Documents which address the interface between forestry and the social sciences comprise this annotated bibliography. A subject-matter classification scheme is used to group publications by subheadings under five major headings: (1) social science applied to forestry at large; (2) applied to forestry's productive agents; (3) applied to forest production; (4) applied to manufacturing; and (5) applied to marketing trade, and demand for forest output. Arranged alphabetically by author, each entry contains the document's complete citation and a brief abstract. If the publication is not in English, the language used is indicated. An author index is also provided. An appendix lists theses and dissertations in progress in the United States and Canada. Compilation sources included numerous U.S. and foreign journals, publications lists from U.S. Forest Service Experiment Stations, and selected data bases. (DC)
SOCIAL SCIENCES in FORESTRY

A CURRENT SELECTED BIBLIOGRAPHY

NO. 57 FEBRUARY 1982

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SPECIAL APPENDIX

THESIS AND DISSERTATIONS IN PROGRESS

JUDITH L. SCHWAB, EDITOR

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BLACKSBURG, VIRGINIA 24061
SOCIAL SCIENCES IN FORESTRY
A Current Selected Bibliography
No. 57 February 1982

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Editor

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SOCIAL SCIENCES IN FORESTRY

Subject-Matter Classification Scheme

Note: This outline is regarded as working for the most part from the general to the specific. Material covering two or more sections of this outline is classified in the most general of these sections. Material which is classifiable in any of two or more sections is classified in the most specific of these sections. *Asterisks mark those subjects which are not represented in this issue.

I. SOCIAL SCIENCE APPLIED TO FORESTRY AT LARGE

A. General principles, scope, content, method

B. History, status, prospects of forestry in an area, society in an area (This section includes material on forest resources alone, as opposed to that on consumer or intermediate resources alone, for which see appropriate sections.)
   1. General
   2. United States, Canada
   3. Other north-temperate nations
   4. South-temperate nations
   5. Nations in lower latitudes

C. Law, politics, policy, plan, program, and their administration

D. Other influences
   1. Taxation
      a. General
      b. Property, general and special; severance; lieu payment
      c. Income, inheritance, other
   2. Valuation (See also IIID51)
   *3. Insurance
   4. Social interest, value system, custom, folklore, culture
   *5. Characteristics of the individual
   6. Public relations, other

E. Research (For research on specific topics, see those topics.)

F. Professional and subprofessional affairs, education, employment of foresters.
G. Social and economic development (See also IB)

H. Environmental concern

II. APPLIED TO FORESTRY'S PRODUCTIVE AGENTS
(See also the individual operation or type of output in III, IV, V)

A. Labor (Some material on labor will be found in IF, IV)

1. General, employment, demand
2. Supply, union
3. Wage, cost hours, productivity, technology, training, return, benefit
4. Working condition, turnover, absenteeism, safety, insurance
5. Characteristics of the worker

B. Owner, ownership, manager, entrepreneur, holding (See also IC, IIC3)

1. General
2. Public
   a. General
   b. Federal, central
   c. Regional, local
3. Private
   a. General
   b. Industrial
   c. Nonindustrial

C. Land

1. Context of supply, requirement, etc.
2. Description, use trend and status, interpreted description
3. Management, use prospect and plan, planning, marketing, tenure
4. Research method

D. Capital

1. General, investment, interest, finance
   (For investment in forest production, see IIIE; for that in manufacturing, see IIA4).
2. Credit
III. APPLIED TO FOREST PRODUCTION (See also IIB, C)

A. Production including non-timber commodities and services

1. General, supply, multipurpose management
2. Christmas trees, greens
3. Range and livestock
4. Naval stores, maple products
5. Recreation
   a. General
   b. Research
   c. Decision
   d. Demand, consumer, market
   e. Parks and wilderness areas
   f. Interpretation
   g. Aesthetic values
   h. Consumer activities such as driving, walking, camping, etc.
   i. Valuation
6. Water, soil, watershed management, shelterbelts
7. Wildlife, hunting, fishing
8. Urban forestry

B. Production chiefly of timber

1. General, supply
2. Soil, site, site improvement
3. Tree regeneration and improvement, plantation
4. Intermediate cutting, pruning, stand improvement
5. Harvest cutting, rotation, cutting cycle, stocking, regulation, allowable cut
   (For harvesting treated as engineering, see IVB)

C. Roads, other forest-management transportation
   (For transportation in harvesting, see IVB4; in manufacturing and marketing, VD)

D. Damage and protection

1. From fire
2. Prescribed burning
3. From insects
4. From other agencies
   (For water damage and soil erosion, see IIIA6)

E. Decision making, planning, investment, accounting, inventorying
   (For investment in general, see IID1)
IV. APPLIED TO MANUFACTURING
(For material on forestry in general, including forest land resources, see IID1)

A. The industry in general

1. Status and trend
   a. General
   b. United States, Canada
   c. Other north-temperate nations
   d. South-temperate nations
   e. Nations in lower latitudes

2. Directory
   (Includes those covering specific branches of industry.)

3. History

4. Decision making, planning, investment, accounting, inventorying
   (For a specific branch of industry, see that branch, "Operation of firm"; for investment in general, see IID1)

B. Timber-harvesting industry
   (Includes roundwood in general; for specific types, see IVC.
   "raw material." For harvesting as silviculture, see IIIB4, 5)

1. Status and trend
2. Operation of firm
3. Utilization of the stand or tree
   (For utilization of a specific product, see the branch of industry in question.)
   a. General
   b. Logging residue and its disposal

4. Transportation (Skidding, yarding, loading, hauling to mill.
   For transportation in forest management, see IIIC; in manufacturing and marketing, see VD)

C. Wood-using industry

1. Lumber, allied product, pallet
   a. Industry status and trend
   b. Production, consumption, stocks, other statistics
   (For sawtimber, see IB, IVB; for sawlogs, see IVC1d)
   c. Operation of firm
   d. Raw material

2. Pulp, paper, board
   a. Industry status and trend
   b. Operation of firm
   c. Raw material
   d. By-products
3. Veneer, plywood, panel
   a. Industry status and trend
   b. Operation of firm
   c. Raw material

4. Bark, chips other residue
   (See also IVB3 and the industry branch in question, "Operation of firm.")

5. Furniture
   6. Particleboard, hardboard, fibreboard, flakeboard
   7. Construction
   8. Charcoal, fuelwood, other combustibles; energy
   9. Other wood-using industry (including pole, piling, post, mine timber, railway tie)

D. Other forest industry
   1. Decorative product
   2. Naval stores
   3. Maple product
   4. Other

V. APPLIED TO MARKETING, TRADE, DEMAND FOR FOREST OUTPUT
   (For marketing and demand for productive agents, see II)

A: Consumption
   1. General; history of consumption; consumption-production relationships
   2. Consumption or production prospect, goal, requirement, prediction (For material on short-term requirement, see the industry in question in IV, "Industry status and trend.")
   3. Consumer demand and preference
      (For material on specific forest resources, see also IIIA,B)

B. Market, marketing, trade, export, import
   1. General
   2. Futures, hedging
   3. Stumpage, roundwood
   4. Lumber, plywood, composition board
   5. Pulp, paper, paperboard
      a. Product
      b. Raw material
   6. Other wood products
   7. Christmas trees, greens
   8. Other type of output (See also IIC3)
C. Price, value:

1. General
2. Stumpage, roundwood
3. Other type of output
4. Price reporting

D. Transportation (Includes transportation in manufacturing.)
(For transportation in forest management, see IIIC; in harvesting see IVB4)


1756. 57  IA TOMBAUGH LARRY W., STONE ROBERT N.  "Renewable Resources: Will They Be Scarce in the Future?" In, Through the 80's, Thinking Globally, Acting Locally. Published by World Future Society, Washington, D.C. (1980), pages 118-121. Emphasis is on goods and services provided by forests. Widely divergent future views are troublesome to the forest manager. More communication between persons involved with natural resource management and policy and people from other disciplines who are grappling with better ways of structuring thinking about the future is recommended.


