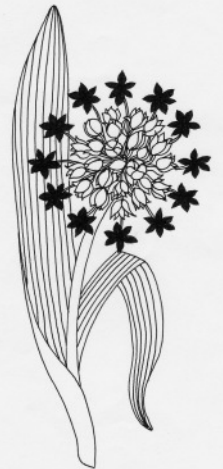


A phytosociological approach to grassland classification

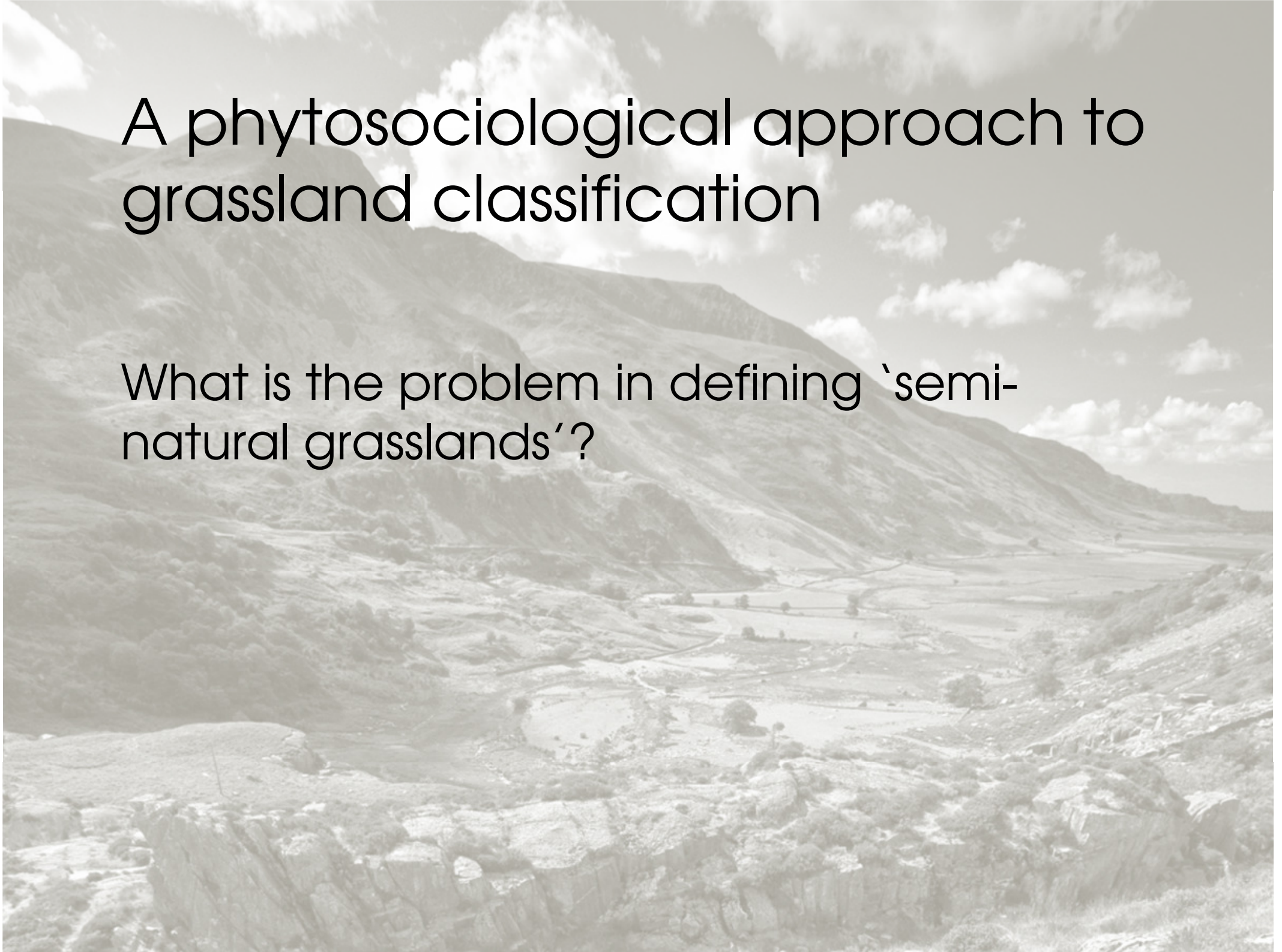
John Rodwell
European Vegetation Survey

European Grasslands Federation Workshop
Aberystwyth 7 September 2014



