



Ministry of Agriculture and Forestry

National Forestry Board

BIOMASS IN THE FOREST AND POSSIBILITIES FOR ITS UTILIZATION

Eng. D-r Agr.Sc. Liubcho Trichkov - Head of Sector, NF

National Forestry Board (State forest administration)

Legal entity, state budget financed

Management functions – forest policy, forest protection, coordination, control

Three levels of management – national: NFB, regional: 16 RFBs, local: 141 LFS, 37 SGS and 20 other specialized territorial structures

Total staff: 7 500

Forests of Bulgaria

Total area of the country - 111 000 km²

Population - 8 millions, about 2 mln. live in mountainous regions

Third richest biodiversity in Europe

Forest - 37% of the total area

4.06 mln. ha forest territories

69% afforested with deciduous forests

598 mln. m³ total wood stock

14.5 mln. m³ total annual increment

5.5 mln. m³ annual harvesting

10 nature parks, 700 protected areas



Forest Fund of Bulgaria

Data by the end of 2004: the forest fund amounts to 1 063 555 ha, covering approx. 37% of the country

Afforested area, excl. mountain pine formations: 962 692 ha or nearly 89% of the total forest area

With 33% afforested area Bulgaria ranks 19th in Europe.

Coniferous plantations and cultures, excl. mountain pine, cover 1 127 366 ha (approx. 31% of the total afforested area)

Forest Fund of Bulgaria

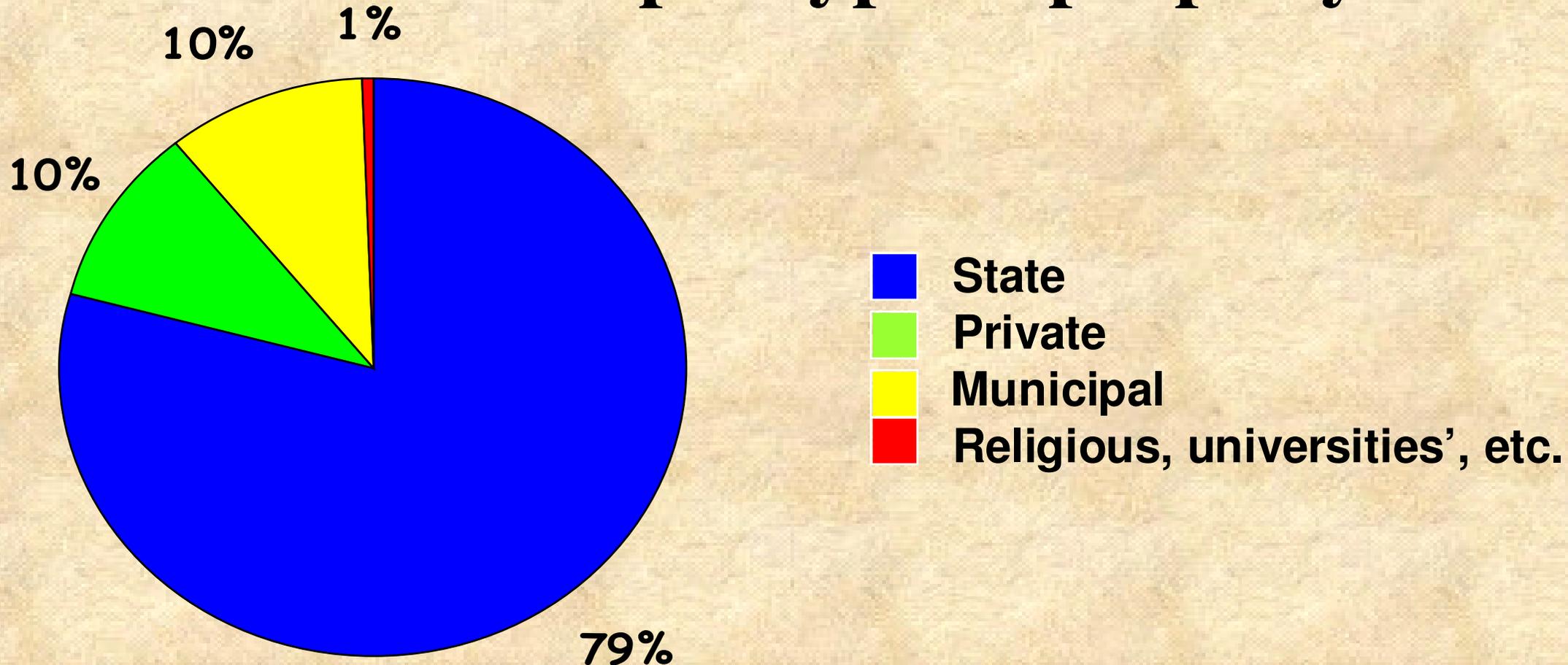
Deciduous forests cover 2 497 356 ha (approx. 69% of the total afforested area)

Total standing volume of Bulgarian forests by end 2004 was estimated of 598 710 620 m³ wood.