1762. 57  IB2 ADAMS D.M., HAYNES R.W.  The 1980 RFA Softwood Timber Assessment Market Model: Structure, Projections, and Policy Simulations. Forest Science Monograph 22 (1980). Details for the construction and estimation of a long-range model to project prices, production, and consumption of forest products in the U.S. to the year 2030. The baseline projection was used by the U.S. Forest Service in the 1980 Timber Assessment report. Several alternative policy measures, such as changes in log export restrictions and intensive management on private forest lands, are simulated.

1764. 57 IB2 BECATOR OLIVER W., SHEPPARD RAYMOND M. Forest Statistics for Florida, 1980. USDA Forest Service Resource Bulletin SE-58. (1981), 40 pages. Since the fourth inventory of Florida's forest resources in 1970, area of commercial forest has declined by 597,000 acres, or 4 percent. Commercial forest now occupies 15.7 million acres, or 42 percent of the total land area. The ratio of pine types to hardwood types has remained the same, because declines in the total commercial forest were proportionately distributed between these types. Average basal area of all live trees 5.0 inches and larger has increased from 43 to 53 square feet per acre. Volume of growing stock has increased 20 percent for softwoods and 15 percent for hardwoods. Slash pine volume has increased by 8 percent, while longleaf pine volume has decreased by 8 percent. Net annual growth of growing stock averaged 50 cubic feet per acre, up by 17 cubic feet per acre since 1969. Annual removals of growing stock averaged 69 percent of net annual growth.

1765. 57 IB2 FISHER RICHARD F. "Productivity in Florida's Third Forest." Journal of Forestry, Vol. 79, No. 9 (1981), pages 613-615. In the late 1960s foresters in the South set out to apply intensive practices and high technology to create and manage a very productive domesticated forest. This third forest was to succeed the second growth stands which became established on abandoned fields and cut over sites that had once supported slash pine. During more than a decade, management has intensified and many new technologies have been developed. The South is producing more wood than ever before, but if the future demands are to be met the technologies must be further refined and management must become even more intensive.


1767. 57 IB2 IRLAND LLOYD C. "Maine House Conference on Maine's Forest Outlook." Journal of Forestry, Vol. 79, No. 10 (1981), pages 689-690, 702. A conference in Augusta, Maine, during January 1981 considered the ability of the forests to sustain increased demands created by industrial expansion. Damage by the spruce budworm, together with decades of non-management and diameter-limit harvesting, has left both spruce-fir and northern hardwood stands yielding far below potential but still capable of responding to good forestry. Participants were concerned that government regulations had a dampening effect on investment in forestry, and they regretted cutbacks in the state's forestry program.


8. MCCLURE JOE P., SAUCIER JOSEPH R., BIESTERFELDT R.C. Biomass in Southeastern Forests. USDA Forest Service Research Paper SE-227 (1981), 38 pages. The 88.5 million acres of commercial forest land in the Southeast contain some 6.2 billion green tons of woody biomass. Distribution of this material is reported by state, tree size, and tree species. Relative amounts in various portions of typical trees are also reported for major species groups.


15. SHEFFIELD RAYMOND M., BECHTOLD WILLIAM A. Forest Statistics for South Florida, 1980. USDA Forest Service Resource Bulletin SE-59 (1981), 33 pages. Since the fourth inventory of the forest resources of South Florida in 1970, the area of commercial forest land has increased by 109,000 acres and now totals 834,000 acres. Nonindustrial private landowners control 99 percent of the commercial forest land. The volume of growing stock on these lands has increased by 10 percent. Cypress accounts for 93 percent of the total volume gain. Net annual growth of growing stock totals 21 million cubic feet compared to 16 million cubic feet for annual timber removals.
Volume of yellow pine timber in the coastal plain and southern piedmont of Virginia has increased by 4 percent since 1976. The increase occurred on all ownerships except on farmer-owned woodlands where it declined by 3 percent. Across all ownerships, net annual growth of yellow pine has increased by 2 percent since 1976.


Commercial timberland area in the United States increased from 1952 until the 1960's, then declined, and is projected to decline further by 2030. Details by section, region, state, and ownership are presented. Projections for USDA Forest Service Administrative Regions are detailed in tables.


Abstracts Vol. 42, No. 7. Detailed account of most aspects of forestry observed by the mission in 6 of the 12 major vegetation regions of China, describing urban forestry, silviculture in the South and Northeast, and research and education.


1802. 57 IB3 NEWTON JOHN F. "Wood Supply and Demand in the United Kingdom." Scottish Forestry, Vol. 35, No. 3 (1981), pages 167-172. The major international agencies forecast a developing world shortage of industrial wood after 2000 which will affect those developed nations which have built up advanced processing industries based on imported raw materials and have neglected their own opportunities for self-supply. Nations which have plentiful raw material supplies and can manufacture goods for home use and export will have commercial advantage.


1822. 57 CASEY JOHN "Fuel and Pole Supplies for Rural Populations." South African Forestry Journal, No. 117. (1981), pages 2-5. The Lesotho Woodlot Project, started April 1973, will have established 6,000 ha of woodlots by the mid 1980's, which will supply 10 percent of the minimum requirements for fuel and building poles.


Reforestation has become a primary concern of resource management and government in the Philippines. Efforts are hampered by technical and social problems. Environmental factors, lack of financing, and a shortage of trained manpower pose serious difficulties. An additional need is for methods that gain the interest and cooperation of local land users.

1832. 57 IB5 GALVÃO A. PAULO M. "Present Status of Forest Resources in the Tropics and Problems in Forestation and Afforestation: Present Situation in Central and South America." Proceedings, XVII IUFRO World Congress. Interdivisional. (1981), pages 73-78. Expansion of the agricultural front for the production of more food and increased use of wood for energy production are the main reasons for the significant decline in natural forest resources. It is important to have inventories available of the forest resources in Central and South America, presently incomplete and scarce, which will allow the planning of land use as the rational use of arboreal vegetation.


1839. 57 IB5 OLEMBO R.J., OGAMBO-ONGOMA A.H. "The Present Situation of Forest Resources in Tropical Africa and Problems of Reforestation and Afforestation in the Region." Proceedings, XVII IUFRO World Congress. Interdivisional. (1981), pages 63-71. In tropical Africa a sizeable proportion of the existing forest has been subjected to the influence of human activities resulting in deforestation. Some responses to the removal of the original forest include secondary forests resulting from regeneration following shifting cultivation and planted fast-growing softwood forest estates.

1841. 57 IB5 PANT M.M. "Economic and Social Costs and Benefits of Forestry in Tropical Regions." Printed at the Forest Research Institute and Colleges, Dehra Dun and 400 copies submitted to the XI Commonwealth Forestry Conference, Trinidad and Tobago (1980).