A phytosociological approach to grassland classification

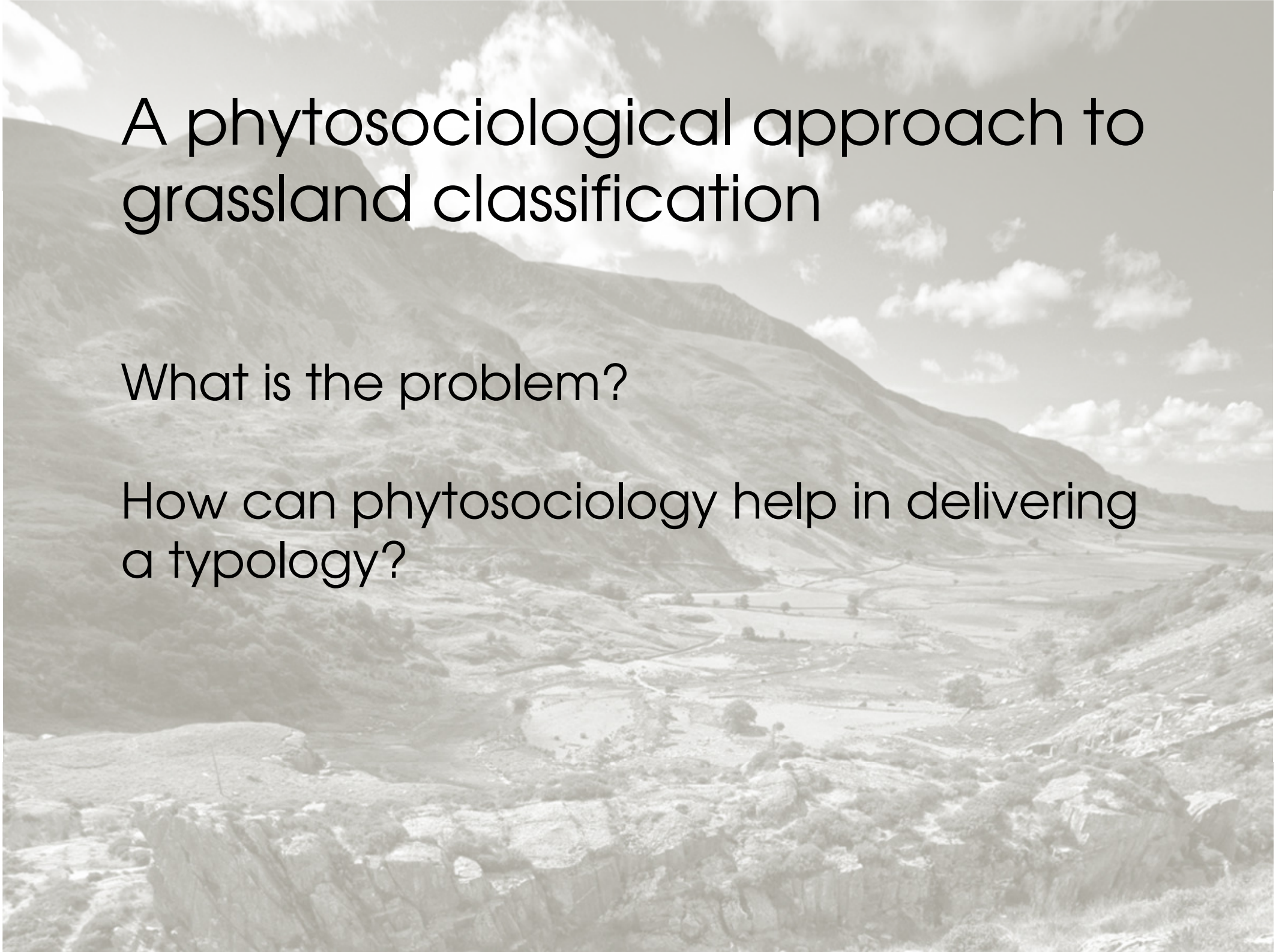
What is the problem in defining 'semi-natural grasslands'?



A phytosociological approach to grassland classification

What is the problem?

How can phytosociology help in delivering a typology?

