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ABSTRACT

Compiled is a selected bibliography of social sciences in forestry, including economic, historic, sociological, and business aspects. Five major inclusive categories are the following: social science applied to forestry at large, applied to forestry's productive agents, applied to forest production, applied to manufacturing, and applied to marketing, trade, and demand for forest output. Arranged alphabetically by author, each entry contains the source of information, place and date of publication, volume number, and number of pages. A brief description of each resource is given. Compilation sources include many periodical professional journals, and publication lists from the United States Forest Service experiment stations. (BP)

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# SOCIAL SCIENCES in FORESTRY

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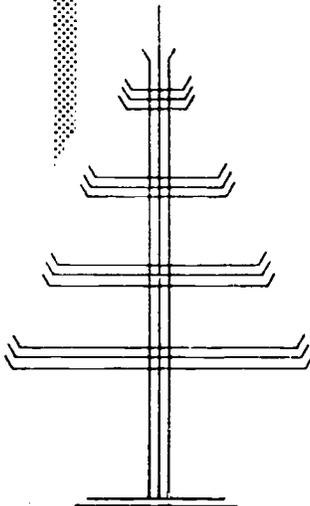
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No. 42 February 1977

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# I SOCIAL SCIENCE APPLIED TO FORESTRY AT LARGE

- B1 JOHNSTON, D. R.. Forestry in a changing world. The Journal of the Institute of Foresters of Great Britain 49(1): 29-44. 1976.
- Changing world affects forests and forestry. Factors that influence forest policy--in Britain in general and in south-east England in particular.
- B1 PROJECT DATA HANDBOOK. Section 7. Forestry and wood-using industries. Ministry of Overseas Development, London. ii + 105 pp. 1974.
- Interpretation of information on world forestry and wood-using industries: world supply and demand, trends in wood output and costs, contributions to economic development, evaluation of nonmarket benefits.
- B2 BAUMGARTNER, DAVID C., JERRY A. SESCO, and JERRY L. CLUTTS. Pine, a new resource in Illinois. The Northern Logger and Timber Processor 25(4): 16-17, 29. 1976.
- Substantial and under-utilized pine resource of Illinois; potential for increased marketing and use.
- B2 BOLSINGER, CHARLES L. Timber resources of northern interior California, 1970. USDA Forest Serv. Pacific Northwest Forest and Range Exp. Sta. Resource Bul. PNW-65, 75 pp. 1976.
- Forest area, timber volume, growth, mortality, removals: timber-resource and timber-industry situation.
- B2 CANADIAN FORESTRY SERVICE, Dept. of the Environment. Forest resources of the Mackenzie River Valley. Forest Management Institute, Dept. of the Environment, Canadian Forestry Serv. Information Rep. FMR-X-71, 42 pp. 1975.
- Survey of Mackenzie-Laird River basin, 36,000 square miles of both forested and nonforested land.
- B2 CANADIAN PULP AND PAPER ASSOCIATION. The needs and the opportunities for intensive forest management in Canada. Woodlands Section Index, Canadian Pulp and Paper Association No. 2685. ii + 39 pp. 1975.
- World wood fibre outlook; USA outlook for timber, and Canadian implications: forest management trends and options; theory and practice of intensive management.
- B2 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Forestry Department. Forestry development in Canada. In English and Spanish. North American Forestry Commission, Eighth Session, Ottawa, Feb 23, 1976. 21 pp. 1976.

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Review and evaluation of forestry institutes and their programs; national forest policy, economic issues, protection activities.

- B2 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Forestry Department. Status of forestry in the USA, 1974-1975. In English and Spanish. North American Forestry Commission, Eighth Session, Ottawa, Feb 23, 1976. 23 pp. 1976.

Resources, planning, management, protection of timber resources--problems and issues.

- B2 FORESTS AND PEOPLE. Reaping our forest bounty. Forests and People 25(4): 3-12. 1976.

Statewide expansion of forest industries in Louisiana and impact on the economy; Louisiana's forest resources; production management of resources in response to world markets; forest tax law, incentive programs, advice and assistance, profits and risks for forestry's productive agents.

- B2 MACLEAN, COLIN D. Timber resources of Douglas County, Oregon. USDA Forest Serv. Pacific Northwest Forest and Range Exp. Sta. Resource Bul. PNW-66, 42 pp. 1976.

Summary of a 1973 timber resource inventory. Forest area, timber volume, growth, mortality, and cut. Present resource situation, condition of cutover lands, and opportunities for silvicultural treatment.

- B2 RESOURCES BULLETIN DE LA DIRECTION GENERALE DES EAUX, QUEBEC. Forests, forestry and water resources in Quebec. In French. Resources Bulletin de la Direction Generale des Eaux, Quebec 6(6): 20 pp. 1975.

Editorial and 6 articles dealing with the interdependence of forests and water resources.

- B2 ZASADA, JOHN C. Alaska's interior forests, ecological and silvicultural considerations. Journal of Forestry 74(6): 334-337. 1976.

Productivity is adequate for forestry to be considered an appropriate land use. Research indicates that the stands can be regenerated. Silvicultural practices developed in other northern forests should be evaluated to determine their applicability in the taiga.

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- B3 ANTANAITIS, V., I. LUKOSHYUS, and S. MIZARAS. Attempt at an economic evaluation of forest lands in Lithuania. In Russian. Lesnye Khozyaistvo No. 10, pp. 29-34. 1975.

