


Symposium on Fire Management in Cultural and Natural Landscapes, Nature Conservation and Forestry in Temperate-Boreal Eurasia
Freiburg, Germany, 25-27 January 2008

Prescribed Range Burning in the French Pyrenees

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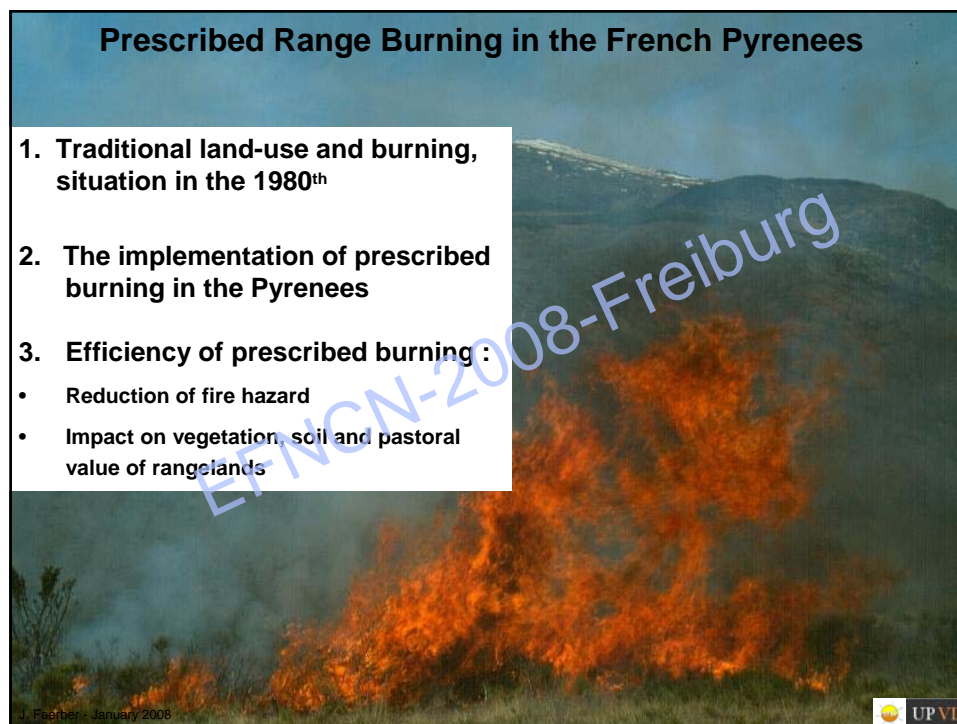
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Prescribed Range Burning in the French Pyrenees

1. Traditional land-use and burning, situation in the 1980th
2. The implementation of prescribed burning in the Pyrenees
3. Efficiency of prescribed burning :
 - Reduction of fire hazard
 - Impact on vegetation, soil and pastoral value of rangelands



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Traditional land-use and burning in the Pyrenees (19th century)

Open landscapes, strong grazing intensity

No fuel accumulation, low fire intensity

Illustration : J.P. Métaillé (modified)

Situation in the 20th century : decrease of agro-pastoralism, fuel accumulation

decrease of pastoral value

decrease of landscape quality

Illustration : J.P. Métaillé (modified)


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Persistence of fire use

Stronger regulations


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Uncontrolled burnings, increasing damages