1845. 57 IB5 SALEM B. BEN "Arid-Zone Forestry - Where There Are No Forests and Everything Depends on Trees." Unasylva, Vol. 32, No. 128 (1980), Pages 16-18. Desert peoples, whom outsiders might consider "primitive," come to terms with their environments through cohesive social systems which enable them to create and organize farming appropriate to their land and climate.


1847. 57 IB5 TAYLOR GEORGE F. II. "The Forestry/Agriculture Interface: Some Lessons from Indian Forest Policy." Commonwealth Forestry Review, Vol. 60, No. 1 (1981). In English with English, French and Spanish summaries. Pages 45-52. The relationship between forestry and agriculture is an important facet of forestry development in many parts of the Third World. Using the development of forestry in India, this paper describes the multi-faceted contribution of forestry to agriculture and demonstrates the need for clearly defined policy direction with regard to the forestry/agriculture interface.


1849. 57 IB5 YINGVANSIRI THANIT "Present Situation of Monsoon Forest in Thailand and Its Reforestation Problem." Proceedings, XVII IUFRO World Congress. Interdivisional. (1981), Pages 50-55. Forest resources in Thailand are diminishing at a rate of 10 percent per annum. Reforestation activities are too small and too slow to cope with the existing circumstances. Revised and definite national...
Forest policy is needed to accelerate reforestation activities as well as to preserve the remaining natural forest. Concerted research effort is now being re-organized to solve the reforestation problems of the country.


1852. 57 IC CORTNER HANNA J., SCHWEITZER DENNIS L. "Political-Institutional Values in Quantitative Models for Regional Landscape Planning." In, Regional Landscape Planning, Proceedings of 1981 Annual Meeting of the American Society of Landscape Architects. (1981), pages 81-89. Focuses on the land planning process of the U.S. Forest Service and explores political-institutional influences affecting development and use of quantitative models in regional landscape planning, specifically: value judgements and political-institutional factors which influence the basic data used in analytical models; and, the manner in which political-institutional factors determine how analytical results are used to make planning and implementation decisions.

1853. 57 IC CULHANE PAUL J. Public Lands Politics, Interest Group Influence on the Forest Service and the Bureau of Land Management. Resources for the Future, Inc., Johns Hopkins Univ. Press (1980), 412 pages. The federal government holds one third of the nation's land area, with two agencies, the Bureau of Land Management (BLM) and the Forest Service, managing most of it. These agencies manage to reinforce their objectives by balancing the conflicting pressures exerted on them by such traditional users as stockmen and the forest products industry against that brought to bear by environmentalists and recreationists. Drawing upon interviews with local agency officials and key interest-group leaders in three regions of the western U.S., the author uses a formal model of interest-group influence to empirically measure the extent to which groups really affect key public lands policies, such as timber sales levels and wilderness recommendations.

1854. 57 IC DUNN B. ALLEN. Characteristics, Enactment, and Structural Effectiveness of South Carolina's Forest Policy. Dept. of Forestry, Technical Paper No. 12, Clemson Univ., Clemson, South Carolina (1980), 23 pages. The applicability of the state's policies vests formulated organizations with administrative authority. The General Assembly has structured a number of commissions, boards, and agencies and empowered each with management, development, preservation, and/or protection authority. The primary responsibility for the forest resources of the state has been delegated to a Commission of Forestry. The scope of South Carolina's policies related to forest management encompasses the primary resources of forests, wildlife, water, soil, and air; and for each of these, policy guidelines have been established.


1865. 57 IC MILLER ROBERT "State Forestry for the Axe." Hobart Paper 91. The Institute of Economic Affairs. 2 Lord North Street, Westminster, London SWIP 3LB (1981), 68 pages. Arguments are advanced that state forestry is unnecessary in Britain and does not
usefully contribute to balance of payments, rural employment and strategic stockpile needs while positively harming water resources and countryside amenities.


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<th>Year</th>
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<td>1886</td>
<td>57</td>
<td>&quot;Thirty-five Years of the Economic and Social Development of State Forests.&quot;</td>
<td>HAVELKA M.</td>
<td>Lesnictví, Vol. 27, No. 1 (1981) In Czech with Russian, English, German, and French abstracts. Pages 1-11. The living standard in Czechoslovakia will be influenced more and more by the condition of the forest resource and...</td>
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its societal functions. The advantages of socialism were proved by all the changes and development of forest management in the past 35 years. It is confirmed that all activities in the socialist society carried out for the whole society are beneficial for the workers themselves.


1889. 57 ID4 POLÁK O. "Economic Evaluation of the Societal Functions of the Forests." Lesnictví, Vol. 27, No. 1 (1981) In Czech with Russian, English, German, and French abstracts. Pages 29-45. Methods are given to appraise the societal functions of forests according to Marx's theory of the value of labor: natural function, function expressed as incomes, costs and substitution-income function. The results of such appraisal can serve to estimate the priorities in inter-branch relations or for the needs of regionalization; therefore the prices are not real prices, but utilitarian prices. The level of utilitarian prices is given by the qualities of separate functions, the applicability of the methods of appraisal is given in the same way.


1896. 57 IE DE STEIGUER J. EDWARD, MASSEY JOSEPH G. "Forestry Research Priorities of Various User Groups." Forest Products Journal, Vol. 31, No. 10 (1981), pages 86-88. Nonparametric statistical procedures were used to compare forestry research priorities of users from government, professional societies, industry, and environmental and consumer groups. Research priorities of industry were clearly at odds with those of the other groups. Special care must be taken to ensure that the views of industrial users are adequately represented in research planning. Results will be useful in obtaining representative public input for the planning of publicly administered forestry research.

1897. 57 IE EK ALAN R., ROSE DIETMAR W. "How the University of Minnesota, College of Forestry Uses Inventory Information." Proceedings of Minnesota Forest Resource Inventory Conferences. USDA Forest Service General Technical Report NC-64. (1981), pages 61-73. Use of inventory data for research and in meeting the objectives of projects sponsored by public and private groups. Emphasis for most projects is on economic analyses. Shortcomings and opportunities for the forest survey, its users, and the data base.


1901. 57 IF CASE PAMELA J., FERRELL WILLIAM K., HAGESTEDT RICHARD "Forestry Curriculum Change: What Do Professionals in the West Think?" Journal of Forestry, Vol. 79, No. 10 (1981), pages 667-670. Results of a questionnaire survey of experienced public and private foresters showed that, as foresters advanced, they spent increasingly more time dealing with people (administration, organization) and increasingly less time at conventional tasks (logging, inventory), and they enjoyed greater diversity in their jobs. Foresters expected these trends to accelerate in the future and, correspondingly, felt deficient in the disciplines that would support the increased activities they foresaw in their professional futures. Survey findings suggested the need for some changes to broaden traditional forestry curricula.


1906. 57 IF MCMAHON KAREN R., JONES J. GREG "Women in SAF - Survey Results and Analysis." Journal of Forestry, Vol. 79, No. 11 (1981), pages 740-742. A 1979 nationwide sample survey of members of the Society of American Foresters (SAF) found, few differences between male and female foresters with regard to education, salaries, career aspirations, geographic locations, employment sectors, or job satisfaction. A higher percentage of females were unemployed. Those who were employed supervised fewer employees and indicated more job discrimination than males. Female respondents were more likely to be single or married with no children.