- B3 BARTELHEIMER, P. The timber market in an input-output model for the German economy. In German; Eng. sum. Forstwissenschaftliches Centralblatt 95(1): 79-88. Feb 1976.

Input-output tables that show forestry as a separate sector of W. German economy. Interactions of wood industry and pulp-paper industries, including effects of timber-price changes on wood and pulp-paper industries.

- B3 BROGGI, M. F. Landscape management in the Principality of Liechtenstein. In German; Fre. sum. Schweizerische Zeitschrift für Forstwesen 126(11): 840-851. 1975.

National plans for integrated land use; historical reasons for abandoning farmlands to forestry; afforestation policy.

- B3 CHYBOVA, J. (ED.). Forestry in Bohemia-Moravia 30 years after the liberation. In Czech; Rus., Eng. sum. Ministerstvo Lesniho a Vodniho Hospodarstvi CSR. 87 pp. 1975.

Reorganization and development of forestry as part of a socialist economy.

- B3 CLAUSER, F. The coppice woodlands 22 years later. In Italian; Fre. sum. Italia Forestale e Montana 30(5): 210-214. 1975.

Measures to ensure effective management and prevent unwise exploitation of this forest, which has economic possibilities for Italy.

- B3 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Economic Commission for Europe. Study of timber trends and prospects in the ECE region 1950-2000, international trade. In English and French. European Forestry Commission, Seventeenth Session, Geneva, Oct 20, 1975.

Major trading partners include USSR, North America, Tropical Nations, Europe.

I SOCIAL SCIENCE APPLIED TO FORESTRY AT LARGE

- B3 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Economic Commission for Europe. Study of timber trends and prospects in the ECE region 1950-2000, recycling of waste paper. In English and French. European Forestry Commission, Seventeenth Session, Geneva, Oct 20, 1975. 16 pp. 1975.
- Trends in collection, consumption; future demands.
- B3 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Economic Commission for Europe. Study of timber trends and prospects in the ECE region 1950-2000, roundwood supply prospects in Europe. In English and French. European Forestry Commission, Seventeenth Session, Geneva, Oct 20, 1975. 43 pp. 1975.
- B3 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Economic Commission for Europe. Study of timber trends and prospects in the ECE region 1950-2000, the special role of tropical hardwoods in the region's trade and consumption of forest products. In English and French. European Forestry Commission, Seventeenth Session, Geneva, Oct 20, 1975. 53 pp. 1975.
- Timber resources, future supply and demand, by country.
- B3 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Economic Commission for Europe. Study of timber trends and prospects in the ECE region 1950-2000, trends and prospects in the consumption of forest products. In English and French. European Forestry Commission, Seventeenth Session, Geneva, Oct 20, 1975.
- B3 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Economic Commission for Europe. Study of timber trends and prospects in the ECE regions 1950-2000, the use of residues and recyclable raw material. In English and French. European Forestry Commission, Seventeenth Session, Geneva, Oct 20, 1975. 17 pp. 1975.
- B3 GACHON, L. Forestry in the Auvergne region, its development since 1914 and prospects for the future. In French. Foret Privee Francaise No. 106, pp. 37-44. 1975.
- Forestry in relation to land-management problems, afforestation programs, population changes.

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B3 HOLOWACZ, J. Forests of Ukraine, their history and present status. In Ukraine in the Seventies, Mosaic Press, Oakville, Ontario. Pp. 33-70. 1974.

B3 INSPECTION FEDERALE DES FORETS. 100 years of conservation. In French. Inspection Federale des Forets, Berne. 47 pp. 1975.

Development of forest legislation, outline of forest policy. Forestry and its importance now and in the future.

B3 INVENTARIO FORESTAL NACIONAL, Region Levante. National Forest Inventory (of Spain), Levante Region. In Spanish. Inventario Forestal Nacional, Region Levante. 132 pp. 1975.

B3 MARKIN, Y. V. Some questions about further improvement of management in the forest and in woodworking and pulp-paper industries, as exemplified in the Komi USSR. In Russian. Lesnoi Zhurnal 18(3): 144-149. 1975.

Status of management in the forest and in forest-based industries. Proposal for altering the organizational structure of management so as to increase output and efficiency.

B3 NIKOLAYUK, V. A. Changes in the (Soviet) forest resource as a result of forestry activity. In Rumanian. Lesnoe Khozyaistvo No. 7, pp. 2-6. 1975.

B3 PLAISANCE, G. The Mediterranean forests (of France) in 1975. In French. Foret Privee Francaise No. 105, pp. 37-40. 1975.

Fire, overgrazing, and lack of pest control have contributed to forest deterioration in many areas. Remedies suggested.

B3 SCHWAIGER, H. Results of the Bavarian forest inventory and timber-availability forecast for Bavaria. In German. Allgemeine Forstzeitschrift 31(6): 79-82. 1976.

Timber volume and increment by species and age; present and potential cut in state and private forests: estimates for decades up to 2020.

B3 SOZIALISTISCHE FORSTWIRTSCHAFT. Special number on forestry in Czechoslovakia. In German. Sozialistische Forstwirtschaft 25(10): 289-320. 1975.

