Sustainable Forestry in Financial Times

Ernst Ulrich Koepf (Germany)

Current Problems in Forest Economics
Puszczykowo, June 7-9, 2011
Sustainable forestry in financial times

1. Introduction
2. Sustainability
3. Forestry and money
4. Economy and financial problems
5. Conclusion
Sustainable forestry in financial times

- **Introduction:**
  - Why this topic by the author?
  - **Dissertation:** »Fundamentals of rational investment policies in forestry« (1964)
  - **Habilitation thesis:** »The forestry firm as an instrument of forest policies« (1991)

- Special topic: The subtle mechanics of enrichment by powerful nations at cost of the third world
Sustainable forestry in financial times

- **Forestry sustainability**
  - 1713: Hanss Carl von Carlowitz (1645–1714)
  - 1757: Wilhelm Gottfried von Moser (1729–1793)
  - 1765: Carl Christoph Oettelt (1727–1802)
  - 1763: Hans Dietrich von Zanthier (1717–1778)
  - 1786, 1794, 1811, 1816: Heinrich Cotta (1763–1844)

200 years of forestry science, academic education, and established administrative and management structures
Sustainable forestry in financial times

»Sustainable development«
UNCED – Rio 1992

Critical:
- Growth of the world population
- Productivity at high energy costs
- Fantastic living standard for only few
- The demand of all to participate
- Technology possibly could help
- The financial system does not support sustainable development but competition
Sustainable forestry in financial times

- Forestry and money
  - Johann Christian Hundeshagen (1783–1834)
  - Martin Faustmann (1822–1876)
  - Max Robert Pressler (1815–1886)
  - Friedrich Judeich (1828–1894)
Sustainable forestry in financial times

1849: The Faustmann Formula

\[
Bu = \frac{Au + Da \cdot (1+i)^{u-a} + \ldots + Dq \cdot (1+i)^{u-q} - c \cdot (1+i)^u - \nu}{(1+i)^u - 1 - i}
\]

in which:

- \(i\) the rate of interest: Investor' expectation of profit on the capital or capital cost rate
- \(Bu\) the expected capital value of unstocked ground as a permanent rent, paid once in \(u\) years
- \(Au\) net market value of the timber harvested at the end of a rotation period of \(u\) years
- \(Da \ldots Dq\) net market values of all thinnings within one rotation of \(u\) years earned in the years \(a \ldots q\)
- \(c\) Regeneration and plantation costs to be paid at the beginning of each rotation period
- \(\nu\) annual costs of administration and management
Sustainable forestry in financial times
Sustainable forestry in financial times
Sustainable forestry in financial times

- **In Saxony**
  - 28 percent of total land area forests: 516,572 hectares

- **Tree species (percent):**
  - Spruce 44
  - Pine 31
  - Other 4
  - Birch 7
  - Oak 6
  - Beach 3
  - Other 5
  - Conifers 79
  - Deciduous trees 21
Sustainable forestry in financial times

»Soil rent theory«
against »forest rent theory«

- Mistake of the normative approach
- Theories may help to explain reality, they should not govern reality
- The Faustmann formula is a model explaining the cultivating and maintaining work in forestry a long-term investment
- Sustainable forestry is as much a necessity as security, education, science, health services, preservation of nature …
Sustainable forestry in financial times

- Economy and financing problems
  (Not really the interest of foresters …)

**Crises of the last years:**
- U.S. real estates' markets
- Bank crash Lehman Brothers in 2008
- Crisis of the bank system worldwide
- Heavy recession more or less worldwide
- Dept crisis of states (Greece and others)
Sustainable forestry in financial times

- Concentration of money and power under the conditions of unregulated market conditions
- »New economy«
Sustainable forestry in financial times

Wilhelm Gottfried von Moser, 1757:

*Economy is the internal management system of an institution aiming at production, utilization and maintenance of certain goods, which for this purpose need adequate equipment and rules.*

[Citation following H. Rubner: Forstgeschichte im Zeitalter der industriellen Revolution (Forest history at times of the industrial revolution), 1967, p. 65.]

Translation by the author
Sustainable forestry in financial times

Paul A. Samuelson (1915–2009):

»Economics is the study of how men and society choose, with or without the use of money, to employ scarce productive resources, which could have alternative uses, to produce various commodities over time and distribute them for consumption, now and in the future, among various people and groups in society.«

Sustainable forestry in financial times

ECONOMIC ORDER

LABOUR (Man)

SOIL (Nature)

CAPITAL (Technology)

PRODUCTION FACTORS

ECONOMY
Sustainable forestry in financial times

Diagram:

- Konsumausgaben
- Konsumgüter
- Haushalte
- Arbeit, Boden, Kapital
- Unternehmen
- Einkommen
Sustainable forestry in financial times

- The real world is drawn by the inner circle of production factors and of commodities produced for consumption.
- The extern circle (dotted) represents values, derived from prices (costs).
- Money is subsidiary in the economic process like the lubricant in a machine.
- Money should not be handled as a commodity.
- There is no »finance industry«.
Sustainable forestry in financial times

Joseph Huber / James Robertson: Geldschöpfung in öffentlicher Hand – Weg zu einer gerechten Geldordnung im Informationszeitalter. (Creating New Money – A monetary reform for the information age)
Gauke GmbH / Verlag für Sozialökonomie, Kiel (Germany) 2008
(ISBN 978-3-87998-454-1)
www.gauke.net
Sustainable forestry in financial times

Cotta's Grundriss der Forstwissenschaft 1849, p. 13/14:

1) Forestry can follow the following goals: The perfect forest condition for supplying sustainably the maximum volume of the most usable wood; or

2) To aim at the maximum monetary gain from the forest area without respect of the public wealth or the future condition of the forest; or

3) to aim at the highest general public wealth without respect of the cash which directly supplies the forest treasury.

[Translation by the author]
Sustainable forestry in financial times

Conclusion:

- A worldwide economic and financial system influences forests and sustainable forestry.
- Forest policies cannot become efficient in favour of the sensible system of sustainable forestry if the context is not understood by foresters and forest owners.
- Therefore it is necessary for foresters and the public to deal with these problems.
Sustainable forestry in financial times

Thank you for following my presentation!