1907. 57 IF PANT M.M. "Need for Inducting Fair Sex in Forest Service." Presented at the 2nd Forest Conference, Dehra Dun (1980).


1912. 57 IG ARNOLD J.E.M. "Forestry for Community Development, A Problem Statement." Proceedings, XVII IUFRO World Congress. División 4. (1981), pages 2-17. The broad types of community dependence on forestry are discussed. (1) Communities operating shifting agriculture systems within the forest. (2) Communities living outside the forest which still depend on forest products for essential needs. (3) Communities which depend on forestry as a source of employment and income.


professional and technical skills, and women have a realistic knowledge and experience of local community needs. If third world community projects are going to succeed, these two will have to recognize each other and work together.


1917. 57 IG LESLIE A.J. "Logging Concessions, How to Stop Losing Money." Unasylva, Vol. 32, No. 129 (1980), pages 2-7. In the bargaining for timber concessions between governments of developing countries and big companies, the companies usually come out ahead. Governments' unpreparedness and lack of basic technical skills can be corrected through training and practice.


1920. 57 IG RIIHINEN PÄIVIÖ "Forestry and the Timber Economy in Economic Development." Silva Fennica, Vol. 15, No. 2 (1981), pages 199-207. Roles of forestry and the forest industries in equating or differentiating economic growth in various countries and regions are considered. Production of raw material in one region tends to increase differences in economic development if that raw material is processed in another region - despite the fact that level of income rises in both regions. It is desirable that afforestation projects in developing countries be accompanied by the development of forest industries.


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<td>1952</td>
<td>57</td>
<td>MCGUIRE JOHN R.</td>
<td>The Outlook for the National Forests.</td>
<td>The Horace M. Albright Conservation Lectureship, No. 20 of Calif. College of Natural Resources Dept. of Forestry and Resource Mgt., Berkeley, Calif. (1981)</td>
<td>25</td>
<td>Should the United States have national forests and if so, how should they be managed?</td>
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<td>1955</td>
<td>57</td>
<td>LEYS H.</td>
<td>The Accessibility of the Private Forest. Point of View of Towns and Cities.</td>
<td>Vereniging voor openbaar groen. (1980)</td>
<td>not given</td>
<td>Urges towns and cities to make their forests accessible to the public. Sound management is necessary for this goal but is often too expensive.</td>
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<tr>
<td>1957</td>
<td>57</td>
<td>HIEGROET H.</td>
<td>A Forest for Your Town.</td>
<td>Stichting Leefmilieu, Documentatie No. 8 2ed. (1979)</td>
<td>139</td>
<td>100 concrete questions and answers concerning the acquisition, leasing, establishment, treatment and importance of the communal forest. Especially intended to give information to community authorities, also tries to reach a broader audience by giving ample information on the forest, its use and its social function.</td>
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1959. 57 IIB3 CHO EUNG HYOUN "Socio-Economic Variables and Attitudes of Forest Owners toward Cooperative Management." Journal of Korean Forestry Society, No. 51. (1981) In Korean with an English summary. Pages 56-61. Private landowners' attitudes toward cooperative forest management were analyzed in regard to their socio-economic status, age and educational level.


1972. 57 IIB3C GALLE M. "The Accessibility of the Forests in Flanders." Groene Band, No. 38 (1980). In Dutch. Pages 1-12. Not enough forest land is available for recreation. The only solution is the greater use of private forests with compensation to the owners for services.

1973. 57 IIB3C GALLE M. "The Accessibility of the Private Forests in Flanders." Groenkontakt, No. 6 (1979). In Dutch. Pages 28-30. The private forest in Flanders is in a difficult position due to low economic rentability, cutting up of large estates, insufficient technical management and the predominance of parks surrounding castles. Recreational use of these domains is a good solution for both the owners and the public. Adequate compensation must be granted by state and communal agencies.

1974. 57 IIB3C GELDHOF P. "Towards Subventions for Social Forest Use in Flanders." Groenkontakt, No. 1 (1980). In Dutch. Pages 23-26. It is impossible to meet the demands for forest recreation without the collaboration of private forest owners. An adequate compensation must be paid by state, provincial or communal administrations to private owners willing to accept the public in their forests. The system of subventions, in use in the Netherlands, is cited as a good example.


MULLANEY GARY E., ROBINSON VERNON C. Forest Investment by Non-Industrial, Private Landowners in Georgia. Research Division, Georgia Forestry Commission (1980), 5 pages. In Georgia, nonindustrial private forest (NIPF) owners who invest in their woodlands differ significantly from those who do not. NIPF investors tend to be better educated, are more likely to be business or professional people, and are more likely to have incomes greater than 25,000 dollars a year. Most of them own more than 100 acres of forest land, the sample average being 1030 acres; and most have an attitude of stewardship toward this land. The repetitive use of subsidies by a large portion of the investors suggests that these individuals are responding to whatever subsidy program is available. Their average subsidized rate of return was 13.7 percent with timber stand improvement being one of the best investments nonindustrial forest landowners can undertake.


CLAWSON MARION "An Economic Classification of U.S. 'Commercial' Forests." Journal of Forestry, Vol. 79, No. 11 (1981), pages 727-730. "Commercial forests" as customarily defined by the USDA Forest Service include large areas which cannot be managed for economic production of wood under present or foreseeable conditions. An economically and environmentally defensible classification of forests is proposed, and illustrated by data drawn from two published sources. Economic Class A forests include less than a third of the "commercial" forest area in the U.S. but have most of the economic production potential.

MANNING E.W. Issues in Canadian Land Use. Working Paper No. 9, Lands Directorate, Environment Canada. (1980) In English and French. 16 pages. Identifies principal land use issues and categorizes these issues according to their nature and the means which must be used to deal with them. Major land use management issues deal with these sectors: agricultural land, human settlement, forest land, transportation land, recreation land, wildlife land, energy and materials, and the land resource per se.

1986. 57  IIC3  DE STEIGUER J.E., GILES R.H. JR. "Introduction to Computerized Land-Information Systems." Journal of Forestry, Vol. 79, No. 11 (1981), pages 734-737. Computerized land information systems provide the manager with a means of rapid and comprehensive multi-resource evaluation. Spatial and descriptive data can be placed into the system and, after analysis, the results can be retrieved in map or tabular formats. Applications reach many areas of land resource management. Many types of systems software and services are available to the public through government agencies, universities, and data management corporations. There are some significant problems and the systems can be expensive.

1987. 57  IIC3  KLÆMPERER W. DAVID "Segregating Land Values from Sales of Forested Properties under Even-Aged Management." Forest Science, Vol. 27, No. 2 (1981), pages 305-315. Because forest land is seldom purchased without standing timber, taxing authorities often have difficulty determining market values of bare forest land for property tax purposes. This paper describes a computerized model which simulates future harvest income from a forest property and determines the capitalization rate which discounts this income to exactly equal the purchase price. With such capitalization rates, the model computes regional land values and timber age class values for selected site qualities, such that the sum of site-type values on each sale will always equal the sale price. An application and sensitivity analysis is presented.


