COPPICE FORESTS IN BELGRADE AREA IN SERBIA

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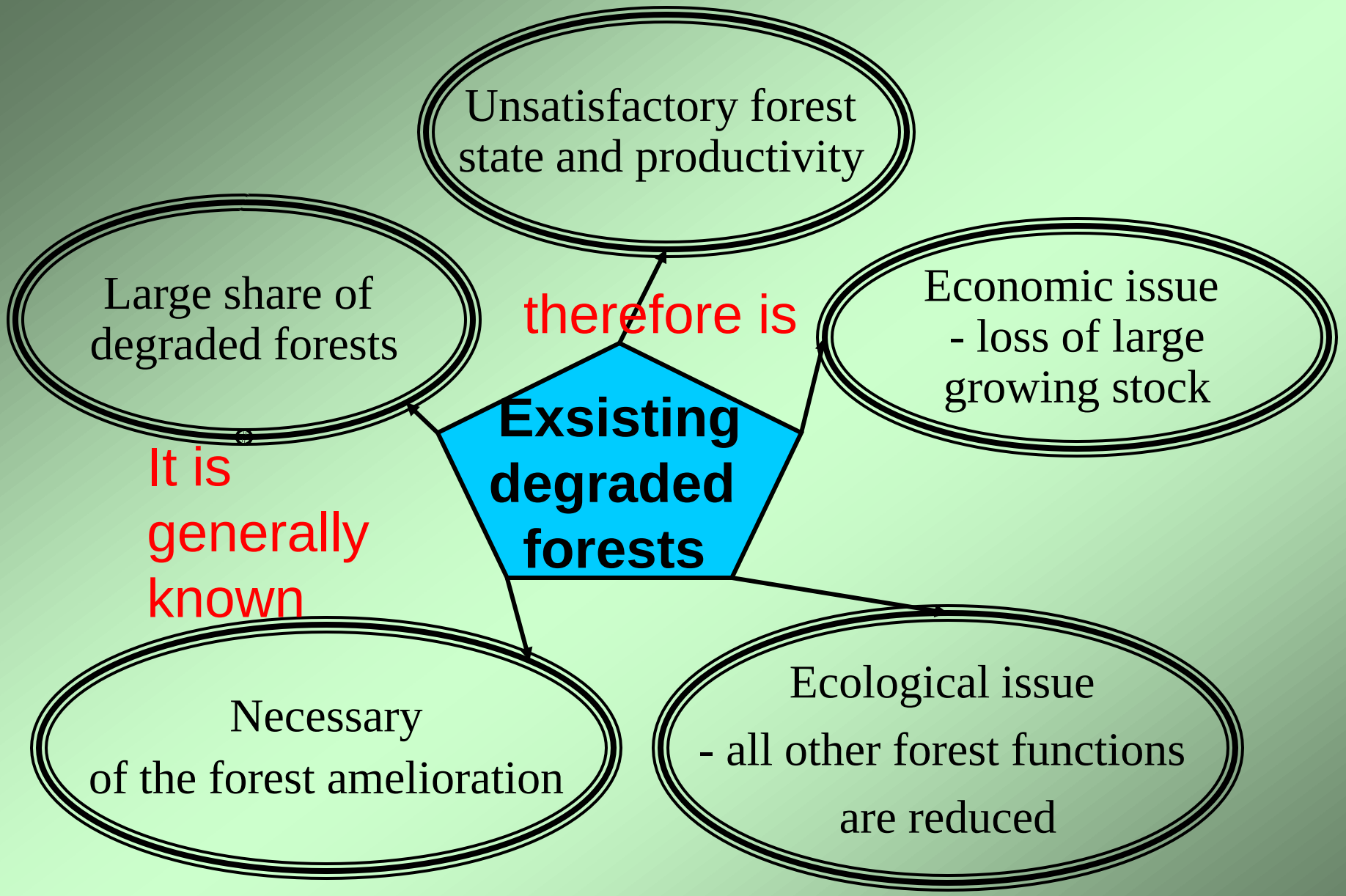
Unsatisfactory forest state and productivity
Large share of degraded forests
therefore is
Economic issue - loss of large growing stock
Exsisting degraded forests
It is generally known
Necessary of the forest amelioration
Ecological issue - all other forest functions are reduced

