Spanish old-growth forests:
some examples of networks
at different levels

O. Schwendtner & J.A. Atauri

European Commision - Natura 2000 Biogeographical process
Workshop on Mediterranean forest management and Natura 2000
9 to 11 may 2016, Parc Naturel de Luberon, France
1.- INTRODUCTION
A long history of anthropogenic use ...

Coppice system
and
Pollard system
to get firewood and
to make charcoal
Until beginning of XX century: big surfaces of open forests with pollards (cattle grazing & charcoal making).
Logging. Negative selection system during the first half of twentieth century
99,99% of Spanish forests have been exploited in any time of the History.
2.- CURRENT FOREST MANAGEMENT

Even-aged stands (shelterwood system) renewable product …
Economical cycle (in only 100 yrs.)

Sampling

Young stage

Forestry "shorter way"

Self-thining stage

Forestry "shorter way"

"Old-growth stand"

We have systematically lost our old-growth forest stands....
3.- NATURAL DEVELOPMENT OF FORESTS

Without timber extraction... begins an ecological process:

- the age and size of trees grows
- perturbations open gaps in the canopy
- begins a new regeneration by little patches
- deadwood volume increases

As a result... quality of habitat for specialized species will be improved... but some of them have been lost along the way... LOCAL EXTINCTIONS
4.- PROTECTED AREAS IN SPAIN
- In some of them (IUCN I & II), timber extraction is not allowed
- In other (IUCN III – VI), timber extraction is allowed

Ordesa National Park (IUCN II)

Urbasa Natural Park (IUCN VI)
27% of national territory under Natura 2000.
56,5% covered by forests.

- **22 forest habitat types in the Mediterranean Region**
- 13 forest habitat types in the Atlantic Region
- 11 forest habitat types in the Alpine region

**17 forest habitats** in *unfavorable-bad* conservation status
5.- AWARENESS about OLD-GROWTH FORESTS in SPAIN

- Long history of use (timber extraction, grazing, hunting,...). No pristine places.
- Recent trend of use abandonment and forest expansion
- High prevalence of (big) forest fires in the Mediterranean region
- Society demands new services from forest ecosystems (cultural, recreation, nature conservation ...)
- Need of identification of sites in favourable conservation status: “Reference Forests”
Different initiatives have been developed in recent years:

5.1.- At the National level: EUROPARC-Spain “Conservation Group”

Networking, exchange of expertise

Access to information and best practices

Development of standards

Monitoring and evaluation
Initial prospection of candidates (cualitative)

Structure indicators of selected old growth stands

Reference Forests per Habitat Type

Pinus sylvestris

Juniperus thurifera

Pinus halepensis

Pinus nigra
25 stands
10 forest types
Perspectives

“Networks of knowledge and training for the effective management of Mediterranean forest habitats of Nature 2000”. [Revision phase]
LIFE - Environmental Governance and Information

Partners:
- EUROPARC Spain
- Generalitat de Catalunya
- CCREAF (Universidad Autónoma de Barcelona)
- Fundació Catalunya-La Pedrera (private sector)

Total budget: 590.154 €
Duration 3 years (nov2016 – nov2019)
5.2.- An example at the International level: An old-growth beech forests network in Europe: a transnational serial nomination to the UNESCO World Heritage List

- 9 sites already declared.
– 2012: More than 40 new candidates through the different ecological areas for beech in Europe
Finally in 2016:
33 new candidate sites in 11 State Parties

An old-growth beech forests network in Europe:
a transnational serial nomination to the UNESCO World Heritage List
WHL Spanish candidate nr. 3: Hayedos de Ayllón (Montejo & Tejera Negra)

- Mediterranean bioregion: influence of drought and frost
- Ancient open Woodland with pollards, riparian beech forest and krummholz (tree-line near 2000 meter)
Another int. level example: VETree project, 2012-2014
Veteran tree network

Aim: old trees conservation as habitat

A network of people:
(Sweden, England, Romania, Belgium, Spain) - interchange of knowledge about veteran trees, training on conservation management.
5.3.- At the Regional level: Aragón network of reference old-growth stands

Main goals

1.- To develop a methodology for identification and characterization of reference stands

2.- To select simple and effective indicators (measurable and comparable)

3.- To establish a reference level (threshold values) for the diff. forests
Requirements:

- Continuity of forest cover over a long enough period of time.

Valle de Estós (Pyrenees).

*Pinus uncinata* reference stand.
Other requirements

- Old tress
- Natural dynamics
  (gaps and regeneration)
Other requirements

- High deadwood volumen
- Dendro-microhabitats
Some examples of the reference stands in the Aragón network (in Mediterranean Bio-Region)
5.4.- At the Local level: Montseny Natural Park

network of old-growth stands

A mountain landscape near the Mediterranean sea with a high diversity of forests
Some examples of old-growth stands:

- **Abies alba** stand
- **Quercus ilex** stand
- **Ancient Castanea sativa** stand
- Alluvial stand
6.- SOME PROPOSALS

A) On research:

1,- Search on natural dynamics, structural complexity, quality of hábitat (for specific species), vulnerability of the ecosystem

2,- Search on climatic change impact. Search on the species & system adaptation

B) On management:

3,- Changes in the way to use the forests (“Close to Nature management”, “Adaptive ecosystem-based management”)

4,- Better protection of old-growth stages, (establishment of areas of free evolution not only in the protected áreas).
Thank you very much for your attention

Merci beaucoup