The average annual increment per 1 ha amounts at 14,5 m³ and the total annual increment – to 14,5 mln. m³.
The average standing volume of 1 ha is 163 m³.

Forests in Bulgaria

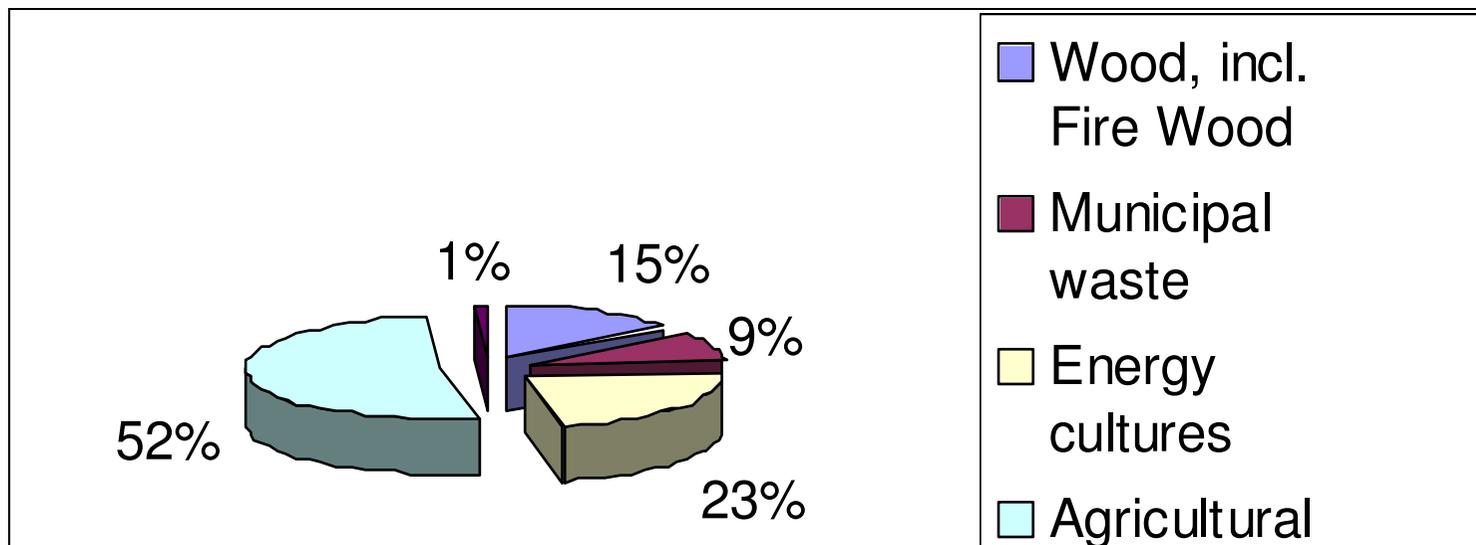
Distribution per type of property



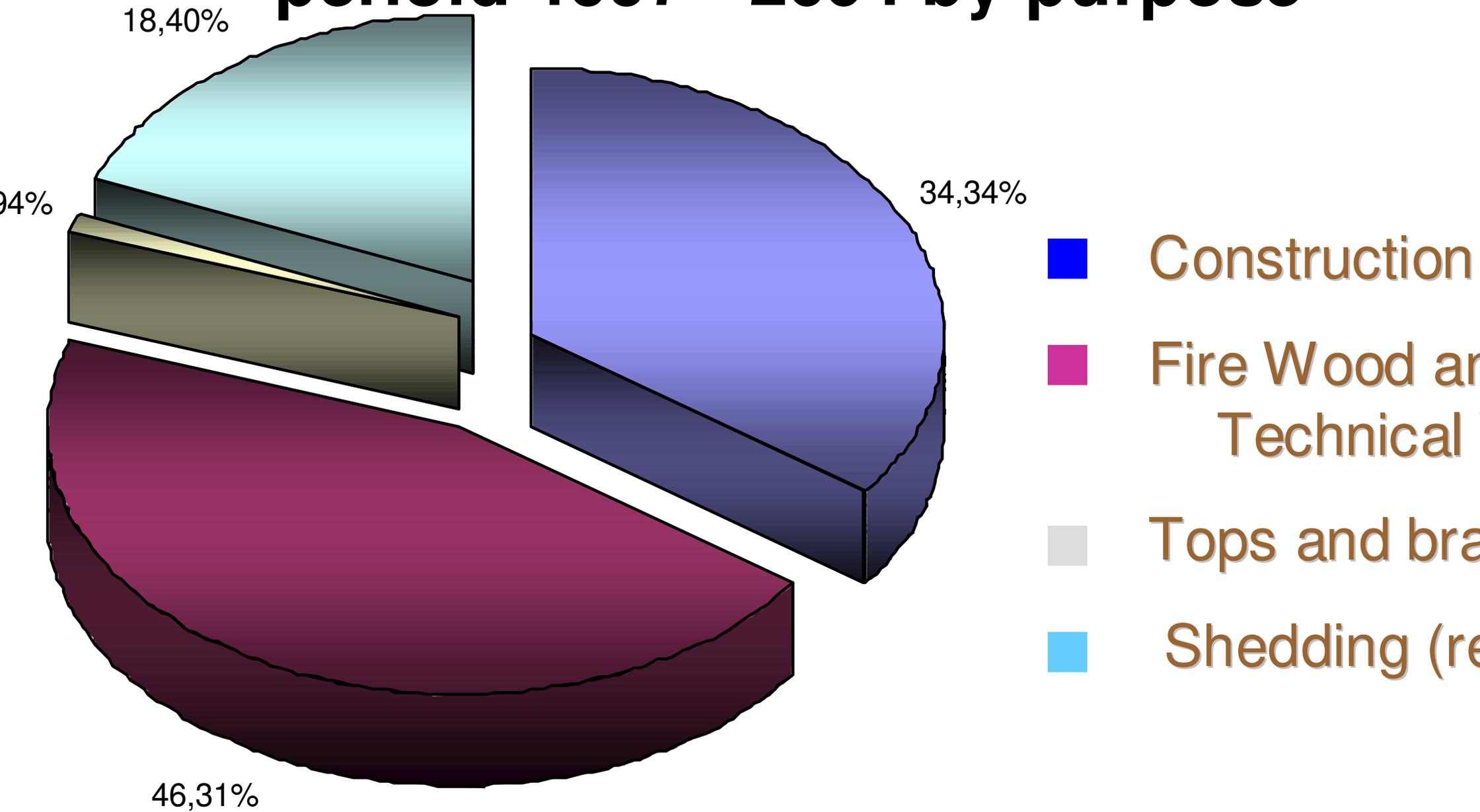
Wood as energy source

Theoretical potential of biomass, ktoe

Energy sources	Agricultural waste	Municipal waste	Wood, incl. Fire Wood	Others	Total
340	1 880	310	550	35	3 615



Average share of harvested wood for the period 1997 - 2004 by purpose



Actual wood harvesting for the period 1997 – 2004: average annual 502047 solid m3 standing volume or about 0,92% of total growing

Firewood as energy source

Total amount of harvested wood (Fire Wood and Technical Wood) for 1997-2004 is app. 2 548 182 m³ (46,31%), as 354839 m³ - coniferous and 2 193 343 m³ broad-leaved

Nearly 1 700 000 m³ from the harvested wood is firewood (266 000 m³ coniferous, 1 434 000 m³ broad-leaved)

Prices: BGN 40 to 60 / m³ “on temporary stock on the site” depending on the region and wood type

Feeding from wood harvesting. Energy source and utilization

Relatively constant volume – average 1 012 639 m³ or 18,40%
standing, incl. 503 565 m³ (25,98%) coniferous, 509 073 m³ (14,2%
deciduous

Present practically applicable: the tops, average annual volume
1 685 m³ or 0,94% of harvested standing volume with dominating
deciduous wood tops

Current utilization of shedding – strongly limited
DUE TO

low infrastructure density (7-8 m/ha) and bad quality of forest roads

Presence of broken terrains with steep and distant felling areas with
low harvesting intensity makes the utilization not profitable

Feeding from wood harvesting. Energy source and utilization

EU White book on RES and Action Plan – increasing the share of RES with 12% up to 2010 r.

3G legislation: Energy Law, Chapter 11 on stimulation of RES energy production. Tentative target up to 2010: 11 % RES of total energy consumption (by 2003 the share is 7.6%) or 0.6% annual increase for the next 6 years

MoAF, respectively NFB supports the effective production and utilization of woody biomass from sustainably managed renewable forest resources.

DB for woody biomass utilization- support and necessities

Participated actively and co-financed the implementation of Fuel
Switch Pilot Project, supported by Japan Trust Fund Climate
Change Initiative of the World Bank

Supports similar projects by issuance of permits for utilization of
thinning in forests

Necessary investments for improvement of forest roads
infrastructure

Necessary investments for technical equipment to secure the fuel
supply chain

Thank you

Contacts:

www.nug.bg