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Recent history, forest resources, management, silviculture, water management, technical education, research, pollution effects.

- B3 VILLINGER, B. Forestry organization in Baden-Wurttemberg, past and future, with special reference to the organization of forest districts. In German. Allgemeine Forstzeitschrift 30(46): 1003-1008. 1975.

- B3 WERGENS, B. Forestry in China today. In English, French, German, and Spanish. Pulp and Paper International 18(3): 67-69. 1976.

Report on a tour of forest management and industry.

- B4 EISENHAUER, G. (ED.). The Valdivia forestry faculty, Chile. In German, Spanish. Deutsche Gesellschaft fur Technische Zusammenarbeit, German Federal Republic. 247 pp. 1975.

Articles concerning the faculty and program at the Universidad Austral de Chile. Problems of forestry and wood industry; research: forest policy.

- B4 RAGONESE, A. E., and F. RIAL ALBERTI. Natural and planted forests in the Argentine Republic. In Spanish. Idia, Suplemento Forestal No. 8, pp. 105-110. 1973/1974.

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- B4 STRATTEN, P. M. Short rotation forest products in southern Africa. South African Forestry Journal No. 95, pp. 1-10. 1975.

Capital requirements, manpower, transport, and other resources of smallwood forestry, with special reference to the pulp and paper industry.

- B5 BOMBIN, L. M. Forestry economic incentives in Latin America. In Spanish. Workshop on Modernization of Public Administration in the Forestry Sector in Latin America, Lima, Peru, Nov 10, 1975. Food and Agriculture Organization of the United Nations, Forestry Department. 30 pp. 1975.

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- B5 CHANDRASEKHARAN, C. Wood use in Kerala and its implications for forest land use and development. KFRI Publication, Kerala Forest Research Institute No. 1, 30 pp. 1975.
- B5 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Forestry Department. Trends and perspectives in forestry in Latin America, interim report. In English, Spanish. Latin American Forestry Commission, Twelfth Session, Havana, Feb 2, 1976. 27 pp. 1976.
- Status and trend of resources, production, trade, employment, and institutional development, 1965-1975, by country.
- B5 FOREST DEPARTMENT. Forestry in Zambia since independence. Forest Department, Ndola, Zambia. 17 pp. 1975.
- B5 GIFFARD, P. L. Trees in Senegal. In French. Centre Technique Forestier Tropical, Dakar, Senegal. 431 pp. 1974.
- Role of trees in the national economy; possibilities for afforestation.
- B5 KING, K. F. S. Putting the emphasis on tropical forestry. Analysis and position of forestry development. Presented to Member Governments at the 18th FAO Conference. Unasylva 27(110): 30-35. 1975.
- Including pulp and paper industry and agrisilviculture.
- B5 MALAYSIAN FORESTER. Fifth Malaysian Forestry Conference, Sabah, Oct 21-28, 1974. Malaysian Forester 37(4): 215-288. 1975.
- Eight papers dealing with forest resources and their development in Malaysia.
- B5 MINISTRY OF AGRICULTURE, LANDS AND FISHERIES, Forestry Division. Country report of Trinidad and Tobago prepared by the Forestry Division, Ministry of Agriculture, Lands and Fisheries for FAO Technical Conference on Tropical Moist Forests 1975. 15 pp. 1975.
- B5 TOSI, J. A., and R. F. VOERTMAN. Making the best use of the tropics. Unasylva 27(110): 2-10. 1975.
- Forest utilization, land use, ecology, natural resources, world-wide life-zone system, development potential of the tropical humid zone for agriculture and forestry.

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- B5 VELEN, T. T. The ecological, cultural and historical bases of forest preservation in Totonicapan, Guatemala. Dissertation, Ph.D. University of California, Berkeley. xvi + 555 pp. 1975.
- Part 1: Vegetation and its development. Part 2: Evolution of the present pattern of human activities. Even though population has increased, the proportion of forested land to grassland and cultivated land has remained almost constant.
- C1 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Forestry Department. The regional framework for the formulation of forest policies. In English, French. African Forestry Commission, Fourth Session, Banqui, Mar 22, 1976. 3 pp. 1976.
- C1 VOROB'EV, G. I. Scientific and technical cooperation between the USSR and the USA. In Russian. Lesnoe Khozyaistvo No. 4, pp. 33-36. 1975.
- Activity in the field of forestry since 1972 agreement.
- C2 CORPORACION NACIONAL FORESTAL. Revised version of the Law Decree No. 701 on afforestation of privately owned land in Chile. Corporacion Nacional Forestal. 13 pp. 1974.
- Obligations and powers of the Corporacion Nacional Forestal. Financial aid is available, and there are penalties for failure to plant.
- C2 DE SAINT-AUBIN, M. Toward intervention of the European Economic Community in forestry matters. In French. Revue Forestiere Francaise 27(2): 141-144. 1975.
- C2 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Forestry Department. An approach to natural resources planning. In English, Spanish. North American Forestry Commission, Eighth Session, Ottawa, Feb 23, 1976. 15 pp. 1976.
- The USA Resources Planning Act of August 1974; responsibilities of the Forest Service.
- C2 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Forestry Department. Recent developments in forest utilization contracts. In English, French. African Forestry Commission, Fourth Session, Banqui, Mar 22, 1976. 5 pp. 1976.

