membership dues for SOFAC are:

Large integrated forest products firms (pulp and paper)	\$8,000
Large forest land owners (TIMOs, REITs)	\$8,000
Federal research organizations and work units	\$8,000
Small forest products firms (sawmill, solid wood)	\$4,000
Small TIMOs (less than 1 million acres managed)	\$4,000
Forestry associations	\$4,000
Forestry consulting firms	\$2,000
State agencies	\$2,000
Non-governmental organizations	\$2,000

In the first year of operation, we hope to attract about 6 to 8 members, including two major forest products firms, two large TIMOs and REITS, the USDA Forest Service, and two forestry consulting firms. A copy of the proposed SOFAC Membership Agreement template is included as Appendix A in this proposal.

At the proposed dues schedule, the projected amount of funding would be \$44,000. We hope to increase the number of members in subsequent years. The table below shows the projected amount of funding in gross and net receipts, assuming a 9.5% overhead rate. We also plan to apply for and receive external grants that would contribute to the research and education components of SOFAC.

Table 1. Prospective Annual Budget from Memberships for the Southern Forest Resource Assessment Consortium (SOFAC), 2007-2011.

Year	Number of Members	Gross Dues (\$)	NCSU Overhead at 9.5% (\$)	Net Operating (\$)
2007	6	44,000	4,180	39,820
2008	8	56,000	5,320	50,680
2009	10	68,000	6,460	61,540
2010	11	76,000	7,220	68,780
2011	12	80,000	7,600	72,400

An estimate of anticipated expenses on annual basis for the first five years are shown in Table 2. They would be distributed among research assistantships, subcontracts with the University of Georgia, Research Triangle Institute, or other universities, equipment, software, supplies, travel (domestic and international) and meetings.

Table 2. Prospective Annual Expenses for the Southern Forest Resource Assessment Consortium (SOFAC), 2007-2011 (\$)

Year	Net Operating	Research Assistantships	Subcontracts	Equipment, Software, and Supplies	Travel and Meetings
2007	39,820	20,000	10,000	4,000	5,820
2008	50,680	25,000	15,000	4,000	6,680
2009	61,540	30,000	22,000	2,000	7,540
2010	68,780	30,000	30,000	2,000	6,780
2011	72,400	30,000	30,000	4,000	8,400

**f. A description of immediate space needs, and realistic projections of future space needs**

The SOFAC consortium does not require any additional space. The Co-Directors of the Consortium, as faculty members of the Department of Forestry and Environmental Resources, already have adequate office space and facilities. SOFAC will fund various graduate students working on the research, who will need space in the graduate student office allocation. But this is fairly routine and sufficient space should be available. We will need appropriate computer equipment for SOFAC and plan to locate it in existing office space.

**g. A statement of other needs such as capital equipment and library resources**

As noted above, we will need to periodically update our computer equipment and software with funds from SOFAC member dues, or departmental and university support. We also may need to subscribe to or purchase data for economic applications, ranging from population/census data to Department of Commerce Census of Manufacturers data, to Forest Service FIA data, to Timber mart-South or Forest2 Market timber price data. Library resources on forest industry, trade, commerce, manufacturing firms, and related economic data will be required. Most of this is available through government documents and statistics, but some must be purchased at a cost for small scale analyses. Some forest industry proprietary publications and consulting reports also may be helpful and requested occasionally, but are not anticipated to be required at this time.

**h. A statement about anticipated effects of the proposed unit on the instructional programs of NCSU, and the provisions for advanced or graduate training or degree programs**

The principal use for SOFAC budgets will be to provide stipends for graduate students, operating for computer equipment, software, and data acquisition, and travel for the PIs and graduate students for relevant meetings. Subcontracts with the University of Georgia or other institutions may be made, and used for similar expenses.

The co-op will provide interesting projects for graduate students to work on for their research, allow interaction with key private and public sector organizations and personnel, and provide contacts for future employment. Graduate students participating in SOFAC will obtain their Masters and PhD degrees under the current graduate programs at NCSU/FER.

In addition, the forest industry and public sector face a shortage of well trained graduate students in forest economics and modeling, which may limit expansion and opportunities in the forestry sector. We currently have far more requests from the forestry sector for good analysts and graduates than we can supply. SOFAC and its work in training graduate students can help bridge this gap, providing long term benefits for members as well for students at NC State or other universities that may participate in the research and receive funds from SOFAC.

**i. Description of the Consortium administrative structure**

As part of the existing Center for Industry Research Programs in Forestry, SOFAC will be small and does not need a separate organization structure.

**j. Any additional information that may bear directly upon the proposal**

The Southern Forest Resource Assessment Consortium should provide an excellent means for major forestry firms and organizations to examine the prospects for timber supply, demand, prices, and trade in the future. A similar consortium with the same name and similar Principal Investigators existed from 1994 to 2006, with joint leadership from the USDA Forest Service and NC State University. From 2000 to 2006, the Research Triangle Institute (RTI) and the University of Georgia were the other partners who cooperated with SOFAC. Financial and administrative authority for that consortium was housed with the Forest Service, where Cabbage actually started the consortium when he was a Forest Service project leader from 1991 to 1994. By agreement among the NC State and Forest Service co-directors and the remaining consortium leaders, that consortium was “sun-setted” last year. All partners agreed to move to formation of a new consortium here at NC State this year, with NCSU serving as the financial and

administrative lead. This should provide more incentive to increase the membership and reach of the program, link SOFAC with our research and teaching missions better, and facilitate cooperation with other universities and partners.

#### **Appendix A. SOFAC Standard Membership Agreement**

Attached separately.