

# Change in the Forestry Profession and its Implications for Terminology Revision

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## Abstract

The field of forestry has evolved rapidly in the last several decades to encompass the sustainability and conservation of forest resource uses and values. It can be argued that any field of science and management could be legitimately included provided it has the word *forest* as a prefix. In addition to “conventional” foresters we now have urban foresters, agroforesters, international foresters, and industrial foresters. To accommodate this broadening there has been an enormous increase in vocabulary needed by those who must communicate technically and accurately on forest resource issues. This broadening has led to growing debate on the →definition of such familiar →terms *forest*, *forestry*, and *forester*. Examples are given of earlier and current →definition of these and other →terms. The compilers of forest →terminologies need to develop guidelines determining what →terms should be included while ensuring that the →terminology follows the profession, reflects current usage, and enables precise and clear communication. In adapting to change, forestry although an international →concept is likely to increase in regional interpretation.

Keywords: forestry profession, societal change, forest terminology, network, Society of American Foresters, USA

## 1 Change in the Forestry Environment

It is common knowledge that the local, national, and international environments in which forestry is practiced has changed dramatically, particularly over the past couple of decades. A few decades ago in North America, human population pressures were relatively low and forest resources were abundant, forest management was focused on timber production, the public was disengaged from forest management, and forestry decisions were made by foresters. In recent times, however, forest resources are recognized as diminishing, the size of the human population is large, and politics and governance are urban-based. Forest management has changed from a focus on multiple use and sustained yield of wood products and become ecosystem-oriented with a focus on sustaining diverse values. The public expectation from forest management has changed dramatically and, because of a general perception of excessive clearcutting and lack of stewardship, forest management is increasingly bypassing professional planning and is being done through protest, litigation, and legislation.

## 2 Change in the Forestry Profession

These exponentially-developing changes in public expectations of forests have been accompanied by remarkable rates of change within professional institutions:

- the practice of forestry is extraordinarily diverse due to variability of ownership that includes public forestry (consisting of numerous state and federal agencies), Native American Tribal lands, industrial and nonindustrial private forestry, urban forestry, agroforest-

- ry, and park and wilderness management. These different entities have a wide array of policies, goals, regulations, and certification constraints and associated management goals varying from short-rotation fiber farms to custody of old-growth forests;
- in forestry education, curricula and texts have broadened in response to increasing diversity of forest resource skills needed by employers, particularly in the environmental and social sciences;
  - in the research and professional organizations, the increasing breadth of forestry of forest science specializations is apparent in IUFRO's 195 Working Parties and in the Society of American Foresters' (SAF) 29 Working Groups.

### 3 Implications for Revisions of Forest Terminology

Perhaps the most compelling evidence of change within the profession is evident by viewing the content of the 1971 IUFRO-authorized, Ford-Robertson *Forest Terminology* (with 1977 Addendum: second printing 1983). This set of →definitions, no doubt accurately reflecting the focus of the profession in the 1960s, is oriented toward the primary goal of timber management. In two decades, times have changed and many Ford-Robertson →terms are either limited in scope or obsolete in the context of modern forestry with its broader focus on forest systems and processes, its social orientation, and in management goals of sustaining diverse values. Therefore, the recommendation to revise the Ford-Robertson *Forest Terminology* was made by the SAF's Forest Science and Technology Board. SAF's 29 science Working Groups were asked to contribute to the revision. Technical review was done by a subcommittee of the Board. A group of 20 persons representing the diverse employers of foresters provided an external review.

In the revised Ford-Robertson *Forest Terminology* (HELMS 1998) it is perhaps surprising to find that fundamentally important →terms such as *forest*, *forestry*, and *forester* now have somewhat changed meanings. A comparison between the 1971 Ford-Robertson →definitions of these three →terms and those in the 1998 SAF *Dictionary of Forestry* shows this trend:

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#### Forest

FORD-ROBERTSON (1971)

**forest** **1.** *ecology* an ecosystem characterized by a more or less dense and extensive tree cover **2.** *ecology* a plant community predominantly of trees and other woody vegetation, growing more or less closely together **3.** *silviculture, management* an area managed for the production of timber and other forest produce, or maintained under woody vegetation for such indirect benefits as protection of catchment areas or recreation

SAF (1998)

**forest** an ecosystem characterized by a more or less dense and extensive tree cover often consisting of stands varying in characteristics such as species composition, structure, age class, and associated processes, and commonly including meadows, streams, fish, and wildlife —*note* forests include special kinds such as industrial forests, nonindustrial private forests, plantations, public forests, protection forests, and urban forests, as well as parks and wilderness —*see* forester, forestry, old-growth forest, second-growth forest, urban forestry, virgin forest

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The 1971 →definition of *forest* shows an orientation focused on use or production, whereas the 1998 text is focused on structure, broad attributes, and illustrates diverse kinds of forests with uses and values left as implicit attributes.

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## Forestry

FORD-ROBERTSON (1971)

**forestry** **1.** a profession embracing the science, business and art of creating, conserving, and managing forests and forest lands for the continuing use of their resources, material, or other forest produce **2.** the husbandry of tree crops or the profitable exploitation of the resources intrinsic to forest land

SAF (1998)

**forestry** the profession embracing the science, art, and practice of creating, managing, using, and conserving forests and associated resources for human benefit and in a sustainable manner to meet desired goals, needs, and values – *note* the broad field of forestry consists of those biological, quantitative, managerial, and social sciences that are applied to forest management and conservation; it includes specialized fields such as agroforestry, urban forestry, industrial forestry, nonindustrial forestry, and wilderness and recreation forestry – *see* agroforestry, forester

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The 1971 →definition of *forestry* is focused on use, crops, and profitable exploitation whereas the 1998 text indicates sustainability and values as well as uses and indicates the breadth of the field.