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Usage right, forestry legislation, forest concession policies, utilization contracts.

- C2 GOGOS, A. Forest propaganda and the forest slogan. In Greek. *Dasika Hronika* 17(6): 153-158. 1975.

Psychological and aesthetic appeal in slogans for leaflets and stamps to encourage tree planting and game protection.

- C2 GROBEY, J. H. An alternative public policy for regulating the impact of forest practices on the northern California salmonid fishery. Dissertation, Ph.D. University of Washington. 145 pp. 1975.

Model of the interdependence of forest practices and fishery resources.

- C2 MALANDRINO, N. Developments in national policy and legislation on poplar (planting) in Italy during 1975. In Italian. *Cellulosa e Carta* 26(12): 34. 1975.

Financial assistance.

- C2 MCELMEE, R. L., and N. H. BELL, (EDS.). Who will control forestry practices? In *Proceedings, Seventh Annual Forestry and Wildlife Forum*, April 22-23, 1976. Virginia Cooperative Extension Service and Virginia Polytechnic Institute and State Univ., School of Forestry and Wildlife Resources MT-100. 96 pp. 1976.

Twelve papers that include (1) state forest practices-- what they are, what they require, experience with forest practices acts, what they mean to the state forester, what they mean to the landowner; (2) how much attention to the environment can we afford; (3) some economics of forestry practice controls.

- C2 PARDO, RICHARD. Forestry and pollution, an interview with Russell Train. *American Forests* 82(10): 20-22, 57. 1976.

Questions posed to the EPA Administrator about forestry concerns (1) in the Model State Practice Act proposed by EPA in fall '74 and (2) in Public Law 92-500.

- C2 WIEBECKE, C. The influence of public opinion on forest policy. In German; Eng. sum. *Forstwissenschaftliches Centralblatt* 95(1): 89-95. 1976.

Need for more public relations work to present an honest picture of forestry.

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- D1a           EVERSBERG, H. Recent changes in business taxation law. Exempting agricultural and forestry associations. In German. *Information über Steuer und Wirtschaft* 29(8): 177-183. 1975.
- D1c           LYNCH, THOMAS D. Forestry management and taxation. *Quarterly Journal of Forestry* 70(2): 69-78. 1976.
- Principles of the tax system as it is, and should be, applied to forest industry. Impact of the tax system on resource availability.
- D2           ARRAGO, R., and P. ROUVEROUX. The valuation of rural, peri-urban, agricultural and forest assets: expropriation in rural areas. In French. *Librairies Techniques*. 305 pp. 1973.
- D2           EID, J. Forest valuation on the basis of discounted yield in times of inflation. In Norwegian. *Tidsskrift for Skogbruk* 83(4): 381-394. 1975.
- D6           BRACE, L. G. The public awareness program at the Kananaskis Forest Experiment Station, Seebe, Alberta. Northern Forest Research Centre, Canadian Forestry Service Information Report NOR-X-158. June 1976.
- Objectives, public reaction, cost, and recommendations for future operation.
- D6           CLARK, ROGER N., and GEORGE H. STANKEY. Analyzing public input to resources decisions: criteria, principles, and case examples of the codinvolve system. *USDA Forest Service* 16(1): 23 pp. 1976.
- Study of issue definition; public input collection, analysis, and evaluation; and decision implementation. Objectives were (1) review public involvement procedures to determine which work best under what conditions, and (2) develop new techniques for analyzing public input.
- D6           OBERHOLZER, E., M. KLAY, and P. HOFER. The planning of public relations campaigns in forestry. In German; Fre. sum. *Schweizerische Zeitschrift für Forstwesen* 126(11): 852-856. 1975.
- Aims, concepts, and methods of a working group of the Swiss forest administration.

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- D6 SVERIGES SKOGSVARDSFORBUNDS TIDSKRIFT. Forestry and society. Balancing different interests in the management of forests as a natural resource. In Swedish. Sveriges Skogsvardsforbunds Tidskrift 73(6): 503-622. 1975.
- 9 papers from a Swedish seminar emphasizing necessary compromises.
- E RAPPORT, CONSEIL DE LA RECHERCHE ET DU DEVELOPPEMENT FORESTIERS DU QUEBEC. A research policy for Quebec. In French. Rapport, Conseil de la Recherche et du Developpement Forestiers du Quebec No. 4, 126 pp. 1975.
- Forest problems in Quebec finance; recommendations for formulation and execution of a research policy.
- F ADDO-ASHONG, F. W. Development of manpower at the managerial level. Food and Agriculture Organization of the United Nations, Forestry Department. African Forestry Commission, Fourth Session, Banqui, Mar 22, 1976. 2 pp. 1976.
- Education, training, and facilities for development of staff at managerial level.
- F HENDEE, JOHN C., and J. LYDEN FREMONT. The public interest and professional advocacy. In America's Renewable Resource Potential--1975: The Turning Point. Proc., 1975 National Conv., Society of American Foresters, pp. 247-253.
- Can professional resource societies be responsive to broad public values and still advocate views on public policy? Guidelines are proposed on recent political concepts.
- G LEIBUNDGUT, H. The role of forestry in the solution of the problems of mountain areas (in the context of land use, economics and general welfare in Switzerland). In German; Eng. sum. Forstwissenschaftliches Centralblatt 94(4/5): 194-201. 1975.
- Through the construction of forest roads and other improvements, the forestry sector could contribute substantially to economic development.
- H DINU, V. Forest, water and the environment. In Rumanian. Editura Ceres, Bucharest. 357 pp. 1974.
- A synthesis of research from around the world with particular reference to Rumania. Economics of all relevant practices are examined: interrelation of water, soil, vegetation; management of forests; impact of man on biosphere; social function and anti-pollution roles of forests.