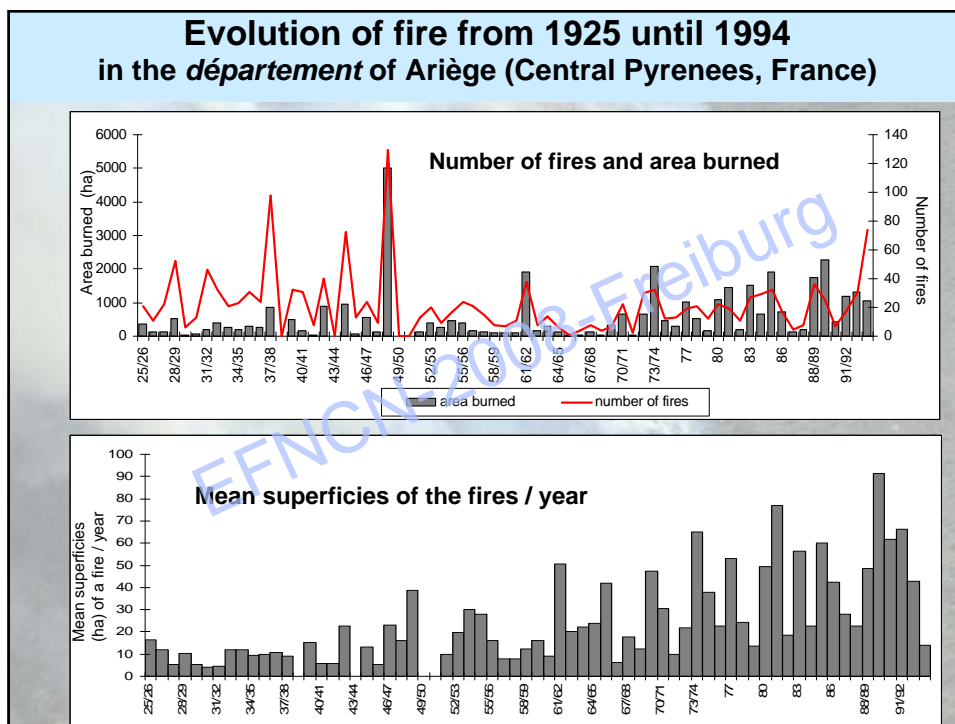


Burned pine forest, Prats de Mollo, Pyrénées-Orientales



Burned oak forest, Melles, Haute Garonne

J. Faerber - January 2008 Illustration : J.P. Métailié (modified)



Development of a new fire policy since the 1980th

Damages linked to uncontrolled burnings, fire regulations inefficient

Need of an effective land management tool

Development of prescribed burning

Scientific and public reconsideration of fire

The Pyrenees – a diversified mountain range

FRANCE

SPAIN

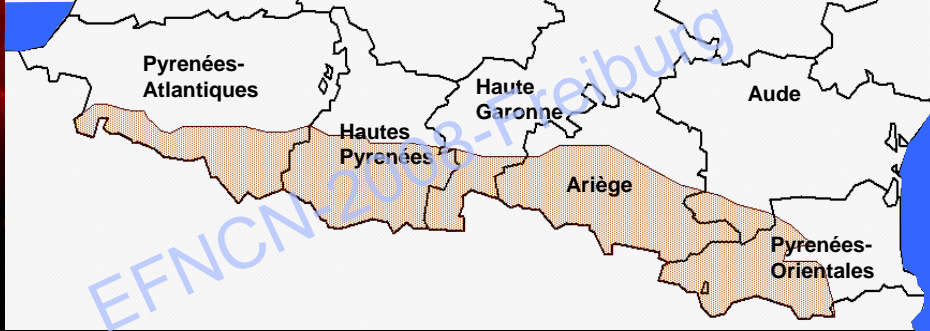
PYRENEES

oceanic Climate mediterranean

high Stock-breeding low

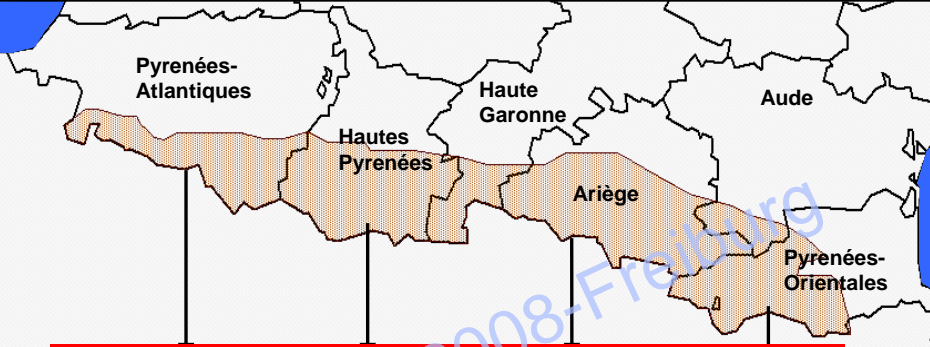
Intense, trad.know-how Use of fire Less intense, uncontrolled

The Pyrenees – a diversified mountain range



National laws («code forestier... », but
Regional decision making and implementation of fire policies

Different strategies at the level of départements



Area burned (ha / year)	≤16000 ha (authorized)	?	1000-1500 ha (authorized) + 100-300 ha	1000 ha/year + 100-200 ha
Rangeland area	152530 ha	136940 ha	121770 ha	110680 ha
	± 10%		± 1%	± 1%

+ illegal burning, forest fire...

