



# Economics of Forestry

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1st of February 2019





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# Introduction

- Economy of the Forestry sector = specialised branch of economics whose subject is utilisation of production factors in forest management
- Forest:
  - The main production factor
  - Forest growth and forest environment and forest land
  - A natural, economic and social phenomenon

# Introduction

- Natural phenomenon – the wildlife component, the vegetation component, the biotope
- Economic phenomenon – an economic object
- Social phenomenon – community demand (multifunctional role)
  
- Sustainable development principle – Rio de Janeiro 1992: Forest and forest land management and utilisation in the manner and in the scope to preserve their biodiversity, production capability and regeneration capacity, vitality and the ability to fulfil, at present and in future, the corresponding environmental, economic and social functions on the local, national and global levels without negative impact on other ecosystems.

- Forest production:
  - Final products are subject of exchange
  - Relations between subjects are offer and demand based
  - Results of production activity can be expressed in kind or in monetary terms
  - Includes: forest production, watercourse management, construction activity, engineering activity etc.

# Origin and Evolution of Forest Management Economics

- Mid 18 century – origins of economic principles in forestry
- Different concepts existed:
  - Liberalist concept of management
  - Allowance theory – emphasis on tree growth
  - Theory of net yield from land
  - Theory of net yield from forest – forest in a gift of the nature
  - Profit maximisation – pressure on profit, monoculture planting
- 20 century – emphasis on planning, statistics vs. state-level planning

- 2 components of forest production:
  - Man – first work input (reproduction), then protection and education and finally exploitation
  - Forest ecosystem

**What are special characteristics of forest production / enterprises comparing to other branches of economis??**

## **Specifics of forestry enterprises:**

- Extremely long production period
- Relatively short working hours
- Link to geographic environment
- Time difference in production completion
- Different involvements in production process (work means, subject, result)
- Large spatial dispersion
- Seasonality
- Use of primeval forest
- Polyfunctionality



- **Production conditions in forest management:**
  - Natural conditions – for example various trees, various age structures etc.
  - Production conditions on sites – adopted on the basis of natural conditions, can be changed by technological development
  - Management factors – subject to the legislation governing the company, managerial skills, arrangements etc.

- **Particular approaches in forest management therefore depend on:**
  - The nature of forest biogenocenosis
  - The size and condition of the forest asset
  - The proportion of growing and exploitation activities
  - Technical and technological equipment levels
  - Social and economic conditions of forest production

- **The nature of forest biogenocenosis:**
  - Forest land (rock matrix, nutrient levels, water circulation etc.)
  - Agents affecting photosynthesis (light, temperature, humidity, CO2 concentration etc.)
  - Climatic and other agents (climate, insects etc.)
  - Terrain relief (affecting technology selection)
  - Groundwater
  - Forest species
  - Forest age

- **Size and condition of forest asset**
  - Area of forest asset and proportion of forest to other land
- **Technical equipment and technological level**
  - Density and types of forest roads and paths
  - Number of parameters of forest machinery
  - Economic effectiveness of machinery used

- **Social and economic conditions of forest production**
  - Long-term conditions (exceeding a decennium, for example the distance from the sales regions)
  - Short-term conditions

- **Forest policy as a branch of study deals with:**
  - Clarification of existing circumstances, drawing of general knowledge and conclusions following from the forest policy practice and
  - Advisory service:
  - Analyses of goals, instruments and implementation of forest policy practice,
  - Strategy development,
  - Predictions and concept formation
- **Irreplaceable role of the state**

## **Approaches of different types of schools to forest policy**

- School of Forestry
- School of Economics
- School of Political Science
- School of Law

- **School of Forestry**

Forest policy is a summary of principles and methods of practical application of supporting and limiting effective tools and measures for:

- Management of exploitation and use by owners (users) and the public, with respect for vested interests of owners and social needs, and further for:
- Achievement of strategic objectives, fulfilment of conceptual interests with consideration of circumstance and global, European, neighbour and domestic impacts with the objective to assert state interests in the area of forestry “.



- **School of Forestry – main goals:**
  - Sustainable forest exploitation and sustainability of all forest functions (classical and modern understanding of sustainability),
  - Multifunctional forest management,
  - Optimisation of forest condition (through development of forestry disciplines).

- **School of Forestry - defines 5 basic principles** repeated in all strategic forest policy documents:
  - Long-term principle
  - Permanent principle
  - Multifunctional forest use
  - Primacy of wood production
  - Expertise

- **School of Economics**

The theory of economic policy deals with society economic decision-making with the aim to assure maximum welfare regardless the politically defined objectives.

- **School of Economics – main goals:**
  - Social economic efficiency in resource exploitation
  - Righteous resource distribution
  - Progress in resource exploitation
  - Economic stability

- **School of Political Science**

Practical forest policy is „coordination of relations between the society and forest management, following from various material and ideological interests in forest existence and functions and related conflicts concerning forest preservation and type, or intensity of its exploitation.“

- **School of Political Science – main goals:**
  - Resolution of conflicts in forest management and exploitation
  - Assurance of optimum implementation of forest policy measures
  - Evaluation of effectiveness of implementation of forest policy measures

- **Basic terms:**

- Political system (polity) – standards, rules, institutions
- Political process (politics) – relations between actors
- Political measures (policy) – particular activities of the state

- **Political system (polity):**
  - The system is entered by requirements, responds to them, makes decisions and takes measures
  - Surroundings of the system



- **Political processes (politics):**

ACTORS are in general terms individuals, groups, organisations and institutions taking part in the political process, in politics.