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- H GATHY, P. Effects of the construction of a motorway on the forest environment. In French. Bulletin de la Societe Royale Forestiere de Belgique 82(5): 274-280. 1975.

Damage and economic losses: loss of wood production, reduction of oxygen output, introduction of noxious gases, adverse effects on stream flow and water quality, interruption of travel lines for people and animals. Possible compensations.

## II . APPLIED TO FORESTRY'S PRODUCTIVE AGENTS

- A1 GRANT, K. R. Local employment multipliers for the pulp and paper industry in New Zealand. *New Zealand Journal of Forestry Science* 6(1): 122-130. 1976.
- Pulp and paper mills built near the forest not only minimize costs, but also encourage regional development by generating employment. Employment multipliers should be considered in regional forest planning.
- A1 MEDDELANDE FRAN JORDBRUKETS UTREDNING SINSTITUT. Felling, silviculture, and employment on private forest farms in southern Sweden. In Swedish; Eng. sum. *Meddelande fran Jordbrukets Utredningsinstitut* No. 6, 39 pp. 1974.
- Farm labor and contract labor employed in felling and silvicultural operations.
- A3 LEIS, H. Remuneration for machine operators in forestry. In German. *Forsttechnische Informationen* 28(1): 1-5. 1976.
- Job evaluation based on knowledge and skill, responsibility, effort involved, and environmental stresses.
- A3 SCHOLZ, H., and H. WILHELMI. Ergonomic problems in the use of combined harvesters in forestry. In German. *Wissenschaftliche Zeitschrift der Technischen Universitat Dresden* 24(3/4): 831-833. 1975.
- Changed demand on forest workers using combined harvesters; problems of work measurement and performance standards.
- A4 FLEISCHER, M. Evaluation of ergonomic factors in comparing different technological systems for wood harvesting. In German. *Wissenschaftliche Zeitschrift der Technischen Universitat Dresden* 24(3/4): 817-820. 1975.
- Assessment of working conditions as an important criterion in systems evaluation; method for estimating stress on a worker, energy expenditure, health hazards.
- A4 HARSTELA, P. Factors affecting working time and strain on the worker in some forestry operations. In Finnish; Eng. sum. *Metsantutkimuslaitoksen Julkaisuja* 87(2): 130 pp. 1975.
- A theoretical and empirical systems analysis.

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- A4 KROHN, B. Noise exposure of forest workers during felling operations. In German. Forsttechnische Informationen 27(12): 89-92. 1975.

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- A4 PETTERSSON, B., and O. OSTBERG. Assessments by various personnel categories of the dangers in felling. In Swedish; Eng. sum. Redogorelse, Forskningsstiftelsen Skogsarbeten No. 8, 19 pp. 1975.

Attitudes of Swedish forest workers.

- A5 WOLF, CHARLES H., and JEAN W. NOLLEY. Mechanization bringing broad changes in makeup of labor force in logging. Forest Industries 103(10): 44-46. 1976.

Characteristics of the logger in the 1970s.

- B1 DUERR, WILLIAM A. Land ownership changes likely to affect timber production. In Proceedings, 55th Annual Meeting of the Society of American Foresters, Appalachian Section, Feb 5-6, 1976. 4 pp. 1976.

Nonindustrial private forest owners, with 75 percent of the forest acreage in the Carolinas and Virginia, are producing their share of the region's timber output. The tendency of these owners to withhold timber temporarily from the market lengthens their rotations, increases their per-acre cut, and enhances their role as timber suppliers--forestry programs or no forestry programs.

- B2b FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Forestry Department. Public forestry administration and the need to develop its managerial capabilities. In English, French. African Forestry Commission, Fourth Session, Bangui, Mar 22, 1976. 5 pp. 1976.

Staffing problems; the need to improve institutional structure and managerial capabilities in public forestry administration.

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- B2c ALLGEMEINE FORSTZEITUNG. State forests: their functions and structures, condition and development. In German. Allgemeine Forstzeitung 86(12): 351-382. 1975.
- Papers read at Austrian Forestry Society meeting; German, Austrian, and Hungarian state forests.
- B3a BALMAN, F. E., and A. G. DOLAN. Economic survey of private forestry income and expenditure, England and Wales. Eighth report for forest year 1974. Commonwealth Forestry Institute, Oxford. 48 pp. 1974.
- B3a LEONARD, J. Structural change of private forest ownership in Finland. In French. Revue Forestiere Francaise 27(6): 462-466. 1975.
- B3a VELDHUYZEN, C. J. Financial results of private forestry in the Netherlands. In Dutch. Nederlands Bosbouw Tijdschrift 48(1): 15-22. 1976.
- Study of 51 enterprises 1967-68 revealed annual expenditure greatly exceeded income. Increased losses calculated for 1972.
- B3c FORST UND HOLZWIRT. Small private forests in Hesse. In German. Forst- und Holzwirt 31(4): 61-84. 1976.
- Problems, policy, supporting and advisory services, projects.
- B3c HOLLEY, LESTER D. Adjustments needed to improve the economic climate for increased timber production. In Proceedings, 55th Annual Meeting of the Society of American Foresters, Appalachian Section, Feb 5-6, 1976. 4 pp. 1976.
- The predominant private nonindustrial forest owners in southeastern USA vary greatly in their motives for ownership. Many are financially motivated and have bright prospects for intensive timber management. However, most of these owners are unaware of their prospects. A program for providing them with planning information would help to increase regional timber output.
- B3c MILLS, THOMAS J., and DARIA CAIN. 1974 forestry incentives program, indicators of cost effectiveness. Journal of Forestry 74(10): 678-683. 1976.
- This program differs from its predecessors: Its primary goal is timber production rather than soil and water conservation. 1974 performance was favorable. Four recommendations are proposed for overcoming some apparent problems.