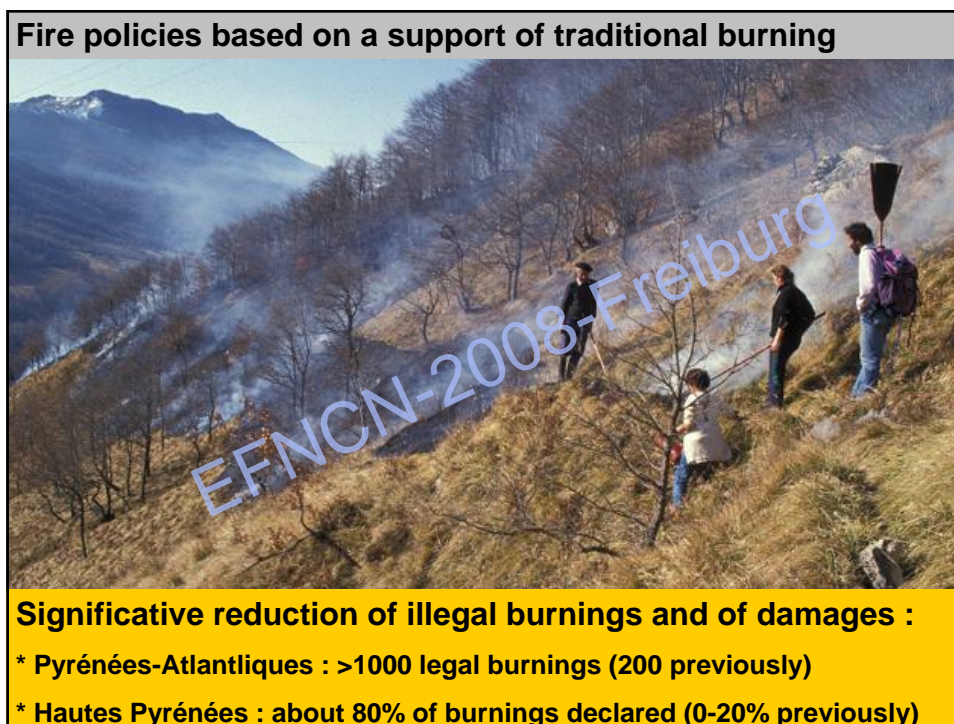
Fire policies based on traditional burning :
(Pyrénées-Atlantiques, Hautes Pyrénées)

- new, more appropriate legislation
- cooperation between all stakeholders involved (private and institutional)
- Information, technical help
- Local management



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Fire policies based on a support of traditional burning



Significant reduction of illegal burnings and of damages :

- * Pyrénées-Atlantiques : >1000 legal burnings (200 previously)
- * Hautes Pyrénées : about 80% of burnings declared (0-20% previously)