1993. 57 IID1 KLEMPERER W. DAVID "Interpreting the Realizable Rate of Return." Journal of Forestry, Vol. 79, No. 9 (1981), pages 616-617. The "realizable rate of return" (RRR), which Schallau and Wirth suggested (Journal of Forestry, Dec. 1980, p. 740) as a possible measure for ranking investment alternatives, can be biased against long-lived investments unless an adjustment is made for different project durations. Also, for any given internal rate of return, RRR will asymptotically approach the alternative rate as investment life lengthens. Thus, extremely attractive long-term investments may appear mediocre when evaluated with the RRR, unless the analyst fully understands the relationships between RRR and investment life.


1996. 57 IID1 SCHALLAU C.H., WIRTH M.E. "Interpreting the Realizable Rate of Return: A Reply." Journal of Forestry, Vol. 79, No. 9 (1981), page 618. Klemperer states that the realizable-rate-of-return criterion is "unsuitable for comparing investments of different lives, unless investments are adjusted to a common time horizon." This response notes that such adjustments are necessary regardless of investment criterion. An example is provided to show the consistency of RRR and the net present value criteria when used to rank investment opportunities having unequal lives.


2002. 57 IIIA1 MAFDELL H.J. "Research Related to Joint Production of Wood and Food in Agroforestry Systems." Mitt-Bundesforshungsanst Forst


2004. 57 IIIA1 SPEARS JOHN S. "Can Farming and Forestry Coexist in the Tropics?" Unasylva, Vol. 32, No. 128 (1980), pages 2-12. Five World Bank projects (from Malaysia, Colombia, Kenya, Indonesia and the Philippines) are examined from the point of view of how they answer human needs for the kind of sustainable forestry and farming that are harmonious with tropical forest ecosystems.


2012. 57 IIIA5A BARTELHEIMER P. "Economics of Recreation Forestry and Human Environment." Proceedings, XVII IURO World Congress, Division 4 (1981), pages 51-56. Forests all over the world have to meet a growing demand for timber and for social outputs that are not subject to direct measurement in monetary terms. The environmental impacts of forestry are to be identified and evaluated to find the optimal multiple use management and the best allocation of land.


III A5A  LUST N. "Problems of Forest Recreation in Flanders." Bull. Soc. R. For. Belg. 86, No. 5 (1979) In Dutch. Pages 205-219. Analysis of forest recreation in Flanders, a densely populated and industrialized region with a forest index of less than 8.5 percent. The norm of one ha per 100 inhabitants is proposed. Infrastructure of the recreation forest should be as simple as possible. Material production and ecological functions of the forest must not be neglected.


III A5A  VYSKOT I. "Recreational Effect of Spruce Monoculture of Various Structures." Lesnictvi, Vol. 27, No. 5 (1981) In Czech with Russian, English, German, and French abstracts. Pages 439-460. The structure of commercial forest stands has been optimized with regard to production so that no optimum structure for recreation is offered. The society requires multipurpose forestry management to bring into harmony the productive and non-productive functions of the forest.

III A5B  DRIVER B.L., KNOPF RICHARD C. Some Thoughts on the Quality of Outdoor Recreation Research and Other Constraints on Its Application. Reprinted by K. Chilman (ed.), Social Research in National Parks and Wilderness Areas. USDI National Park Service, Southeast Regional Office, Atlanta, Ga. (1981), pages 85-99. Outdoor recreation research would be applied more if it were of higher quality. Evaluation of past outdoor recreation research, especially that having a social-behavioral orientation constitutes one of the two major sections of this paper. In the second section, two additional constraints on research application are considered, the professional recognition-reward systems within which managers and researchers work, and the basic personality differences between managers and researchers.

III A5B  HAAS G.E., DRIVER B.L., BROWN P.J. "Measuring Wilderness Recreation Experiences." In Proceedings, Wilderness Psychology Group Annual Conference. Univ. of New Hampshire, Durham. (1980), pages 20-40. Psychological outcomes of wilderness use and five groups of users associated with the outcomes are identified. Discriminant function analysis was used to show how closely the five groups are related and which outcomes contribute most to forming them. A methodology for identifying user groups for planning and management purposes is demonstrated.
III.5A  JUBENVILLE ALAN. "Research Recreationshed: an Experimental Program to Measure Changing Social Values." Proceedings, XVII IUFRO World Congress, Division 4. (1981), pages 519-524. Research recreationshed: social values are determined through monitoring, and specific, controlled experiments are done to test the effects of particular recreation management programs on these values.


III.5E  TRAKOLIS D., HARDING D.M. "Visitor Satisfaction and Attitudes to Management of Forest Recreation Areas in North Wales." Effects of recreational use on the resource, visitors' perceptions and attitudes, and the relationships between carrying capacity and management objectives were explored in four forest recreation areas in North Wales during the summer of 1977. Visitors derived a high level of satisfaction from their visit to the study areas and the majority of visitors did not consider the provision of additional facilities necessary as a means of increasing their enjoyment. Most visitors would accept some kind of control if use of the areas was heavy. Such findings are important to managing agencies when determining what facilities should be provided and what actions should be taken to adequately manage the resource and the visitors.

III.5F  VERTRIEST I. Forest and Living Space for the Child. Thesis. Research Center of Silviculture. State University Ghent. (1979) In Dutch. 151 pages. Pedagogical evaluation of forest recreation for children. The author studies by direct inquiry the degree of information on the forest that children between the ages of 6 and 15 possess, and evaluates their motivation for visits to the forest.

III.5G  WEST PATRICK C. On-Site Social Surveys and the Determination of Social Carrying Capacity in Wildland Recreation Management. USDA Forest Service Research Note NC-264 (1981), 4 pages. On-site surveys of users may fail to measure crowding accurately because long time users who knew the area before it became crowded leave and would not be included in current on-site survey samples. Results from a limited test at the Sylvaniana Recreation Area in Michigan do not support this displacement thesis. Further research is needed in other settings.

curves developed from linear programming models can depict relative wilderness costs among forests and thus assist society in comparing economic trade-offs, making wilderness selections cost-effective, and isolating those forests where wilderness decisions have greatest impact.


2030. 57 IIIA5E · FISH C. BEN, BURY RICHARD L. "Wilderness Visitor Management: Diversity and Agency Policies." Journal of Forestry, Vol. 79, No. 9 (1981), pages 608-612. Since its inception in 1964, the National Wilderness Preservation System has been managed without formal coordination among its three major agencies (the USDA Forest Service, the National Park Service, and Fish and Wildlife Service of the U.S. Dept. of the Interior). This diversity provides a desirable range of opportunities for activities appropriate to wilderness use, but coordination of agency efforts seems desirable and would enhance efforts for attainment of all wilderness system objectives.


2032. 57 IIIA5E · LUCAS ROBERT C. Redistributing Wilderness Use through Information Supplied to Visitors. USDA Forest Service Research Paper INT-277. (1981), 15 pages. Evaluation of an attempt to influence visitors to redistribute themselves to more lightly used trail heads through an informational brochure. Use patterns did not change in desired ways, although visitors who obtained the brochure before they arrived at the trailhead reported their choices of location were influenced.

