

## OUR STAFF

Our staff consists of forestry experts, economists and computer programmers. We have expertise on forestry, rural enterprise planning, wood markets, economic analysis and software development. Project staff is (name, task, location and e-mail connection).

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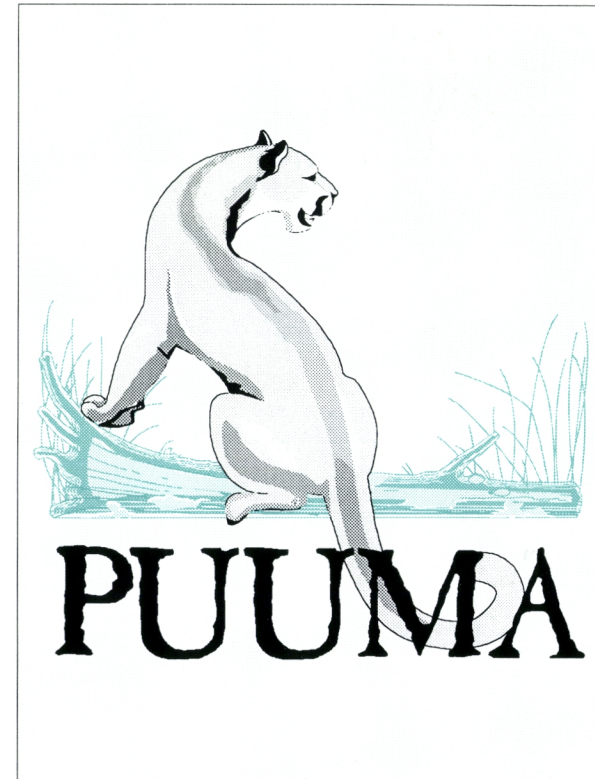
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FINNISH FOREST RESEARCH INSTITUTE



**Utilization of  
Timber Resources  
and Potential  
Allowable Cut**



# WHAT IS PUUMA?

PUUMA is a research project, of which business idea is to develop forest management planning by producing knowledge and knowledge-based systems for decision-making of forestry, forest industry, and national economy (PUUMA is the abbreviation of the Finnish words for Utilization of Timber Resources and Potential Allowable Cut). Duration of the project is three years (1995-1997).

PUUMA works in co-operation with Ministry of Agriculture and Forestry, Ministry of Trade and industry, The Finnish Forest Industries Federation, The Central Union of Agroforest producers, The Forest Center Tapio, Jaakko Pöyry Consulting, and The University of Joensuu and The University of Helsinki.

Main aims of the project are:

- 1 Development of forest management planning
- 2 Development of electronic timber market system
- 3 Development of strategic management planning of rural enterprise
- 4 To find out energy wood resources
- 5 To clarify investment strategies of forest industry and forest sector's impact on national economy. At the enterprise level, we find out technical and economic profitability of integrated logging and chipping terminal.
- 6 Create knowledge-based systems for forest management planning.

## DEVELOPMENT OF FOREST MANAGEMENT PLANNING

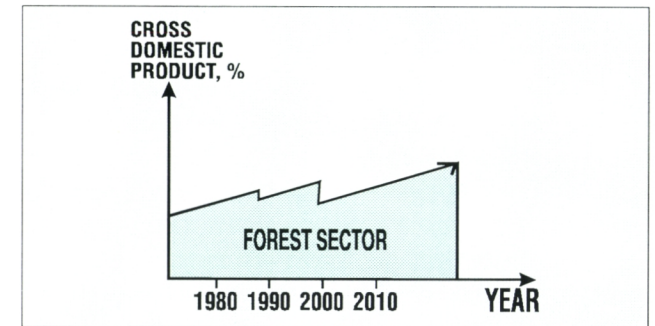
In Finnish present-day non-industrial private forest (NIPF) management planning, the variability with goals of NIPF landowners has been ignored. Our aim is to create the calculation system, which includes strategic decisions of NIPF landowners, data of energy wood resources, and data for electronic timber market system. Based on landowners' choices of timber management strategies, with this system we can calculate the regional and national potential allowable cut from non-industrial private forests more realistically than before.

## DEVELOPMENT OF ELECTRONIC TIMBER MARKET SYSTEM

The purpose of this subproject is to develop an impartial trading system for round wood trade in Finland. The system, Puutori, consists of the main computer where bids and offers of round wood may be announced through data communication network. This way the information on the wood for sale is more widely spread and the likelihood of finding more suitable end-users for the logs is increased.

## DEVELOPMENT OF STRATEGIC MANAGEMENT PLANNING OF RURAL ENTERPRISE

Since joining the EU beginning of 1995, the profitability of agriculture has declined significantly. There is a tendency for the rural enterprises to shift over to forestry. Our goal is to develop the planning of rural enterprise in a way that the increased importance of forestry is taken into account in the enterprise's total economy better than previously.



## INVESTMENT STRATEGIES OF FOREST INDUSTRY AND FOREST SECTOR'S IMPACT ON NATIONAL ECONOMY

Here our purpose is to first describe the investment strategies employed by the Finnish forest industry, and also the factors influencing the investment strategies as well as the weight of these factors (forest resources, potential allowable cutting, the price for energy and labor etc.) are investigated. Our second aim is to develop a macroeconomic model for the forest sector, this model can be used to make various scenarios of the forest sector's importance in the whole Finnish economy.

## ENERGY WOOD RESOURCES

We will find out regional energy wood resources and energy wood harvesting economics. This calculations include industrial wood demand, energy wood prices, location of resources and ecological restrictions for harvesting. Profitability of energy wood production is analysed at stand, forest holding and national level.

## KNOWLEDGE-BASED SYSTEMS

In this subproject we intend to create practical software applications for the needs of forestry and rural enterprise in their timber trading and planning processes.