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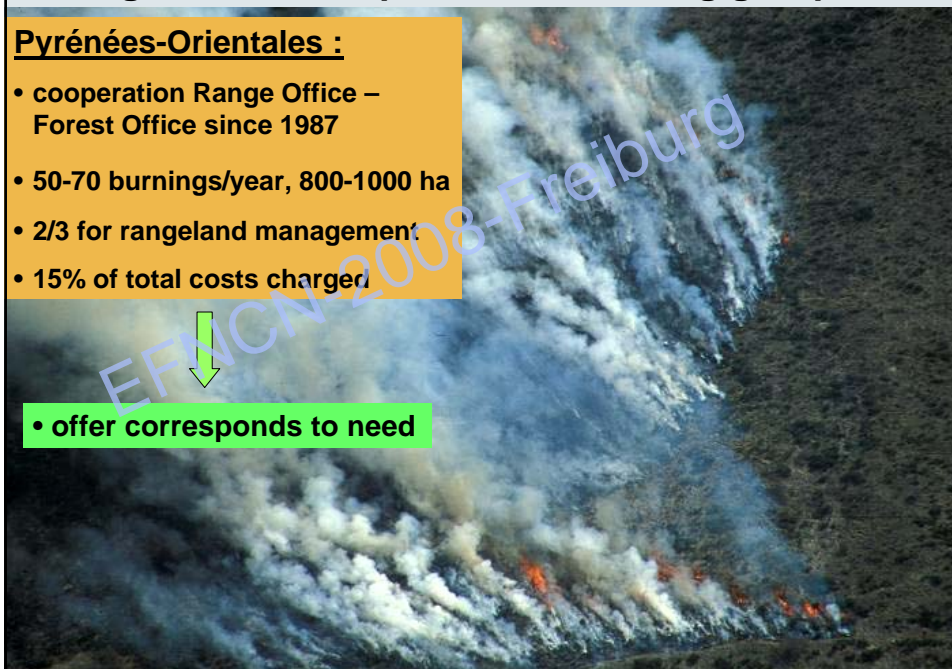
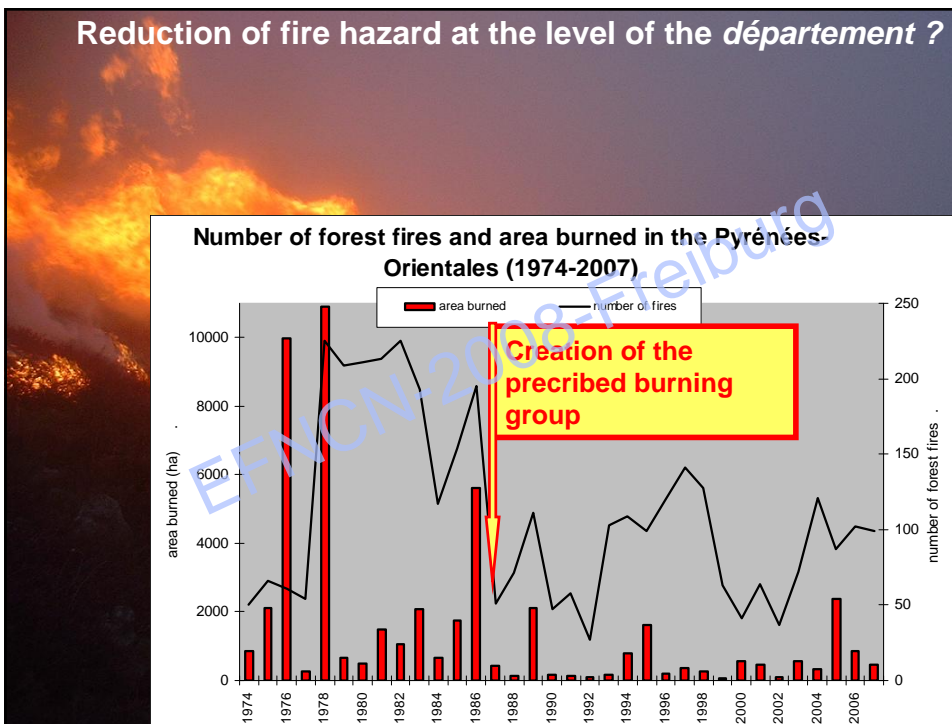
Strategies based on prescribed burning groups

Pyrénées-Orientales :

- cooperation Range Office – Forest Office since 1987
- 50-70 burnings/year, 800-1000 ha
- 2/3 for rangeland management
- 15% of total costs charged

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- offer corresponds to need

« Mixed » strategy

Ariège :