- ACTORS:

- individual
- collective (teams and corporate actors)
- groups of actors

- **Political processes (politics):**

## ACTORS:

- Carriers of political functions
- Political and administrative actors
- Political parties
- Interest groups
- Civic initiatives
- Journalists, publicists, scientists, experts
- Other individual actors (enterprises ...)
- Other collective actors (electorates ...)

- **Political processes (politics):**

The actors assert their interests – especially economic, environmental and social. Their success depends on their power.

POWER is a chance of ability of a political actor to assert their interests against interests of other political actors.

Sources of POWER:

- dependency
- ownership of resources (financial ...)
- non-awareness
- irreplaceability
- influence on decision-making

- **Political measures (policy):**

The result is implementation and taking particular steps in forestry.

The outputs may include legislative standards, for example.

- Example: effort to obtain timber from a territory with living endemic species.
  - Describe the actors and their influence / power
  - Describe their interests
  - What measures may be taken

# Social Forestry

- What is the definition?
- What is the aim?
- What is its role in forestry itself?

# Social Forestry



# Social Forestry

- 1976 The National Commission on Agriculture, Government of India
- Social forestry means the management and protection of forest and afforestation of barren and deforested lands with the purpose of helping environmental, social and rural development.
- The focus is put on FORESTRY and PEOPLE



# Social Forestry

- The term, social forestry, was first used in 1976 by The National Commission on Agriculture, Government of India. It was then that India embarked upon the social forestry project with the aim of taking the pressure off currently existing forests by planting trees on all unused and fallow land.
- Social forestry includes maximum utilization of land for several purposes.

# Social Forestry

- Communities feel the need for wood and its products (for example fuel).
- The government, through communities, helps improve forestry condition.
- Support is given to forestation of river basin surroundings, in-cities etc.
- Communities are involved in decision-making.
- Byproduct is improvement of quality of life of the community.

# Social Forestry

- 4 (or 5) types of Social forestry:
  - farm forestry,
  - community forestry,
  - extension forestry,
  - agroforestry,
  - silviculture or Scientific Forestry

- **Farm Forestry:**
  - Commercial or non-commercial
  - Farmers plant trees on their fields or next to them for these reasons: fuel, money (pulpwood), soil conservation, shade for agricultural product, with shelters etc.
  - Planting trees on private land

- **Community Forestry (= Rural Forestry)**
  - Planting trees on non-private lands (public, community lands)
  - It provides benefits for the whole community
  - The government has the responsibility of providing seedlings, fertilizer but the community has to take responsibility of protecting the trees.
  - Communities after that sell the timber or receive other profits

- **Extension Forestry:**

- Increasing the boundaries of the forests
- Planting of trees on the sides of roads, canals and railways, along with planting on wastelands is known as 'extension' forestry.

- **AgroForestry:**

- growing of forest tree along with agriculture crop on the same piece of land
- silvicultural practices are combined with agricultural crops like leguminous crop, along with orchard farming and live stock ranching on the same piece of land
- a sustainable land use system that maintains or increases the total yield by combining food crop together with forest tree and live stock ranching on the same unit of land, using management practices that takes care of the social and culture characteristic of the local people and the economic and ecological condition of the local area

- **Silviculture or Scientific Forestry:**
  - the art and science of controlling the establishment, growth, composition, health, and quality of forests to meet diverse needs and values of the many landowners, societies and cultures over all the parts of the globe that are covered by dry land,
  - Silviculture lays great stress on replacement and replanting of new crops and trees.



## Objectives of Social Forestry Schemes:

- Improve the environment for protecting agriculture from adverse climatic factors,
- Increase the supply of wood fuel for domestic use, small timber for rural housing, fodder for livestock, and minor forest produce for local industries,
- Increase the natural beauty of the landscape; create recreational forests for the benefit of rural and urban populations,
- Provide jobs for unskilled workers and
- Land rehabilitation
- Finally, its object is to raise the standard of living and quality of life of rural and urban people.

## Missions of Social Forestry Schemes:

- To carry out a need based and time bound programme of afforestation with special emphasis on fuel wood and fodder development on all degraded and denuded lands/forests.
- Afforestation of abandoned lands and mined areas.
- Linear strip plantation of fast-growing species on sides of public roads, rivers, streams and irrigation canals.
- Afforestation on under-utilized lands under state, institutional or private ownership.
- Green belts in urban/industrial areas.

## Missions of Social Forestry Schemes:

- Shelter belt (generally more extensive than the wind breaks) for the purpose of shelter from wind and sun covering areas larger than a single farm on a planned pattern.
- Farm forestry in the form of raising rows of trees on bund or boundaries of fields and individual trees in private agricultural land as well as creation of wind breaks round a farm or orchard by raising one or two lines of trees.
- Raise flowering trees and shrubs mainly to serve as recreation forests for the urban and rural population.
- Elicit people's participation involving women and young people in conservation of forests, wildlife and environment.



- ...ANY QUESTIONS???
- ...THANK YOU FOR YOUR ATTENTION