2033. 57 IIIA5E · TEEGUARDEN DENNIS E. "A Method for Designing Cost-Effective Wilderness Allocation Alternatives." Forest Science, Vol. 27, No. 3 (1981), pages 551-566. Marginal cost of additional wilderness in dollars per acre and per visitor day is relatively negligible up to about 2 million acres. Opportunity cost then increases to a maximum of 74 dollars per potential visitor day if RARE II areas receive the same average level of use as existing wilderness areas. Ecosystem representation goals add to opportunity costs, but diminish to zero for a wilderness allocation goal exceeding three million acres. Results show that of the six RARE II wilderness allocation alternatives that could be evaluated, more are cost effective relative to the least-cost alternatives. The same wilderness area can be provided at substantially less cost; or alternatively, more roadless area could be allocated to wilderness at the same cost.

2034. 57 IIIA5E · ANDERSON LINDA M. "Land Use Designations Affect Perception of Scenic Beauty in Forest Landscapes." Forest Science, Vol. 27, No. 2 (1981), pages 392-400. Ninety color slides of
Northern Arizona ponderosa pine forests were rated for scenic quality in conjunction with six land use designations by 106 college students. The labels: commercial timber stand, leased grazing range, national forest, national park, recreation area, and wilderness area, significantly affected students of scenic quality, with wilderness area and national park consistently elevating perceived scenic quality and commercial timber stand and leased grazing range consistently reducing it.


2039. 57 IIIA5H SHECHTER MORDECHAI, LUCAS ROBERT C. A Simulation of Recreational Use for Park and Wilderness Management. Resources for the Future, Inc., Johns Hopkins Univ. Press (1978), 240 pages. If the unique recreational character of the wilderness experience is not to be lost, and if these areas are to compete with demands for other uses of the land, their optimal carrying capacity and yield must be determined. Shechter and Lucas detail the results of a large-scale testing of a model that simulates the travel behavior of wilderness users in one of the most densely used areas in the National Forest Wilderness System, the Desolation Wilderness of California.


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Sheffield, Raymond M. Multiresource Inventories: Techniques for Evaluating Nongame Bird Habitat. USDA Forest Service Research Paper SE-218. (1981), 28 pages. Procedures for evaluating the suitability of forest lands for breeding habitat of individual nongame bird species and entire avian communities. Habitat data are derived from the South Carolina multiresource inventory, and nine nongame bird species are evaluated as examples.


Wendling, Robert C., Gabriel, Samuel J., Dwyer, John F., Buck, Richard L. "Forest Preserve District of Cook County, Illinois." Journal of Forestry, Vol. 79, No. 9 (1981), pages 602-605. This district's growth and development reflect strong public support for urban forest preservation, environmental education, and outdoor recreation. Management is strongly influenced by heavy use, large
populations in nearby areas, and the high value that urbanites place on forest and related resources.


2055. 57 IIIB1 GESELL S.P. "Impacts of Modern Forestry on Continuing Forest Productivity." Proceedings, XVII IUFRO World Congress. Interdivisional. (1981), pages 2-20. Projected consumption of forest products throughout the world and a declining forest land base dictates greater production from each unit of forest land. Forest management practices are being directed toward this goal. Some practices designed to achieve greater immediate productivity are questioned because of possible impact on continuing productivity.

2056. 57 IIIB1 HYPPÖHEN M. "Profitability of Some Stand Growing Alternatives in the State Forests of Northern Finland." Folia Forestalia 463 (1981) In Finnish. Pages 1-34. Profitability of three programs of various intensity in different research areas and mineral site types in the state forests of Northern Finland. Present net value and internal rate of return are used as a profitability criteria.

2057. 57 IIIB1 PLOCHMANN RICHARD "Impact of Forestry on Forestry Itself from an Economic and Socio-Economic Point of View." Proceedings, XVII IUFRO World Congress. Interdivisional. (1981), pages 33-48. Determines and discusses the economic and socio-economic impacts and consequences of different sustained production forest management systems on forestry itself. Essential issues for sustained productivity are: (1) not to impair the circulation of nutrients and the nutriment chain; (2) to conserve and restore forests capable of resisting disturbances and of regenerating themselves after interference; (3) to open the opportunity of utilizing fully the production capacity; (4) to create a forest structure and composition which permits a flexible form of management capable of adjusting itself to changing demands of society; and to practice on-site treatments that do not have a detrimental effect on off-site values and adjacent ecosystems.


efficient. A benefit-cost analysis of about 3.5 is expected. Rural areas of eastern Virginia will benefit most. The sensitivity of the results to major assumptions is discussed. Landowners, forest industries, and rural laborers are major beneficiaries.

2061. 57 IIIB3 HALBERT R.D., MURRAY T.S. Recent Developments and Current Practices in Forestation in Canada. Canadian Forestry Service, Information Report M-X-116 (1980), 22 pages. In 1968 it was projected that 200,000 ha would be forested annually; it is now evident, with the expansion of forestation programs, that this will be surpassed. At the Canadian Forest Regeneration Conference (1977) it was recognized that forest renewal was inadequate and several needs and deficiencies of forestation were highlighted. New policies and programs are being implemented in most provinces to effectively deal with forest renewal problems. One potential problem relates to the use of herbicides for protection of these forests.


2070. 57 IIIB5 RANDALL ROBERT H., SASSMAN ROBERT W. Identifying and Evaluating Environmental Impacts Associated with Timber Harvest
Scheduling Policies. USDA Forest Service General Technical Report PNW-81. (1979), 20 pages. Expected impacts on the ecosystem and nontimber benefits (people's use of the resources: recreation, hunting, fishing, swimming, etc.) resulting from alternative timber harvest scheduling policies are identified and evaluated for the Mount Hood National Forest. Environmental criteria are established and used in evaluations of timber harvest and management data.

2071. 57 IIIID1 KULA E. "Forest Fires in the CSSR." Lesnictvi, Vol. 27, No. 6 (1981) In Czech with Russian, English, German, and French abstracts. Pages 545-566. Between 1974 and 1978 there were 1703 forest fires in the territory of the CSSR. Considering the trends of development in the society, recreational use of the forests will become more frequent, which will increase fire hazards. Complete exclusion of steam engines on the railroads in the CSSR has not removed the chances of forest fires along the railroads. Safety must be stressed.


2073. 57 IIIID4 JACOBI WILLIAM R., ANDERSON ROBERT L., COST NOEL D. Multiresource Inventories: Procedures for Assessing the Damage Caused by Insects and Diseases. USDA Forest Service Research Paper SE-221 (1981), 11 pages. Valuable data on damage to trees by insects and diseases are being gathered in the forest surveys of Southeastern states. The types of damage tallied in these inventories are described, along with examples of the ways in which the data can be tabulated and interpreted.


2082. 57  IIIE RICHARDSON MARY LOU, BETTERS DAVID R., SAMPSON GEORGE R. Productivity Equations for Forest Vegetation Treatment Projects in the Colorado Forest Range. USDA Forest Service Research Paper RM-230 (1981), 8 pages. Regression equations are presented for various forest vegetation treatment methods that relate labor and equipment time to terrain, area treated, and crew efficiency. Equations are applicable to most Front Range areas. Recommendations are made for improving productivity in vegetation management projects, particularly those required for insect control.


2085. 57  IIIE TISSEVERASINGHE A.E.K. "Timber Utilization in the Tropical Lowland Forests." The Commonwealth Forestry Review, Vol. 60, No. 3 (1981), pages 197-205. Fuller utilization of the species found in these forests will give more flexibility to silviculture and management which may lead to a management system that will ensure adequate natural regeneration and make other options more attractive.


logging and primary mill residues and the disposition of mill residue.