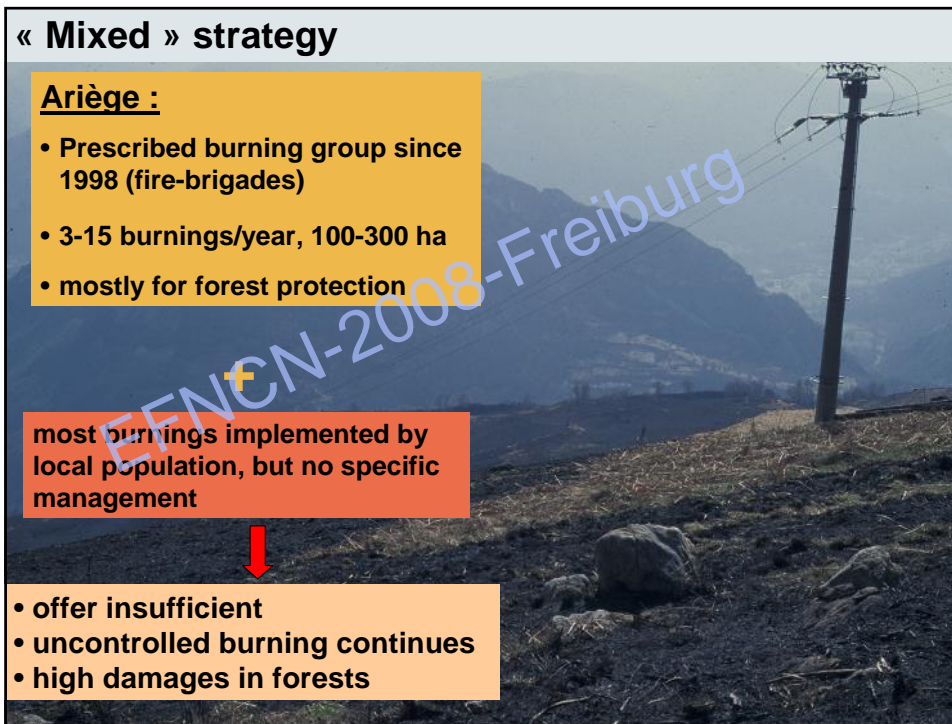
- Prescribed burning group since 1998 (fire-brigades)
- 3-15 burnings/year, 100-300 ha
- mostly for forest protection

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most burnings implemented by local population, but no specific management