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- B3c PLOCHMANN, R. Small woodlands owned by nonfarmers. In German; Eng. sum. Forstwissenschaftliches Centralblatt 95(1): 60-71. 1976.
- A survey in S. Bavaria dealing with size of holdings, social and age structure of owners, owners' attitudes and practices.
- B3c RUSSO, C., and G. FARINA. The special aid project for production forests in southern Italy. In Italian; Fre. sum. Italia Forestale e Montana 30(6): 243-256. 1975.
- Objects and scope of aid to private forestry.
- C2 DE VOS, A. Africa, the devastated continent?; Man's impact on the ecology of Africa. Monographiae Biologicae No. 26, 236 pp. 1975.
- Land-use problems in relation to ecological factors and the history of human intervention; proposals for improved land use.
- C3 JEFFERS, J. N. R. Forestry and terrestrial ecology. Commonwealth Forestry Review 55(2): 109-122. 1976.
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- C3 PETRINI, F., and L. JAKOBSSON. Idle land in Sweden, problems and solutions. Swedish Journal of Agricultural Research 5(2): 91-99. 1975.
- Abandoned agricultural land could be used for recreation, pasture, and forestry.
- D1 MAYDELL, H. J. Effective policies for stimulating investment in forestry and forest industries in countries with tropical forests. Mitteilungen der Bundesforschungsanstalt für Forst- und Holzwirtschaft No. 109, pp. 129-141. 1975.
- D2 CARUSO, C. The (Italian) National Forest Fund. In Italian; Fre. sum. Italia Forestale e Montana 30(5): 197-202. 1975.
- One objective is to provide loans to public and private companies or individuals to restore woodlands, establish plantations, and aid manufacture and marketing of forest products.

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A1 EMEIS, K. The influence on British forestry of landscape conservation, recreation and hunting and shooting (with special reference to the policies of the Forestry Commission: report of a study tour). In German. Allgemeine Forstzeitschrift 31(1/2): 16-18. 1976.

A1 FORST UND HOLZWIRT. The significance of forests for the conservation of the countryside. In German. Forst- und Holzwirt 31(1): 1-20. 1976.

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A1 JOURNAL OF THE ROYAL SOCIETY OF THE ARTS. Forestry management for wood production, nature conservation, recreation, and amenity. Summary of a conference held at the Society's House on November 25, 1975. Journal of the Royal Society of the Arts 124(5236): 193-202. 1976.

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A1 MAYER, G. Costs (additional costs and reduced yields) of the measures taken toward fulfillment of the recreation and protection function of the forests in Baden-Wurttemberg. In German. Mitteilungen der Forstlichen Versuchs- und Forschungsanstalt Baden-Wurttemberg No. 71. 151 pp. 1975.

Methods and results of a study covering the forestry year 1971.

A1 NIESSLEIN, E. A model of a multiple-use forestry enterprise. In German. Forstwissenschaftliches Centralblatt 95(1): 45-51. 1976.

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A1 SABOL, L., (ED.). Adjusting consumptive demands to resource capabilities. Transactions of the North American Wildlife and Natural Resources Conference No. 40, 448 pp. 1975.

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- A5a SIMMONS, I. G. Rural recreation in the industrial world. Edward Arnold (Publishers) Ltd., London. viii + 310 pp. 1975.

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- A5a SNYDER, G. W. Forests and recreation, comparisons between the USA and the German Federal Republic. In German. Mitteilungen der Forstlichen Versuchsanstalt und Forschungsanstalt Baden-Württemberg No. 69. vi + 311 pp. 1975.

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- A5b DECOURT, N., and C. SOUCHON. An objective view of the annual and seasonal pattern of visits to forests by the public, in relation to the type of forest vegetation. In French. Revue Forestiere Francaise 27(4): 315-329. 1975.

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- A5b GRUT, M. Cost-benefit analysis in the forestry sector. Mededeling, Fakulteit van Bosbou, Universiteit Stellenbosch No. 63, 18 pp. 1975.

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- A5b MASHINSKII, L. O. Problems of increasing the resistance of forests and parks to recreational loads. In Russian. Byulleten' Glavnogo Botanicheskogo Sada No. 95, pp. 103-106. 1975.

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- A5d SINDEN, J. A., and R. K. SMITH. The analysis and management of forest landscapes: exotics, eucalypts for solitude? Australian Forestry 38(3): 183-200. 1975.