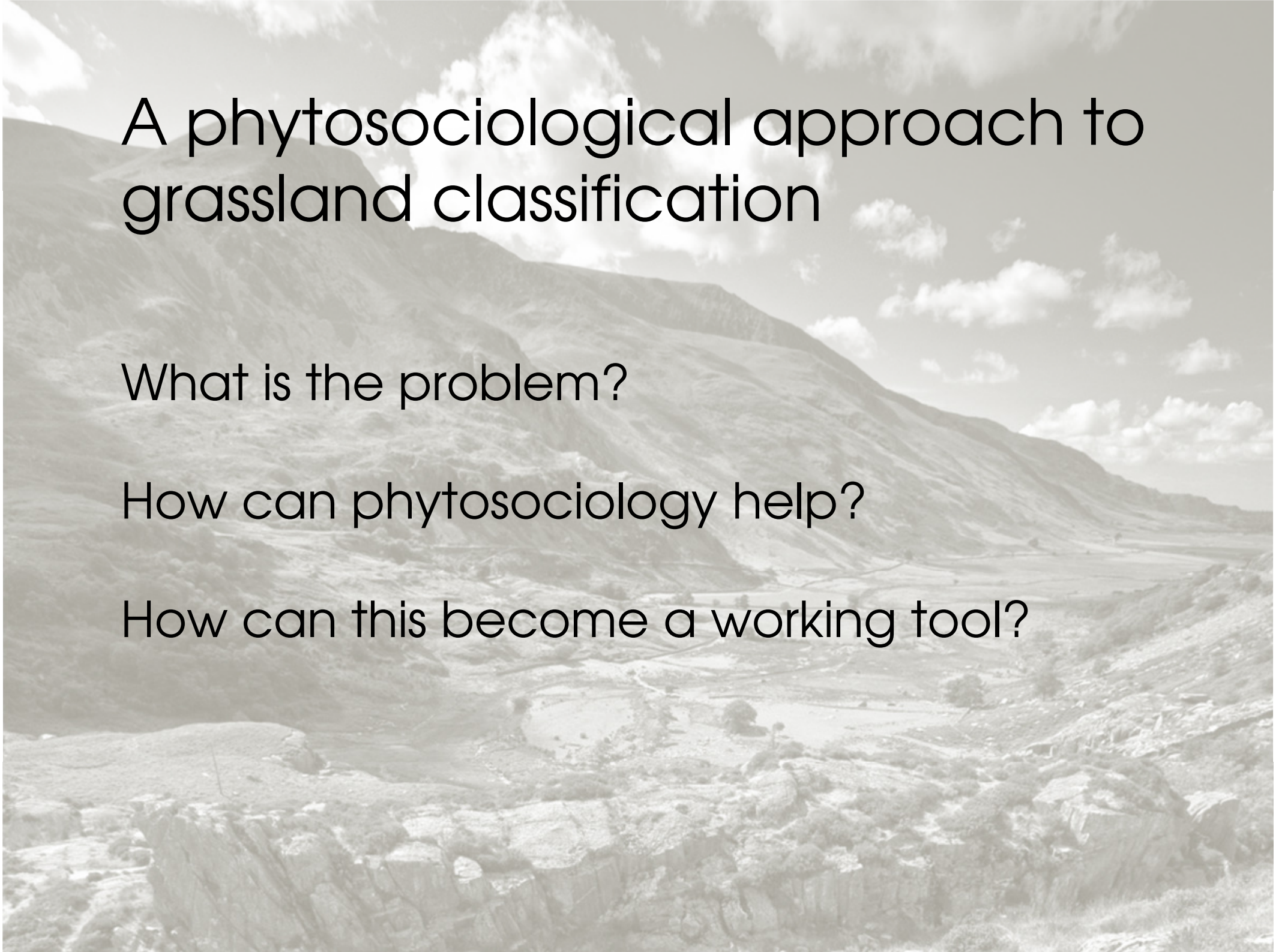


A phytosociological approach to grassland classification

What is the problem?

How can phytosociology help?

How can this become a working tool?



