

Colloquium on the Millennium Ecosystem Assessment Forest ecosystems

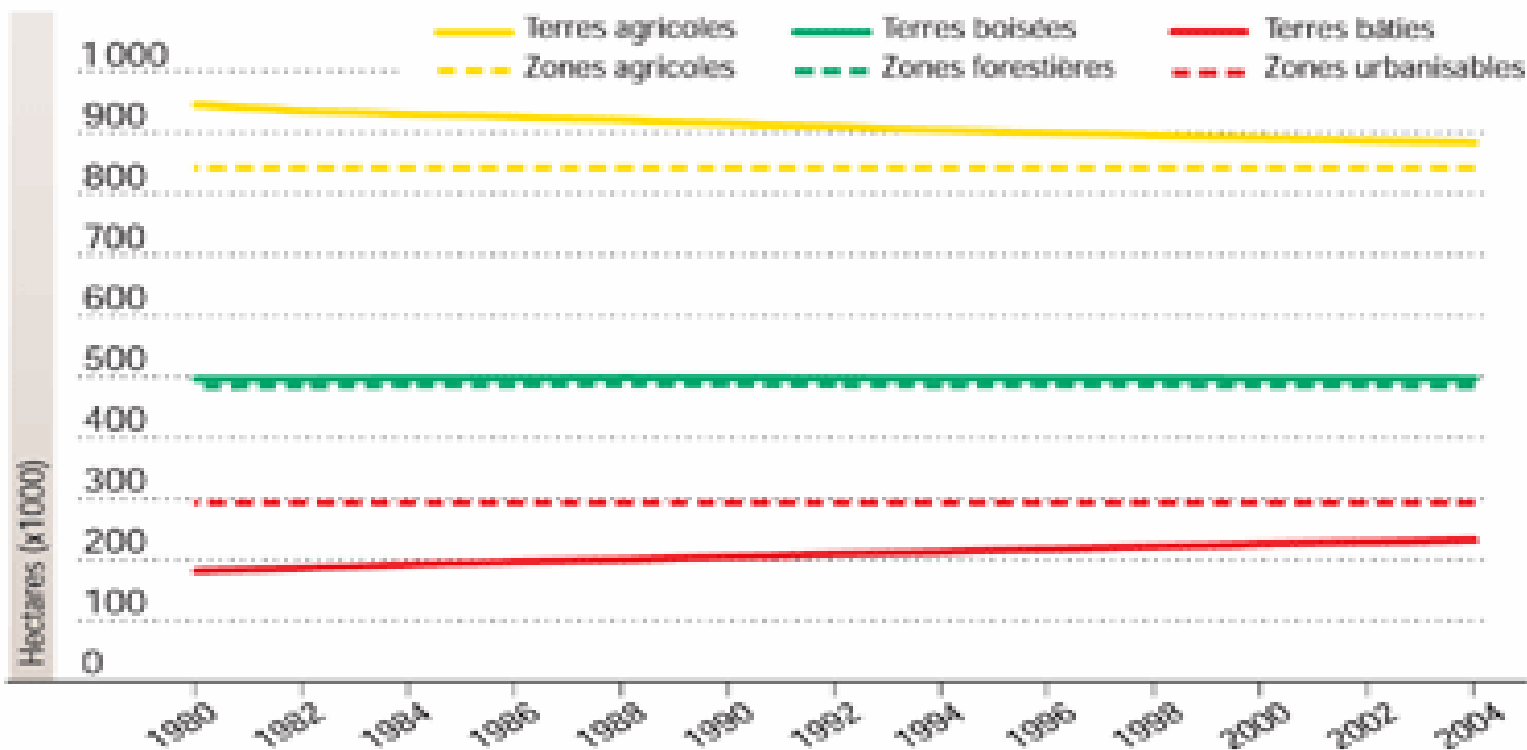
1. Land use
2. Forest management circular
3. Management standards
4. The big game problem
5. Producing quality timber
6. The Seed Bank
7. Forest certification
8. The Walloon Region's forays abroad

1. Land use

Areas of agricultural land, woodland and built areas compared with sector plan zones

FIGURE TERRIT 2-1

Superficies des terres agricoles, boisées et bâties, comparées aux zones d'affectation aux plans de secteur en Région wallonne



Source: CPDT (sur base des données cadastrales)

Natura 2000 :

