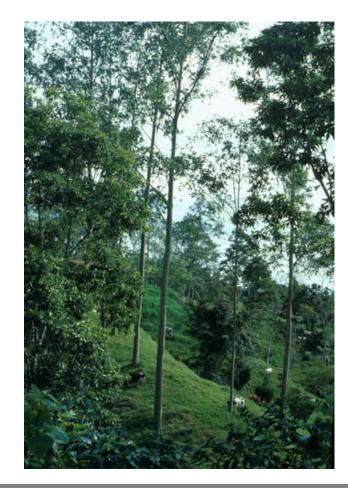
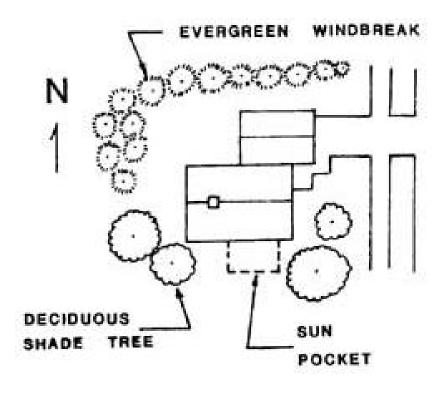
Trees, Energy and People Introduction and Overview



The world urgently needs foresters who look beyond the edges of the forests, thinking about

- the benefits that provide even singular trees in cities and rural areas
- the problem of global warming mainly resulting from the consumption of fossil energy
- how to cooperate with the people, how to help them solving their local and global problems by using trees.

Trees, Energy and People Urban Forestry for Saving Energy



"Carefully positioned trees can save up to 25% of a households energy consumption for heating and cooling. Computer models devised by the U.S. Department of Energy predict that the proper placement of only three trees will save an average household between \$100 and \$250 in energy costs annually. On average, a well-designed landscape provides enough energy savings to return your initial investment in less than 8 years."

Dr. Ernst Kürsten, Sources: http://www.ext.colostate.edu/pubs/garden/07225.html and http://www.eren.doe.gov/erec/factsheets/landscape.html (12-06-01)

Agroforestry: C-Storage and Energy Savings

Estimated CO₂-mitigation effects of agroforestry systems

(in Mg C·ha⁻¹ agroforestry land)

Accumulation and Conservation of Carbon Stores

- Trees in Agroforestry Systems 3... 60
- Wooden Products 1... 100
- Soil Organic Matter 10... 50
- Protection of Existing Forests 0...1000

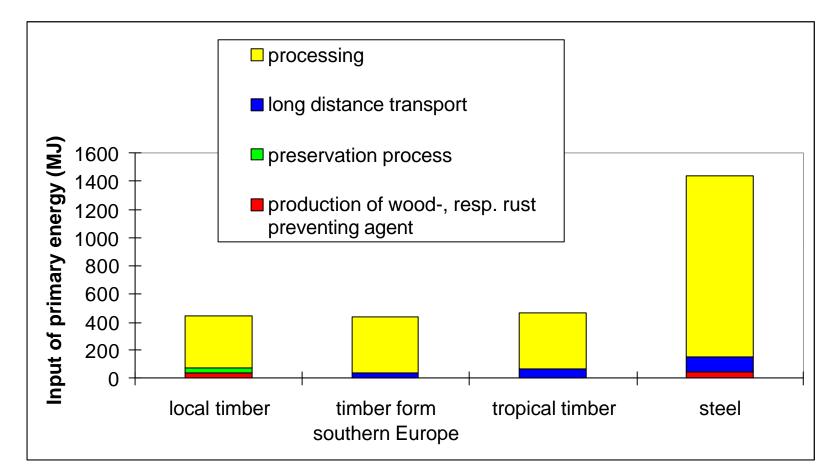
Reduction of CO₂-Emissions within 50 Yrs

- Energy-Substitution 5... 360
- Material-Substitution 0... 100
- Reduction of Fertilizer-Input 1... 5
- Sum 20...1675

