

**ORGANIZATION PLAN FOR THE
HUBBARD BROOK ECOSYSTEM STUDY
(Last revision: December 2019)**

Introduction

The Hubbard Brook Ecosystem Study (HBES), initiated in the early 1960s by Herb Bormann, Gene Likens, Bob Pierce, and Noye Johnson, now involves many investigators from many different disciplines and institutions. This Organizational Plan (Plan) describes the governance structure for the HBES. The Plan is intended to foster collaboration among the people and organizations that are part of the HBES, provide for efficient management and integration of research projects, and allow the HBES to continue to flourish into the future.

Goals of the HBES

Mission Statement:

We conduct multidisciplinary studies of the structure, function, and change of northern forest ecosystems and associated aquatic ecosystems, as represented within the Hubbard Brook Experimental Forest (HBEF), New Hampshire. The HBEF is located in the White Mountain National Forest and is operated by the United States Forest Service (USFS) Northern Research Station.

Overall goals of the HBES:

- i. To advance scientific understanding of forest and aquatic ecosystems in northeastern North America and provide a scientific baseline for management and policy decisions;
- ii. To offer educational opportunities to students; and
- iii. To promote greater public awareness of ecosystem science.

Participants in the HBES

All investigators including their associates, students, technicians, and assistants who are conducting research, education, and/or outreach directly related to the Hubbard Brook Valley.

Overview of Organization and Management of the HBES

Committee of Scientists (COS): The HBES is governed by a Committee of Scientists (COS) that consists of all Principal Investigators (usually Ph.D. scientists) who are conducting research at Hubbard Brook. The COS meets four times per year (January, March/April, July, September/October) to discuss research activities and progress and to take up matters pertaining to the functioning and advancement of the HBES. The chair of the COS serves as the chair of the Scientific Coordinating Committee (see below).

Scientific Coordinating Committee (SCC): An executive committee, referred to hereafter as the Scientific Coordinating Committee (SCC), consists of eight full members and one external

advisor (see list below), five of whom will be elected from the COS (see below). The primary charge to the SCC is to provide leadership and vision to the HBES. The SCC elects its Chair from among its members.

Other Committees: (1) Research Approvals Committee (RAC), (2) Information Management Committee (IMC), (3) Education and Outreach (E&O) Committee, and (4) others as needed.

Details of Organizational Plan

The COS is the main body that constitutes the HBES, with executive actions being carried out by the SCC. All committees are made up primarily, but not exclusively, of scientists working at Hubbard Brook Experimental Forest (HBEF). For example, current exceptions include an external scientist, members of the Hubbard Brook Research Foundation (HBRF), and artists in residence. Committees are empowered to do their own work, with some checks and balances provided by the SCC and ultimately by the COS, as described below. The principle of rotation applies to all committees of the COS, with members usually having staggered three-year terms. Individuals may serve consecutive terms on committees, subject to the outcome of voting by the COS. There is no limit on the number of consecutive terms an individual may serve. Membership on the SCC should include a range of researchers representative of the broader HBEF scientific community, e.g., gender, race/ethnicity, seniority, research specialties, and home institutions. To ensure turnover and encourage diversity among the membership of the SCC, there is an expectation that on average there will be a new member each year.

Committee of Scientists (COS)

Composition: all Principal Investigators conducting research at HBEF.

Responsibilities:

1. Oversee and conduct research on ecosystem structure and function at HBEF. The COS is the main policy making body, and will respond to ideas and proposals developed by the SCC.
2. Elect members of the Scientific Coordinating Committee (SCC).
3. Approve changes to this Organizational Plan.

Scientific Coordinating Committee (SCC)

Composition:

- One member from among the principal investigators (PI's) of the Long-Term Ecological Research program (LTER) sponsored by the National Science Foundation. The LTER representative on the SCC is selected by the LTER PI's
- Five members elected, at large, from the COS (includes non-selected individuals from the above category)
- USFS representative selected by the USFS Hubbard Brook Experimental Forest Team Leader

- Executive Director of the HBRF
- One external scientist (only non-voting member) to be nominated by the COS followed by discussion of the nominees with the COS, and selected by the SCC.

Responsibilities of the SCC:

1. Provide leadership and vision to the HBES, by promoting discussion of current and future research options, encouraging collaborations, and encouraging other scientists to become involved.
2. Where feasible and appropriate, promote integration and synthesis across diverse projects and among HBES scientists.
3. Promote interactions and communication among HBES scientists.
4. Promote transparency and engagement by providing ample opportunities for COS input and discussion before for all major decisions (e.g., selection of external advisor).
5. Provide a brief quarterly summary to the COS of the issues discussed and actions taken by the SCC.
6. Regularly review the membership of the COS, identify potential new members, and initiate discussions with those who appear not to be active to see if they should continue to be members.
7. Coordinate activities of other committees, review their actions as needed, and ensure that those committees are fully staffed. Form new committees, as needed.
8. Plan for transitions of leadership and facilitate research continuity, including advising on transitions of LTER leadership.

Responsibilities of the Chair of the SCC (and COS):

1. Actively promote goals of HBES and responsibilities of SCC (see above) by calling, chairing, and developing agendas for meetings of the SCC and the COS.
2. Report on SCC activities at COS meetings.
3. Act as liaison between HBES, USFS, and HBRF.
4. Ensure the provision of quarterly SCC notes to the COS

Decisions/Voting:

1. A simple majority is necessary for decisions requiring a vote (e.g., membership in COS, appointments to subcommittees, appointment of external advisor).
2. Five or more voting members present at a meeting are necessary for a quorum.

Research Approval Committee (RAC)

Composition: four members (including at least one senior member with 20 years or more of experience at HBES) selected from the COS by the SCC, plus the USFS appointed scientist who will serve as Chair and the USFS site manager. Nominations for membership on this committee will be solicited from the COS.

Responsibilities of the RAC:

1. Receive and act upon proposals for research to be conducted in HBEF, under the guidelines listed below.
2. Report on the activities of the RAC at the COS meetings. Promote transparency by inviting COS input and discussion on major decisions (e.g., proposals for new manipulative experiments). If two or more members of COS raise questions about decisions, the SCC will consider the issue, consult with COS members if needed, and make a recommendation based on the majority vote of the SCC.
3. Ultimately, the US Forest Service will make the final decision about whether a project is permitted on HBEF property.

Information Management Committee (IMC)

Composition: at least six members selected mostly from the COS, but including other volunteers for service. The IMC will select the chair from among the membership.

Responsibilities of the IMC:

1. Oversee the HBES information management system including the web page development and content, HBES publication list, physical sample archive, and LTER/HBES computer network.
2. Report on the activities of the IMC at the COS meetings.
3. Promote transparency by inviting COS input and discussion on all major decisions (e.g., changes to data use policy). If two or more members of the COS raise questions about decisions, the SCC will consider the issue, consult with COS members if needed, and make a final decision by majority vote.

Education and Outreach Committee (EOC)

Composition: Members of the COS who wish to participate, plus other volunteers for service, including education and outreach staff from the Hubbard Brook Research Foundation. The SCC will select the chair from among the committee membership.

Responsibilities of the EOC:

1. Provide strategic guidance for coordinating education and outreach efforts related to Hubbard Brook.
2. Report on the activities and meeting minutes of the EOC to the COS, either in COS meetings or via email.
3. Hold an annual, open meeting during the Cooperators' Meeting.