2093. 57 IVA1B RUDERMAN FLORENCE K. Production, Prices, Employment, and Trade in Northwest Forest Industries, First Quarter 1981. USDA Forest Service Pacific Northwest Forest and Range Experiment Station (1981), 47 pages. Current information on the timber situation in Alaska, Washington, Oregon, California, Montana, Idaho, and British Columbia, including data on lumber and plywood production and prices; timber harvest; employment in forest products industries; international trade in logs, pulpwood, chips, lumber, and plywood; log prices in the Pacific Northwest; volume and average prices of stumpage sold by public agencies; and other related items.

2094. 57 IVA1B RUDERMAN FLORENCE K. Production, Prices, Employment, and Trade in Northwest Forest Industries, Third Quarter 1980. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station. (1981), 47 pages. Current information on timber situation in Alaska, Washington, Oregon, California, Montana, Idaho, and British Columbia, including data on lumber and plywood production and prices; timber harvest; employment in forest products industries; international trade in logs, pulpwood, chips, lumber, and plywood; log prices in the Pacific Northwest; volume and average prices of stumpage sold by public agencies; and other related items.

2095. 57 IVA1C BARTUNEK J. "Development of Some Indicators of Forest Production in the CSSR as Forecast for the Period 1986-1990." Lesnictvi, Vol. 27, No. 1 (1981) In Czech with Russian, English, German, and French abstracts. Pages 13-26. Timber volume felled per annum will remain practically at the same level in the given years, in the CSSR it will amount to 17.2-17.5 million cubic meters; volume of silvicultural measures will increase, exploitation of the forest resource will become more intensive; volume of investments will grow, but the rate of growth will be lower than in the seventies; increase in the total volume of production will be moderate because the pattern of logging will remain constant (volume of production is influenced significantly by logging); number of workers will drop slightly; labor productivity will be increased moderately; assortment of commercial timber will be as follows: soft logs and poles 41 percent, soft pulpwood 25 percent, hard logs 12 percent, hard pulpwood and stacked wood 12 percent, other wood 10 percent, level of costs and profits will rise equitably.


2106. 57 IVA1E Improvement of the Forest Extraction and Transformation System, Peru. Seminar on Forest Extraction and Forest Products


2108. 57 IVA4 ANDRUS CHARLES W. A Reporting and Planning System for a World Products Operation. Oregon State University, School of Business. Studies in Management and Accounting for the Forest Products Industries - Monograph Series. (1981), 16 pages. The forest products industry, particularly lumber and plywood, is a mature one. Basic manufacturing processes have not changed radically in recent decades. Rather, there has been gradual growth in efficiency through equipment and process modification. Efficiency gains are evident in greater manpower productivity and more output per unit of raw material. The driving force for recovery improvement has been a steep escalation of log costs, especially over the last decade. In the same decade, labor costs in the industry rose by about 150 percent. The result: a significant change in the ratio of raw material to total cost. The trend has focused greater attention on collection and reporting of recovery information. With heavier investment required to keep up with gains in technology has come a greater stress on utilization of facilities and measurement of their use.


2112. 57 IVB2 STUART WILLIAM B., ODERWALD RICHARD G. "Present and Future Capital Investment in Timber Harvesting." Journal of Forestry, vol. 79, No. 11 (1981), pages 748-749. A questionnaire mailed to most U.S. dealers in logging equipment indicated that total sales of new and used harvesting machinery have been rising in recent years and now are well above $1 billion annually. Hauling equipment, which usually is not purchased from specialized dealers, adds considerably to the total. In 1979, the outlay for logging machinery and trucks combined was an estimated $1.5 billion.


IVB3B  TIMSON FLOYD G.  The Quality and Availability of Hardwood Logging Residue Based on Developed Quality Levels.  USDA Forest Service Research Paper NE-459 (1980), 10 pages.  Hardwood logging residue was examined for salvageable quality material.  Four quality levels (QL 1 to QL 4) based on four sets of specifications were developed.  Twenty-six percent of the total logging residue from saw log only harvesting operations met the lowest of the four quality levels (QL4).  QL4 could best be described as local use logs.  The acceptability of residue at QL4 increased to 36 percent if bolewood only was considered; only 9 percent of the residue would be salvageable at the QL1 level.


IVC1A  PORTERFIELD RICHARD L.  "Western and Southern Lumber and Plywood Capacity- Approaching Stability?"  Southern Journal of Applied Forestry, Vol. 5, No. 3 (1981), pages 98-104.  A lumber and plywood capacity simulation model is derived from U.S. Forest Service data.  Western and southern lumber and plywood capacity changes are responsive to gross profit margins specific to the individual product and region.  Southern lumber production is forecast to increase in both absolute and relative terms through the 1980s while western production falls to some 20 percent of total U.S. demand (from 23 percent in 1976).  Western plywood production capacity is forecast to continue to decline through the 1980s while Southern capacity increases.  Southern stumpage prices could double from 1978 levels in constant dollar terms, and the demand for saw-timber-sized stumpage in the South may be one-third to two-thirds higher by 1990.


2123. 57 IVC2C NEVEL ROBERT L. JR., BONES JAMES T. Northeastern Pulpwood, 1979: An Annual Assessment of Regional Timber Output. USDA Forest Service Resource Bulletin NE-67 (1981), 28 pages. Discussion and tabular data on roundwood and chips from plant residues produced and received in the 14 Northeastern states in 1979. From 1978 to 1979, pulpwood production increased by nearly 4 percent to a record high. Roundwood production remained about the same, while chipped residue production jumped by 14 percent.

2124. 57 IVC2C NEVEL ROBERT L. JR., DICKSON DAVID R. Northeastern Pulpwood, 1977 - An Annual Assessment of Regional Timber Output. USDA Forest Service Resource Bulletin NE-60 (1979), 27 pages. Annual assessment of regional timber output based on a canvass of the papermills in the Northeast. Report contains a discussion and tabular data on roundwood and chips from plant residues produced in and received by 14 northeastern states in 1977: pulpwood production by state, county, and species group; pulpwood receipts from roundwood by state and species group; pulpwood chip receipts by state and species group; and production of total-tree chips. From 1976 to 1977, pulpwood production increased by 10 percent; roundwood production rose by 4 percent; and chipped residue production jumped by 29 percent. Current record levels and trends in pulpwood production for the past 15 years are discussed. A list of pulpwood mills that received northeastern pulpwood during 1977 is included.


2129. 57 IVC8 CARPENTER EUGENE M. Wood Fuel Potential from Harvested Areas in the Eastern United States. USDA Forest Service Resource Bulletin NC-51 (1980), 14 pages. Estimates amount of wood fiber that could be available for fuel from forest residues on harvested areas in the eastern U.S. Includes a key to resource data published by the USDA Forest Service and factors for estimating amounts of cull, bark, tops, and limbs from inventory and product output tabulations.


2132. 57 IVC8 KIERULFF NIEL C., ADAMS THOMAS C. Feasibility of Generating Electric Power from Forest Residue. U.S. Dept. of Energy, Bonneville Power Administration and the USDA Forest Service - Pacific Northwest Forest & Range Exp. Station. (1980), 47 pages. Preliminary investigation using Mount Hood National Forest in western Oregon as an example. Raw material supply, restricting regulations, and the interface between forest industries and the power industry are explored. These industries operate in different time frames and different markets, and it is difficult for them to coordinate efforts in producing electricity from wood fuel.