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- A5d YAKUSHINA, E. I. Ornamental aspects of deciduous woody plants in amenity plantings in Moscow. In Russian. Byulleten' Glavnogo Botanicheskogo Sada No. 98, pp. 8-17. 1975.

- A6 BRECHTEL, H. M. Problems of erosion and flood control in Turkey. In German. Allgemeine Forstzeitschrift 31(3): 41-44. 1976.

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- A6 CORNISH, P. M. The impact of forestry operations on water quality. Technical Paper, Forestry Commission of NSW No. 24, 12 pp. 1975.

Normal forest operations may cause soil erosion and water pollution.

- A7 HENDEE, JOHN C., and DALE R. POTTER. Hunters and hunting, management implications of research. In Proceedings of the Southern States Recreation Research Applications Workshop, Asheville, North Carolina, Sept 1975. USDA Forest Service Southeastern Forest Exp. Sta. Gen. Tech. Rep. SE-9, pp. 137-161.

Summary and synthesis of more than 30 studies describing hunter participation, characteristics, and motives; membership in sportsmen organizations; anti-hunting sentiment; and nonconsumptive wildlife uses.

### III APPLIED TO FOREST PRODUCTION

- A7 MORTON, WILLIAM B. Managing deer on private lands in the Central Adirondacks, the use of economic incentives. The Northern Logger and Timber Processor 25(4): 6-7, 35-37. 1976.

Principles of deer management. Lack of public support. Proposals for a pilot project for management of deer, addressed to large landowners interested in realizing a profit.

- A8 LAST, F. T., J. E. G. GOOD, R. H. WATSON, and D. A. GREIG. The city of Edinburgh, its stock of trees: a continuing amenity and timber resource. Scottish Forestry 30(2): 112-126. 1976.

84% of the trees are in gardens; the rest are distributed between streets and parks. In residential sections, social factors such as the percentage of owner occupiers affect number, size, and species of trees.

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- B1 MONTGOMERY, ALBERT A., VERNON L. ROBINSON, and JAMES D. STRANGE. Impacts of land-use competition and other constraints on Georgia's future timber supply. Georgia Forest Research Council Rep. No. 36, 25 pp. 1976.

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- B1 SETZER, T. S. Comparing actual timber growth with potential, some implications for Montana. USDA Forest Serv. Intermountain Forest and Range Exp. Sta. Res. Note INT-188, 4 pp. 1975.

- B2 SCHONAU, A. P. G., and M. PENNEFATHER. A first account of profits at harvesting as a result of fertilizing Eucalyptus grandis at time of planting in southern Africa. South African Forestry Journal No. 94. pp. 29-35. 1975.

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- B3 GOUDET, J. P. Experimental plantations of species for papermaking in the San-Pedro region, Ivory Coast 1971-1974. In French. Centre Technique Forestier Tropical. 84 pp. 1974.

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- B3 GROULEZ, J. Conversion to plantation forestry in tropical rain forest. In French; Eng., Spa. sum. *Bois et Forêts des Tropiques* No. 162, pp. 3-24. 1975.

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- B3 GRUT, M. Long rotation forest products in southern Africa. *South African Forestry Journal* No. 95, pp. 11-20. 1975.

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- B3 MIYAJAMA, H. The way to labour-saving silviculture in Taiwan. In Chinese; Eng. sum. *Quarterly Journal of Chinese Forestry* 7(3): 30-38. 1974.

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- B4 IEVIN, I. K., V. P. KLYAVIN'ISH, and E. YA. SAUSINYA. Thinning technology, stand yield, and forest utilization. In Russian. *Lesnoe Khozyaistvo* No. 8, pp. 31-36. 1975.

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Control theory with land-use cost considered gives a rotation solution identical to Faustmann's formula. This further supports the use of this formula in public as well as private forest management planning.

- B5           CHUPROV, N. P. Economic maturity and ages of felling. In Russian. Lesnoe Khozyaistvo No. 10, pp. 24-29. 1975.

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- B5           USDA FOREST SERVICE. Timber harvest scheduling issues study. USDA Forest Service. 292 pp. 1976.

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- D1           EDGEELL, M. C. R., and E. H. BROWN. The bushfire environment of southeastern Australia. Journal of Environmental Management 3(4): 329-349. 1975.

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- E BELL, ENOCH F. Problems with goal programing on a national forest planning unit. In Proceedings, Systems Analysis Working Group, Society of American Foresters, Institute of Forest Ecosystems Decisions, USDA Forest Service, and Univ. of Georgia, Athens, School of Forest Resources, Aug 11-13, 1975. 8 pp. 1975.

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- E DE BELL, DEAN S., and JAN C. HARMS. Identification of cost factors associated with intensive culture of short-rotation forest crops. Iowa State Journal of Research 50(3): 6 pp. 1975.

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- E HOYER, G. E. Measuring and interpreting Douglas-fir management practices, (explanation of a simulation technique, its results and meaning). State of Washington, Department of Natural Resources No. 26, 80 pp. 1976.

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- E LECLERE, A. The concept of forest revenue and the effect of recent legislation (in France): articles 590 et. seq. of the Code Civil should be recast and amplified. In French. Foret Privee Francaise No. 107, pp. 15, 23. 1975.