Causes of forest degradation

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•Numerous and varied factors:

- historical, abiotic, biotic, anthropogenic

• To choose effective amelioration approach we have first

- to determine the cause of degradation

• Just after curbing degradation, application of relevant ameliorating measures can be successful

Some examples of degraded forests

Quality coppice
stand on the good site

Bad stands
on the bad site

Bad coppice stand
on the good site

Forests drying out

Regression succession

from other side

Existing current climate change

- **Increased "glass house effect"**
- **Increase of the average global air temperature**
- **Shift of the temperature and precipitation regimes**
- **Indications the continuance of the previous**
- **Dramatic effects on the human environment, global economy and society**

The current state of coppice forests in Belgrade region in Serbia

The area of Belgrade covers an surface of 360 km2,

The total forest area is 38,853 hectares, and forest cover is 11.8%,

In state ownership has 17,057.9 ha or 43.9% of the total forest area,

Area coppice forests owned by the state amounts to 6151.8 ha, or 44.1%: **Existing**

- preserved coppice stands occupy 5445.7 ha,
- diluted 667.5 ha of coppice,
- devastated 38.6 ha.

The current state of coppice forests in Belgrade region

A significant part of the surface outcrop forest waste complex xerothermophilous forests of Hungarian oak and Turkey oak.

Area of mixed forest of Hungarian oak and Turkey oak and pure oak forests owned by the state amounts to 2968.47 ha or about 22% of the surface area of overgrown forest land.

In forests with the right of ownership, participation forests of Hungarian oak and Turkey is about 30% of the surface.

The current state of coppice forests in Belgrade region

Hungarian oak and Turkish oak in Belgrade area *(FU Lipovica)* occur in somewhat different site conditions and three typical stand situations:

I - mainly pure Turkish oak stands occur about 60% of the area;

II - mixed Hungarian oak and Turkish oak stands with a lower percentage of Hungarian oak (about 30% of the area),

III - stands with prevailing or equal portion of Hungarian oak in the mixture (about 10%).

The current state of Hungarian oak and Turkish oak coppice forests in Belgrade region

Basic condition of coppice forests in the Belgrade area:

-unfavorable ratio of age classes (age 65-70 years) ,

- inadequate composition of the mixture (prevailing Turkish oak),

-forests within urban areas categorized as special purpose forests with characteristics of protective reclamation forests and especially significant forests;

- most of these forests are of coppice origin (about 90%);

- most of the stands have even-age structure (80%).

The current state of Hungarian oak and Turkish oak coppice forests in Belgrade region

- inadequate introduction of different autochthonous and allochthonous woody species occurred on a certain part of the territories, which led to both decreased utilization of production potentials of the site and insufficient provision of multiple benefit forest functions;

- calculated rotation for forest management of these forests is about 80 years
- These stands are in the phase when conversion has to be started,
- which means that all these stands should be regenerated in a very short period during next 10 years.

In this connection

- the role of silviculture changed

- the necessary forest-silvicultural methods in the conditions of actual state

Application of the

close to nature silviculture,

which implies the permanently sustainable and economically justified silvicultural activities limited by the natural processes

General guidelines for the optimal use of site production potential

- conversion of coppice into high forests;
- amelioration of degraded and devastated forests;
- formation of stable stands with solid density;
- improve the composition of forests;
- tending of forests in accordance with the priority needs;
- preventive conservation of forest ecosystems and repressive protection

Basic silvicultural and ameliorative measures in the coppice forests in Belgrade region

- For the selection of ameliorative method it is important to determine
  - degree of degradation of habitat (soil)
  - degree of degradation forests (production, quality, condition, composition, origin, etc.).:

In the

- Quality coppice forests of valuable tree species and preserve habitat
  - *Indirect conversion* (translation forests in the high form by the natural regeneration)

- Pronounced degradation of forests - apply *direct* conversion process
  If - Land-preserved - degraded forests are being removed and amelioration is done by artificial restoration, reforestation same species (restitution),
  - Stands and habitats are degraded, then the introduction of species of trees can grow successfully in such habitat conditions (substitution)

- Prolonged conversion phase during which major changes in stand condition (next 50-60 years)