2136. 57 IVC8 NORONHA RAYMOND "Why Is It So Difficult to Grow Fuelwood?" Unasylva, Vol. 33, No. 131. (1981), pages 4-12. "Foresters have to be willing to understand people and to put that understanding into the design and management of their projects. Whether woodlots are accepted or rejected by village's depends upon realities that are social, cultural, economic and locally political.


IVC8 STUART WILLIAM B., PORTER CARL D., WALBRIDGE THOMAS A., ODERWALD RICHARD G. "Economics of Modifying Harvesting Systems to Recover Energy Wood." Forest Products Journal, Vol. 31, No. 8 (1981), pages 37-42. Recent interest in the recovery of previously underutilized logging residues for energy has stimulated the development of a variety of technologies for bringing this resource to market. The most promising approach for the independent contractor working the southeastern United States is to incorporate residue recovery equipment into his existing harvesting system.


IVC8 ZERBE JOHN I. "Wood Residue Potential for Energy." In, Proceedings Bio-Energy '80 World Congress and Exposition. (1980), pages 51-52. About 500 million dry tons of wood are unused in the U.S. annually. If half this material were harvested and used for fuel, it would contribute up to 4.2 quads to our energy supply. New studies are aimed at a better assessment of the available material, improved harvesting systems, and development of more efficient conversion technologies for fuelwood and wood used for chemicals.

IVC9 PANT M.M., CHANDOLA L.P. "Demand and Supply of Railway Sleepers." Presented at the 2nd Forestry Conference, Dehra Dun (1980).


VA1 JOHANSSON PER-OLOV. "An Outline of a Cost-Benefit Analysis of Increased Felling in Sweden." Canadian Journal of Forest Research, Vol. 11, No. 3 (1981), pages 637-642. Examines the meaning of "shortage" of roundwood in Sweden and estimates social benefits and costs of an increased supply of roundwood. Estimates indicate that it is profitable for the society to eliminate the excess demand (shortage) through an increased supply.
2146. 57 VA1 KAO CHIANG "Demand Relationship for Timber Sold from a National Forest." Quarterly Journal of Chinese Forestry, Vol. 14, No. 3 (1981). In Chinese with an English summary. Pages 37-42. Variables explaining the fluctuation of bid prices are total quantity supplied, prices of secondary products, costs of non-stumpage inputs, and inventories of timber under contract. A log-linear regression model is fitted with the coefficient of determination (R) of 0.82.


2149. 57 VA2 KUMAR RAJ "Regional Forecasting of Demand for Malaysian Wood Products." The Malaysian Forester, Vol. 44, No. 1 (1981), pages 1-11. Forecasts the demand, both of export and home consumption, for sawlogs, sawnwood, and plywood till the year 1985 based on sample time series data of 1960-1976. Growth rates for exports are expected to be lower than the sample period, and those for home demand slightly higher. In all cases it may be necessary to increase imports of logs to meet desired levels.


2152. 57 VB1 FERGUSON I.S., LLOYD P.J. "Non-Tariff Distortion of International Trade in Forest Products." Unasylva, Vol. 32, No. 130 (1980), pages 2-10. This article aims at stimulating awareness and understanding of the economic effects of non-tariff distortion to trade in forest products.


2154. 57 VB1 SABADI RUDOLF "Development Optimization of Forestry and Forest Industries under Balance of Payment Difficulties Conditions." Proceedings, XVII IU FRO World Congress. Division 4. (1981), pages 185-195. Yugoslavia's forest resources are inadequate since
Forestry and forest industries are principal foreign exchange earners. Policy suggestions for development are presented.

2155. 57 VB1 SEDJO ROGER A. Issues in U.S. International Forest Products Trade. Resources for the Future, Inc., Johns Hopkins Univ. Press. (1980), 274 pages. Topics discussed are: the future role of the United States in world forest resource trade; general effects of international trade restrictions and recent multilateral trade negotiations upon U.S. forest products trade; and economic effects of a specific set of restrictions upon one important commodity - conifer sawlogs.


2157. 57 VB3 ALEY JACK. The Export of Maine Sawlogs to Quebec. Division of Planning and Development, Maine Forest Service, Dept. of Conservation, Augusta, Maine (1981), 53 pages. Interprets the strength of the Quebec milling industry in the context of the culture in which it operates, evaluates Bureau of Forestry data on exports, discusses the trend of diminishing exports to Quebec related to growing milling capacity in Maine and the spruce budworm infestation, surveys the attitude of the Maine woods industry toward Quebec mills that depend on Maine logs, details the comparative strengths of the Quebec milling industry and outlines why Quebec mills are a major force in the Maine sawlog market, and offers recommendations as to what the state can do to make its own milling industry more competitive.

2158. 57 VB3 GALLAGHER PAUL. An Analysis of the Softwood Log Trade between the United States and Japan. Technical Bulletin 330 Forestry Series No. 34. Agricultural Experiment Station, Univ. of Minnesota. (1980), 19 pages. Results indicate that Japan's excess demand and the United States' excess supply relations are price responsive in the log market. Estimates indicate that changes in housing starts and domestic log production in Japan are critical in explaining past and likely future levels of U.S. log trade. Japan could drastically reduce its dependence on U.S. log imports if stagnant income precludes strong demand for new housing and the output potential of Japan's softwood forest is realized.


This study utilizes the Capital Asset Pricing model to analyze risk, return, and competition in a major spot log market in Oregon for 1968-1978. Holding period returns on thirteen individual log species and grades were calculated using actual log sales prices and storage costs. Results suggest the market is competitive and that log investors earn a return which approximates the yield on U.S. Treasury bills and log returns do not appear to exhibit any significant amount of systematic or "market related" risk.


2162. 57 VB4 LINDSAY ROBERT C., COURTER RICHARD W. Selling Northwest Dimensional Lumber into Metric Markets. Robert C. Lindsay, 2910 S.W. Collins Ct., Portland, Oregon 97219. (1981), 68 pages + appendices. Softwood lumber export market as an alternative for production from Pacific Northwest sawmills. Five countries are used as examples of export markets (Japan, France, United Kingdom, West Germany, and Italy).


2165. 57 VB4 European Export Study Report on Southern Pine Lumber. Southern Forest Products Association. (1981), 21 pages. Long term prospects for the use of Southern Pine in structural applications is favorable. Recent strengthening of the U.S. dollar has weakened Southern Pine's competitive position, long term position of Southern Pine will be more favorable than those of competing species from other countries.


APPENDIX

THESES AND DISSERTATIONS IN PROGRESS IN THE UNITED STATES AND CANADA

The following citations include the student's name followed by the subject of the dissertation or thesis, the institution where the degree is being completed, the degree, and the anticipated date of completion.


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SIEGEL WILLIAM C.
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1764, 1777, 1778, 2049
SHIMADA K.
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SIEGELE WILLIAM C.
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SHIMADA K.
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SPENCER JOHN S.
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2160
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1922
TEWARI RAJENDRA N.
1872
THEGE P.A.
1932
THOMAS H.
1848
THOMASON J.
1911
THORNTON PHILIP L.
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TIMSON FLOYD G.
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TISSEVERASINGHE A.E.K.
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