30% of Wallonia's forests

41% of the forests under public ownership

Habitat of Community interest : 69 % of
N2000 area

« Luzulo-fagetum » beech stands : 56 %
included in N2000 area

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2. Circular on forest resource management for publicly owned forests

Priority aims :

- conservation
- water protection
- soil protection

Conservation :

Aim : conservation of rare or semi-natural formations

Management : prefer irregular high forest
prefer natural regeneration
maintain companion tree species
and bushes

Water protection:

- Watercourses (2 x 25m): 10,000 ha (public)
 - Aims : illumination, physical-chemical quality, filtration and water treatment
 - Management : clear cutting < 200m
drainage and chemical inputs prohibited
low basal area
- Springs (15m)
 - Aims : See above
 - Management : no silviculture

- Water catchments (prevention zone + watershed)
 - Aims : ↗ accumulation of organic matter
 - ↗ concentration and leaching of nitrates
 - Management : ↗ clear cutting
 - drainage prohibited in prevention zone
 - low basal area
 - different ages

Soil protection:

- Hydromorphic soils with temporary and permanent water tables : 19% of Wallonia's forests
 - Aims : avoid rise in water table
 - preserve soil structure
 - ⇒ acidification
 - Management : clear cutting < 2 ha
 - ⇒ drainage
 - low basal area and low planting density

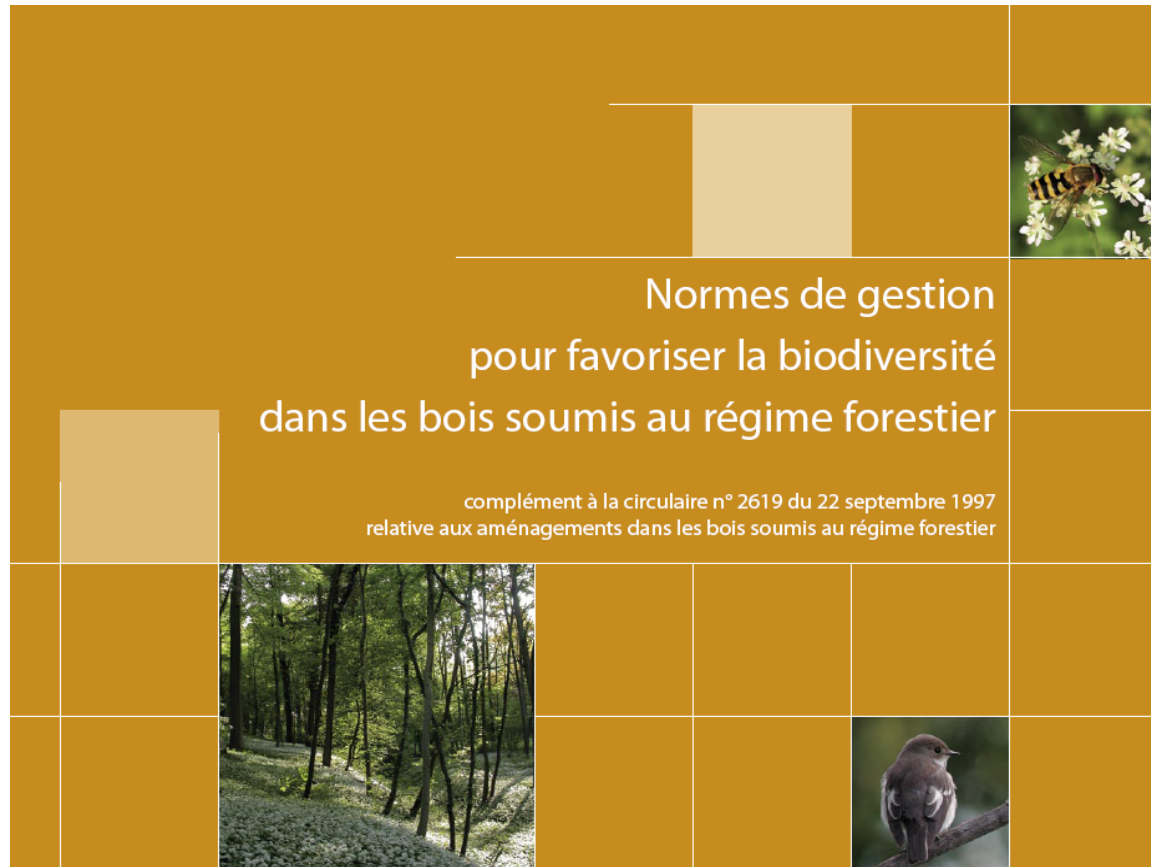
- Peaty soils : 0.4% of Wallonia's forests
 - Aims : avoid soil destruction
guarantee biological value
 - Management : no silviculture