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- E LUSSIER, LOUIS-JEAN. The forest management plan operation in Quebec. This paper presented at the 57th Annual Meeting of the Woodlands Section, Canadian Pulp and Paper Association, Montreal. 1976.

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- E PRASAD, DAYAL. Forestry planning and changing concepts of management. The Indian Forester 102(3): 143-151. 1976.

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- E SCHULER, A., and J. C. MEADOWS. Planning resource use on national forests to achieve multiple objectives. Journal of Environmental Management 3(4): 351-366. 1975.

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- E WALD UND HOLZ. Special number on statistics in forestry. In German. Wald und Holz 56(6): 219-240. 1974/1975.

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- E YANUSHKO, A. D., B. N. ZHELIBA, and V. P. KOBRINETS. Analysis of the intensity of forestry by the application of statistical methods. In Russian. Lesnoi Zhurnal 18(3): 135-140. 1975.

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- Worldwide timber production and trade statistics, exports and imports of roundwood, industrial wood, sawnwood, pulp and paper, and paperboard, by country.
- A1a WAGENFUHR, R., and C. SCHEIBER. Wood Atlas. In German. VEB Fachbuchverlag, Leipzig. 690 pp. 1974.
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- A1b HERRICK, OWEN W. Structure and change in northern U.S. forest industry: a shift-share analysis. Forest Products Journal 26(8): 29-35. 1976.
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- A1b RICH, STUART U. Small company survival in period of tight supply and fluctuating markets. Forest Products Journal 26(10): 8 pp. 1976.
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- Alc REVUE FORESTIERE FRANCAISE. State financial aid for modernizing sawmills and logging equipment. In French. Revue Forestiere Francaise 27(4): 308-314. 1975.
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- Ale BREITHAUPT, G. The wood industry of Cuba. In German. Holzindustrie 28(12): 373-376. 1975.
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- Ale FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Forestry Department. The mechanical forest industries in Central and West Africa, guidelines for development. In English, French. African Forestry Commission, Fourth Session, Bangui, Mar 22, 1976. 9 pp. 1976.
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- Proposals intended to aid in planning the location and capacities of pulpwood mills and other wood-based industries, which are essential if increasing domestic demands are to be satisfied by domestic supplies.

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- A4 KROTH, WERNER, H. LOFFLER, and J. TIMINGER. The analysis of objectives in forest enterprises and the methods of decision making. Forstwissenschaftliches Centralblatt 95(1): 20-44. Feb 1976.

A system of objectives worked out by example using the subjective preference approach to eliminate partial or total competition among objectives. The paper assumes that the enterprise seeks rational allocation of resources. An example: six alternatives for logging mature stands.

- B1 KEMP, S., and D. KOHLER. Preparing for the concentration of harvesting in technical complexes by the planning of working circles, working blocks, and areas of concentrated utilization. In German. Sozialistische Forstwirtschaft 25(12): 355-357. 1975.

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- B2 VESIKALLIO, H. Cost savings through the development of logging practices. In Finnish; Eng. sum. Metsäteho Tiedotus No. 338, 20 pp. 1975.

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- B3b ADAMS, THOMAS C. Economic availability of logging residue in the Douglas-fir region. USDA Forest Serv. Pacific Northwest Forest and Range Exp. Sta. Res. Bul. PNW-64, 9 pp. 1976.

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- B3b ADAMS, THOMAS C., and RICHARD C. SMITH. Review of the logging residue problem and its reduction through marketing practices. USDA Forest Service Pacific Northwest Forest Range and Exp. Sta. Gen. Tech. Rep. PNW-48, 22 pp. 1976.

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Current efforts toward logging residue reduction. Opportunities for improved sales arrangements, materials handling, and expanded markets for utilization of what would otherwise be left as logging residue.

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- B4 FORSCHUNGSBERICHTE, FORSTLICHE FORSCHUNGSANSTALT MUNCHEN. Work and cost studies on the skidding of small conifer wood and the calculation of machine costs. In German. *Forschungsberichte, Forstliche Forschungsanstalt Munchen* No. 24, 172 pp. 1974.

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- C1c SALJE, E., and B. MEYER. Yield, output, and production costs of gang-saw lines. In German; Eng. sum. *Holz als Roh- und Werkstoff* 33(5): 171-175. 1975.

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- C1c SNELLGROVE, THOMAS A., and DAVID R. DARR. Lumber potential for cull logs in the Pacific Northwest. *Forest Products Journal* 26(7): 51-54.

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- C2a BERGENDAHL, C. J. Pulp and paper in Iran, today and tomorrow. *Svensk Papperstidning* 78(15): 533-537. 1975.

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- C2a FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, Forestry Department. Development of pulp and paper industries. In English, French. African Forestry Commission, Fourth Session, Bangui, Mar 22, 1976. 4 pp. 1976.

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- Method, objectives, limitations, and interpreting the results of the yearly FAO-conducted survey.
- C2a JEGR, K. M., and K. M. THOMPSON. The Canadian pulp and paper industry, threats and opportunities, 1980-1990. Pulp and Paper Institute of Canada. 398 pp. 1975.
- Survey of future technology and markets for Canada's pulp and paper industry. Part I: findings. Part II: answers, summaries.
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IV APPLIED TO MANUFACTURING

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V APPLIED TO MARKETING, TRADE, DEMAND FOR FOREST OUTPUT

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