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## Forester

FORD-ROBERTSON (1971)

**forester** **1.** anyone engaged in the profession of forestry **2.** a forest official having a rank and functions that vary widely between countries, e.g., in India and West Africa, a junior executive under a forest ranger, in N. Am., Australia, and New Zealand, a manager, an administrator, or a technical officer, generally holding University qualifications

SAF (1998)

**forester** a professional engaged in the science and profession of forestry —*note* foresters are commonly credentialed by states or other certifying bodies, e.g., the Society of American Foresters, and may be licensed, certified, or registered indicating specific education and abilities; the requirements for credentialing differ and usually require a baccalaureate degree in forestry, sometimes equivalent experience, and usually passing a comprehensive examination —*see* accreditation, forest, forest technology recognition

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Both →definitions are linked to the →definition of *forestry* which in the 1971 →terminology is timber-oriented whereas the 1998 →definition is more broadly defined. In addition, the 1998 →definition indicates the complexity of differentiating, both in practice and in a legal context, among licensed, certified, or registered professional foresters.

This evolution of →definitions is contentious within the profession. Within the SAF there is considerable debate among members on whether “forestry” is drifting too far from its traditional roots.

I would like to present three other illustrations of evolution within →definitions of technical forestry →terms:

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## Forest Inventory

### FORD-ROBERTSON (1971)

**forest survey** a survey to determine, on a given area, such data as soil conditions and topography, together with the extent, condition, composition and constitution of the forests for such purposes as purchase or management, or as a basis for forest policies and programs

### SAF (1998)

**forest inventory** **1.** a set of objective sampling methods designed to quantify the spatial distribution, composition, and rates of change of forest parameters within specified levels of precision for the purposes of management **2.** the listing (enumeration) of data from such a survey —*syn* cruise, forest survey —*note* inventories may be made of all forest resources including trees and other vegetation, fish, insects, and wildlife, as well as street trees and urban forest trees —*see* dynamic sampling, point sampling

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The two →definitions differ primarily in what constitutes a “forest”, and inclusion in the 1998 →definition that inventories quantify both current condition and rates of change and an explicit note indicating the breadth of forest inventories.

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## Silviculture

### FORD-ROBERTSON (1971)

**silviculture** **1.** the science and art of cultivating (i.e., growing and tending) forest crops, based on a knowledge of silvics **2.** the theory and practice of controlling the establishment, composition, constitution, and growth of forests

### SAF (1998)

**silviculture** the art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis —*see* silvics

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The modern →definition moves away from prime focus on crops of trees and places emphasis on control of forest structure to meet diverse needs and values on a sustainable basis. Again, cross-reference to the modern →definition of *forest* indicates that silviculture is applied to trees, wildlife habitat, and other forest values.

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## Forest Management

### FORD-ROBERTSON (1971)

**forest management** **1.** the practical application of scientific, economic and social principles to the administration and working of a forest estate for specified objectives **2.** that branch of forestry concerned (a) with the over-all administrative, economic, legal, and social aspects, and (b) with the essentially scientific and technical aspects, especially silviculture, protection, and forest regulation. NOTE: Phrases such as “method of management”, “objects of management”, “plan of management”, “sustained yield management” may refer to either the broader or the narrower meaning according to context

SAF (1998)

**forest management** the practical application of biological, physical, quantitative, managerial, economic, social, and policy principles to the regeneration, management, utilization, and conservation of forests to meet specified goals and objectives while maintaining the productivity of the forest —*note* forest management includes management for aesthetics, fish, recreation, urban values, water, wilderness, wildlife, wood products, and other forest resource values —*see* forest regulation, forestry, operations research, sustainable forest management, sustained yield

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The 1998 →definition broadens the principles on which forestry is based, specifically identifies regeneration, management, utilization and conservation as the key managerial goals, and uses a note to explicitly convey the diversity of forest values that are being managed.

In addition to these changes in old, familiar, forestry →terms there is a host of new →terms used in contemporary forestry in such areas as sustainability, forest health, ecosystem management, as well as →terms associated with meeting requirements of the many environmental and planning regulations and policies that have been introduced in the last two decades. Currently, there is interest in the →definitions of deforestation, afforestation, and reforestation from the standpoint of legal eligibility for gaining carbon credits (see LUND 1998).

In compiling a →terminology, guidelines are needed limiting its scope. A balance must be sought between being too inclusive or too exclusive of general →terms that exist in standard →dictionaries and specialist →terms from →glossaries in the various fields of forest science and in government agencies. Should →terms be included that are self-explanatory or focused on taxonomic details or classification systems? To what extent should notes be included that help users interpret the →definitions or provide examples of use? What should be the policy regarding cross-referencing allied →terms and providing sources of →definitions? And how should →dictionaries be published – in book form, CD-ROM, or made available on the World Wide Web? Availability of →dictionaries in an electronic format is desirable but there currently are difficulties in gaining permission to incorporate copyrighted →definitions.

## 4 Outlook

As the field of forestry becomes broader and moves beyond its earlier, central focus on timber management, there is legitimate concern whether a “forestry” →dictionary is evolving towards a →dictionary of “natural resources”. Fortunately, resolving this issue is not the responsibility of the compiler of →terminologies who must follow the evolution of the profession and provide a →dictionary that is contemporary and enables precise, clear, and consistent communication.

## 5 References

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## 6 Related Web Pages

- The Society of American Foresters (SAF)  
<<http://www.safnet.org/>>