- Sloping soils ($> 15^\circ$): 15% of Wallonia's forests
 - Aims : avoid erosion
soil structure
 - Management: clear cutting < 0.5 ha and < 1 ha
low basal area

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3. Management standards to promote forest biodiversity for publicly owned forests



The image shows the cover of a document titled "Normes de gestion pour favoriser la biodiversité dans les bois soumis au régime forestier". The cover has a dark brown background with a grid pattern. The title is centered in white text. Below the title, it says "complément à la circulaire n° 2619 du 22 septembre 1997 relative aux aménagements dans les bois soumis au régime forestier". There are three small images: a bee on a flower in the top right, a forest scene in the bottom left, and a bird on a branch in the bottom right.

Normes de gestion
pour favoriser la biodiversité
dans les bois soumis au régime forestier

complément à la circulaire n° 2619 du 22 septembre 1997
relative aux aménagements dans les bois soumis au régime forestier

normes de gestion : des expériences à échanger...



Composition



Structure



Lisières



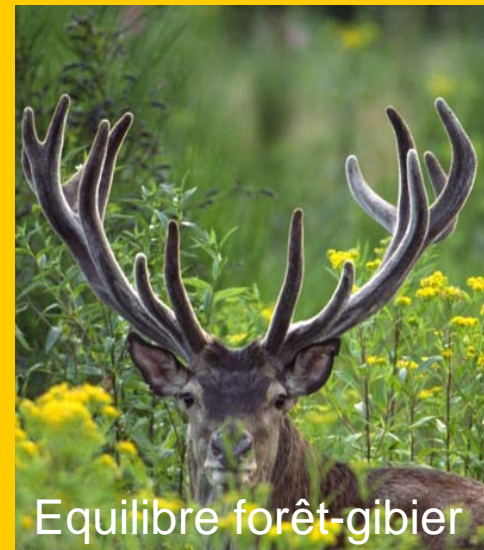
Bois mort



Aires protégées



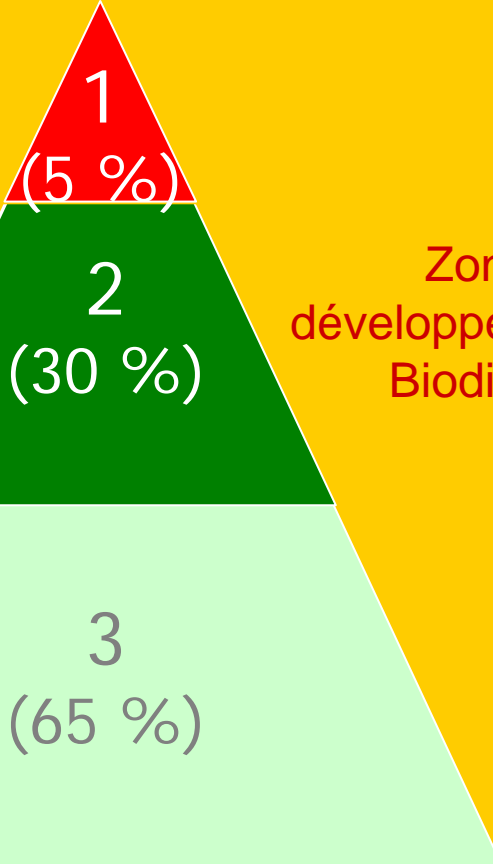
Travaux forestiers



Equilibre forêt-gibier

développer un réseau écologique en forêt

Zones centrales
de conservation



Zone de
développement de la
Biodiversité

Zones multifonctionnelles



- *Composition of stands:*
 - *no replacement of semi-natural broadleaved stands by exotic species*
 - *preservation of companion species (cleaning, thinning)*
 - *natural regeneration*
- *Structure of stands and forms of management:*
 - *maintain coppices and coppices with standards*
 - *natural regeneration in oak and beech forests*
 - *irregular and mixed high forest mgmt schemes*