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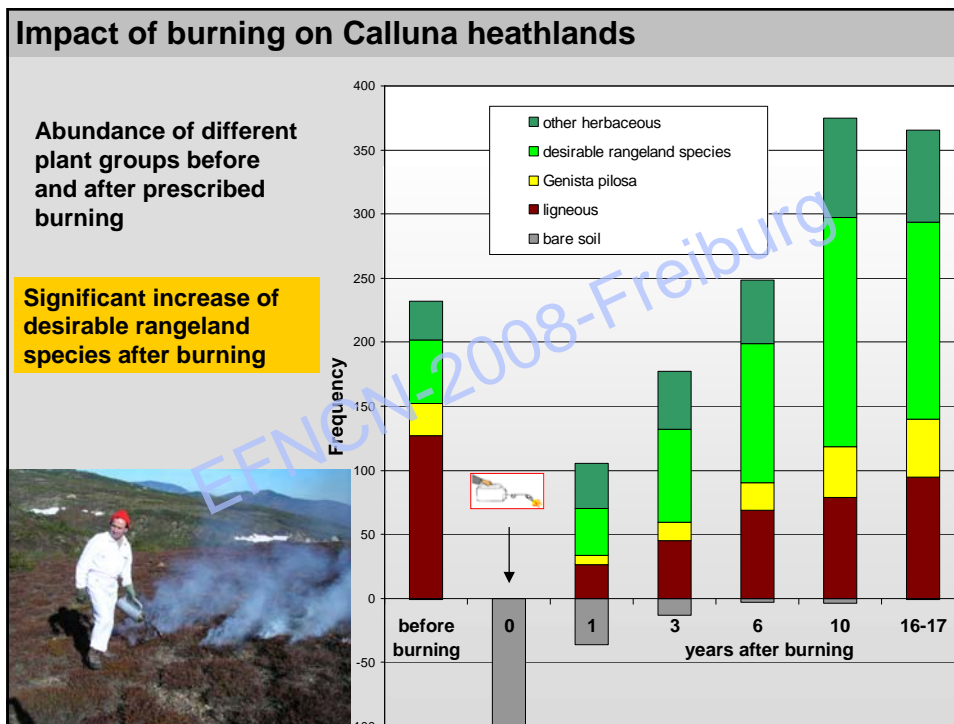
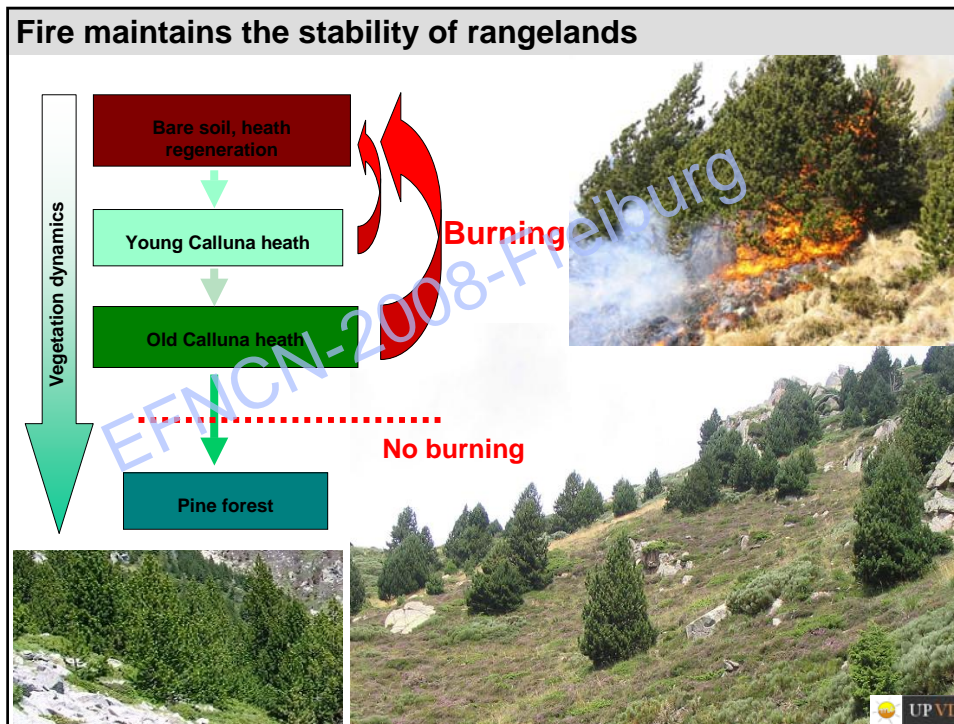
- offer insufficient
- uncontrolled burning continues
- high damages in forests