Dr. Ernst Kürsten, Source:KÜRSTEN, E. 2000. Fuelwood production in agroforestry systems for sustainable land use and CO₂-mitigation. Ecological Engineering 16 (1001), 69-72, http://www.congress-report.de/pdf/fuelwood.pdf

A Pillar Made of Wood Needs much less Primary Energy than one Made of Steel

(carrying capacity: 20 kN)



Dr. Ernst Kürsten, Source: KÜRSTEN, E. 1999. Der Export von Tropenholz als Beitrag zur nachhaltigen Entwicklung in: Tropenzentrum der Universität Göttingen (Herausg.), Tagungsband zum "Tropentag" am 3./4.12. 1998 http://www.espen.de/seiten/vorgoett.html (06-12-2001)

Trees, Energy and People Much Money from the People to Plant Trees

"Shell Renewables is one of five core businesses of the Shell Group, established to develop commercial opportunities in solar, biomass, forestry and wind energy. Renewable energy sources are expected to meet an increasing percentage of the world's energy demand and Shell plans to be a significant player in this sustainable energy market."

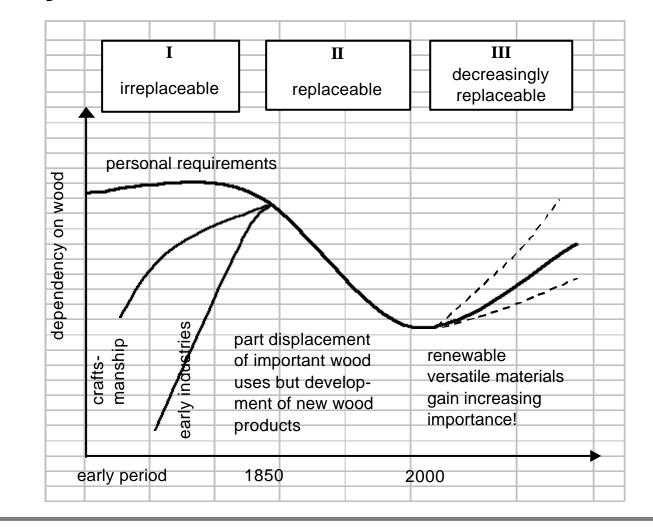
"Specialized timber investment management organizations (TIMOs) identified potential funding of between US\$ 1 and US\$ 2 billion per year, providing there was the capacity to produce a flow of attractive investments."



ECO SECURITIES

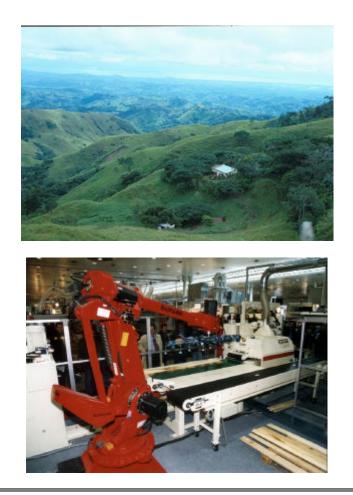
Dr. Ernst Kürsten, Sources: http://www.shell.com/rw-br/0,6124,,00.html and MOURA COSTA, P. & KOHN, G. 2001: Feasibility Analysis for an International Investment Promotion Entity forSustainable Forest Management: http://www.ecosecurities.com/300publications/300publications.html (06-15-2001)

History of Wood Use - Three-Phase-Theory



Dr. Ernst Kürsten, Source: SCHULZ, H. 19??

Let Us Educate Foresters to Use Their Tremendous Chances!



- There several hundreds of hectare land in the tropics that need afforestation or agroforestry land-use systems. Growing cities need more trees.
- There is money from environmentally funds and private investors available. CO2-mitigation is an actual political topic.
- New technical developments in the woodworking industry create new possibilities for the use of wood as raw material in a future economy based on solar energy.

Dr. Ernst Kürsten, Sources and additional information: http://www.holzfragen.de/kuersten/eberswalde.html