- *Open areas, edges and interfaces :*
 - *cordon of shrubs ($\geq 10\text{m}$ wide) on the forest's edge*
 - *recommendation not to plant 10m along roads and paths in the forests*
- *Dead and senescent trees:*
 - *2 large trees/ha*
 - *1 tree of biological interest to reserve/2 ha (unusual size, hollow tree)*
 - *□ exploitability size in zones 1 and 2*

- *Protected areas in forest:*
 - *islands of conservation and forest reserves without active intervention*
 - > *3% of area*
 - *managed forest reserves*
 - *coppices, coppices with standards, long rotation selection high forests*
 - > *2% of area*
- *Logging and forestry work schedules*
 - *felling hardwoods and cleaning work; banned in April, May and June*
 - *no incineration of slash*
 - *water protection measures*
 - *stacking areas: along roads*
 - *late mowing of roadsides (1/8 ->)*

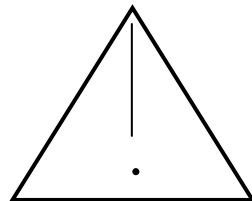
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4. The big game problem

- Damage to stands : 17%
 - beech stands : 9%
 - spruce stands : 34%
 - Douglas fir stands : 24%
- Damage to spruce stands by volume : 13%
- Damage to natural regeneration : 28%

=> economic losses and biodiversity losses



certification

- *Measures concerning big game:*
 - *strict control to allow spontaneous regrowth of woody species*
 - *in zone 2 : no manmade feeding patches within 25m of a habitat of Community interest.*
 - *no manmade feeding patches within 25m of a watercourse*
 - *no dissuasive feeding of wild boar in habitats of Community interest or of ground-nesting species*
 - *merits of irregular and mixed high forests*
 - *in regular high forests :*
 - > *spacing*
 - > *localised cleaning operations*
 - > *heavy thinning*

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5. Producing quality timber by opting for irregular and mixed forests

- Smaller investments
- Better resistance to parasites
- Better quality of humus
- Increased biodiversity
- Better landscape

-> PRO SILVA

2006 targets : 10,000 ha

awareness raising

Producing quality timber by opting for regular forests

Major investments

-> must be more intensive to:

- improve stability
- ↗ harvesting age
- improve the quality of the humus
- improve resistance to parasites

-> must favour mixtures

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6. Seed Bank

- **Species diversity :**
 - 32 forest tree species (sorbier, fusain, ...)
- **Gene diversity :**
 - □ diversity of provenances
 - harvest on > 20 trees/prov.
 - mixing of provenances from a provenance region



Seed Bank

(Sales 1995-2006)

• Conifers

- **16 species/more than 60 provenances**
- **37.500.000 plants**
- **18.500 ha**

• Broadleaves

- **16 species/more than 60 provenances**
- **18.000.000 plants**
- **9.000 ha**

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7. PEFC certification: regional progress plan

Development by a broad regional group (owners-managers, forest technicians, scientists, environment NGOs and users)

Examples of **aims** and actions:

Promote integrated forest resource management plans:

definition and mapping of conservation areas

Keep chemical inputs in the forest (e.g., phytocides, pesticides and fertilisers) to the strict minimum.

Improve biodiversity in the forest on all levels
(genes, species and ecosystems)

Improve game management and forest-game equilibrium

Promote selection and mixed hight forests

Verification of the plan's implementation by an outside auditor

PEFC Certification: the owner's commitment

Drafting of a sustainable forest management charter.

Verification of implementation by field audits.

Concerns 249,000 hectares (= 46%) of Wallonia's forests

- manage the forest so as to maintain, even restore, areas of special biological value;
- install adapted and sufficiently varied species;
- set up mixed stands;
- apply dynamic forestry techniques;
- leave old and dead trees in place;
- use biological and/or integrated protection method;
- use clear cutting with discernment only and never exceed an area of 10 ha for a single cut;
- use methods that ensure a better forest/game equilibrium.

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- MAURITANIA: extension of Nouakchott's green belt
 - 550 ha
- MOROCCO:
 - *Maison de la Cédraie* (Cedar Centre) at Ifrane
 - sustainable development indicators for the Middle Atlas
 - book on the Atlas cedar, *Le Cèdre de l'Atlas*
- ROMANIA: Nera virgin beech forest
- PERU: 20,000 ha



Le Cèdre de l'Atlas

Mémoire du temps



MARDAGA