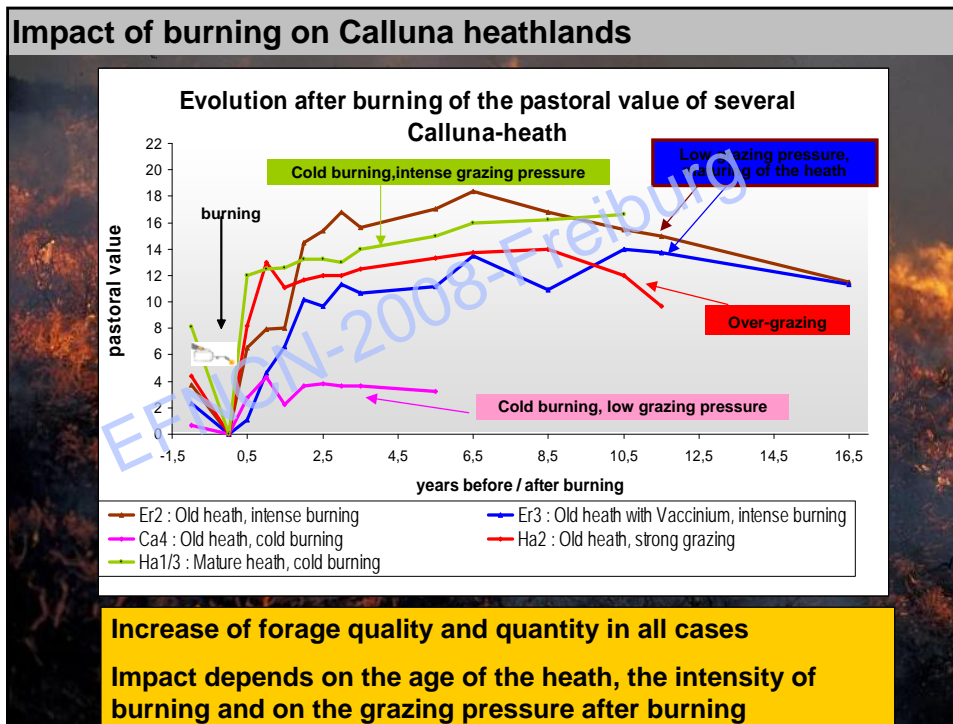


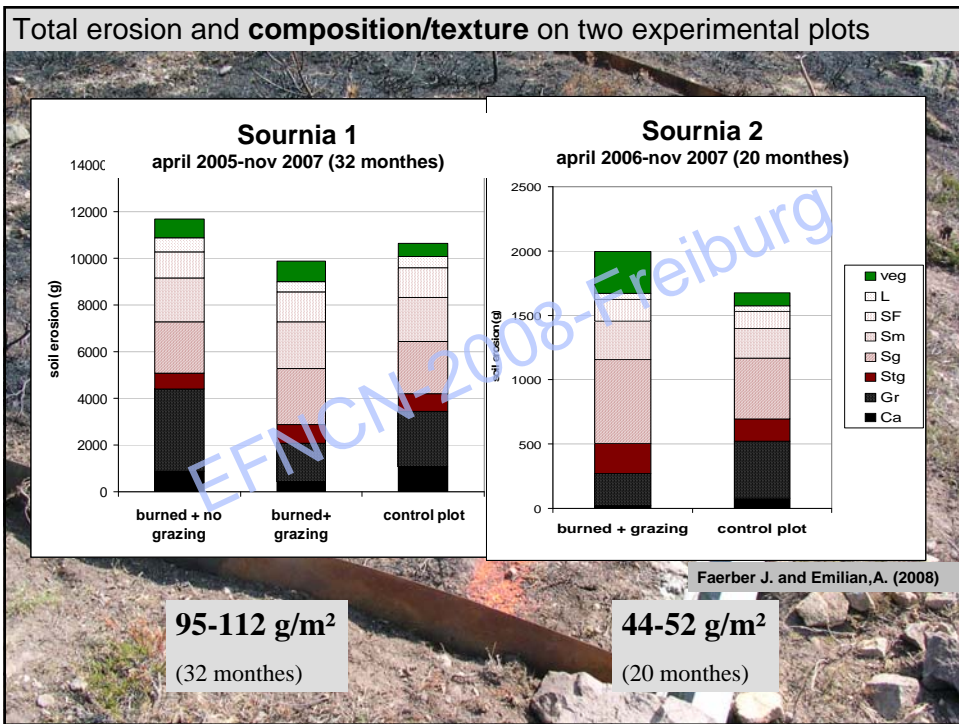
Impact of fire on vegetation and soil

Example of Calluna heathlands :
monitoring on permanent transect lines since 1990

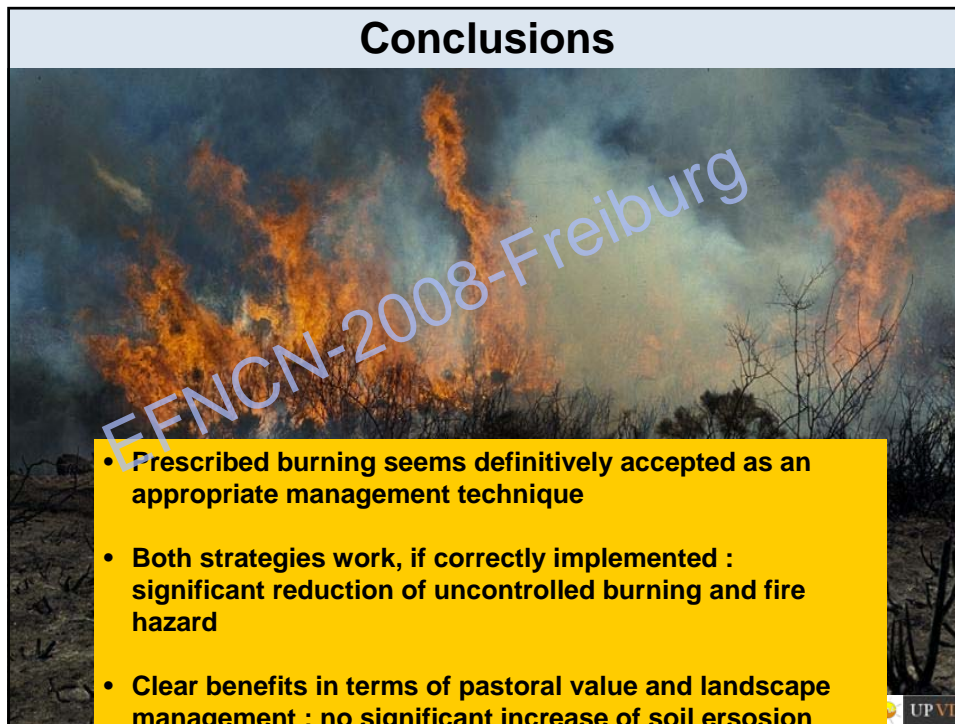








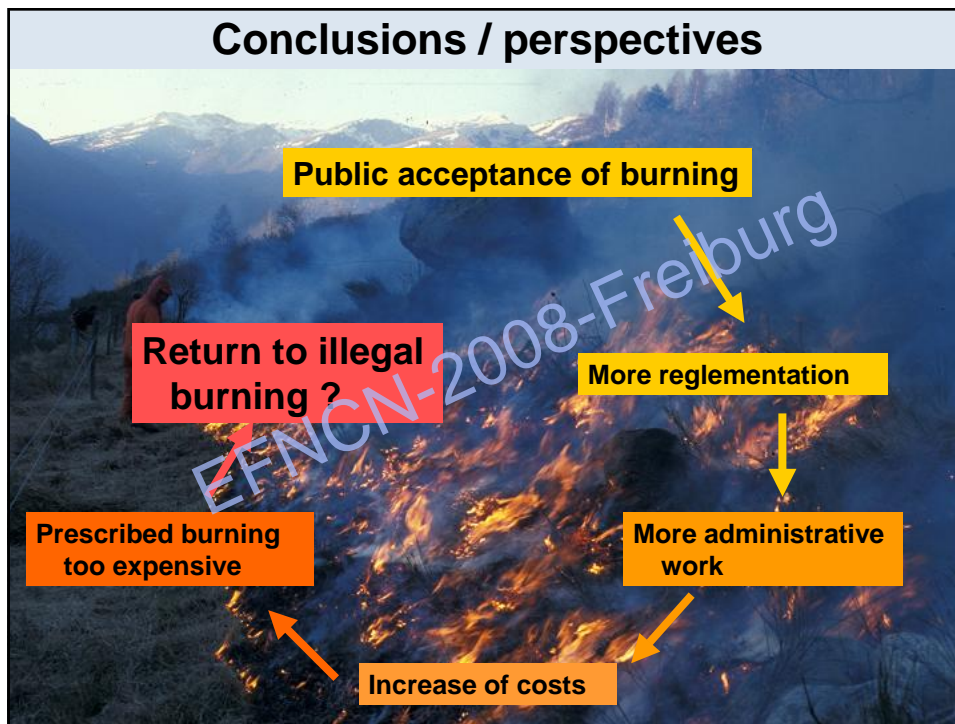
Conclusions



- Prescribed burning seems definitively accepted as an appropriate management technique
- Both strategies work, if correctly implemented : significant reduction of uncontrolled burning and fire hazard
- Clear benefits in terms of pastoral value and landscape management : no significant increase of soil erosion

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Conclusions / perspectives



Public acceptance of burning

Return to illegal burning ?

More reglementation

More administrative work

Increase of costs

Prescribed burning too expensive



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