A phytosociological approach to grassland classification

A report from the European Forum for
Nature Conservation & Pastoralism



A phytosociological approach to grassland classification

A report from the European Forum for Nature Conservation & Pastoralism

Inadequate definitions of 'permanent pasture' and 'semi-natural grassland' in agri-environment legislation

A phytosociological approach to grassland classification

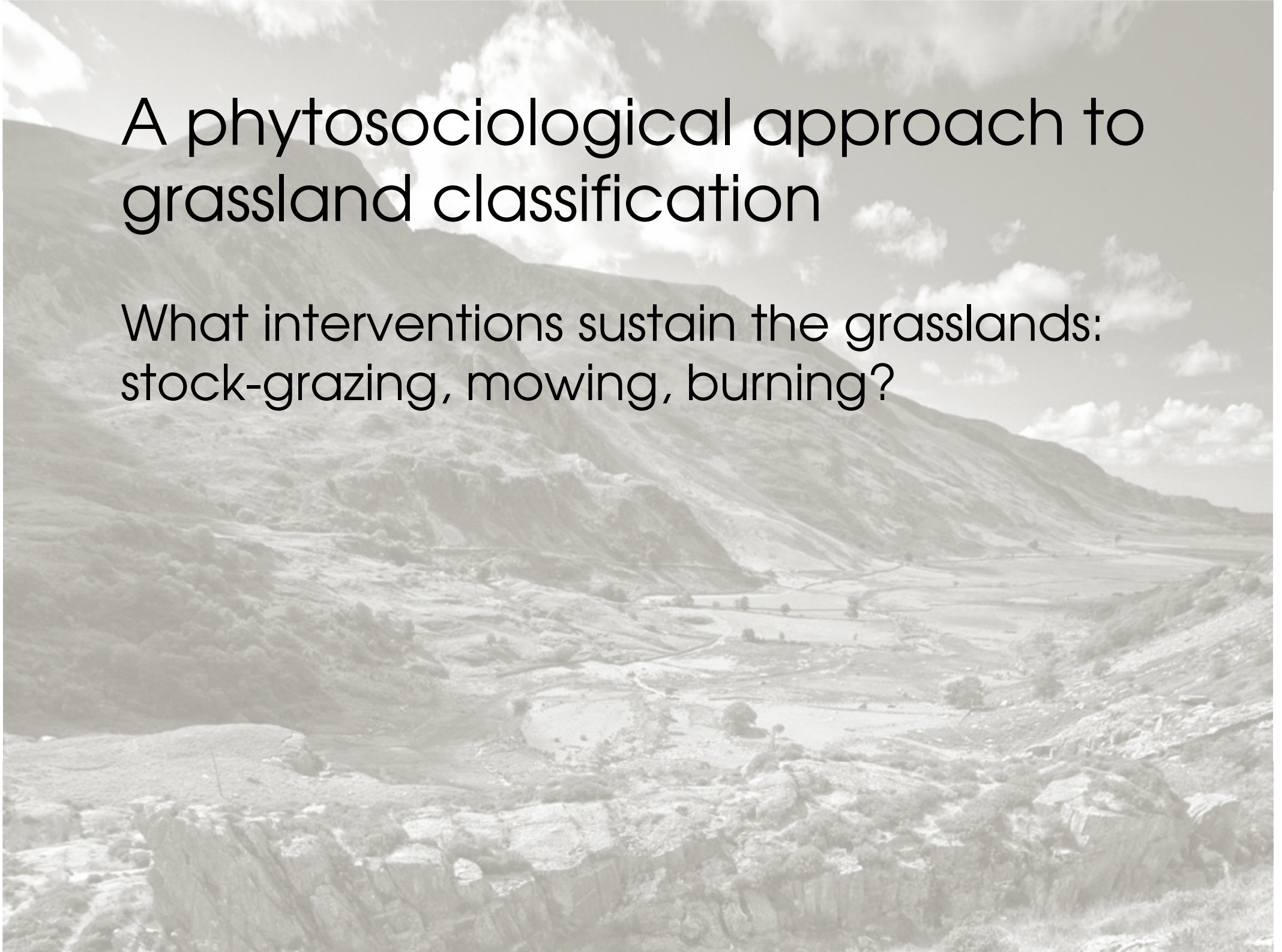
A report from the European Forum for Nature Conservation & Pastoralism

Inadequate definitions of 'permanent pasture' and 'semi-natural grassland' in agri-environment legislation

Questionnaire to European Vegetation Survey & European Dry Grassland Group members

A phytosociological approach to grassland classification

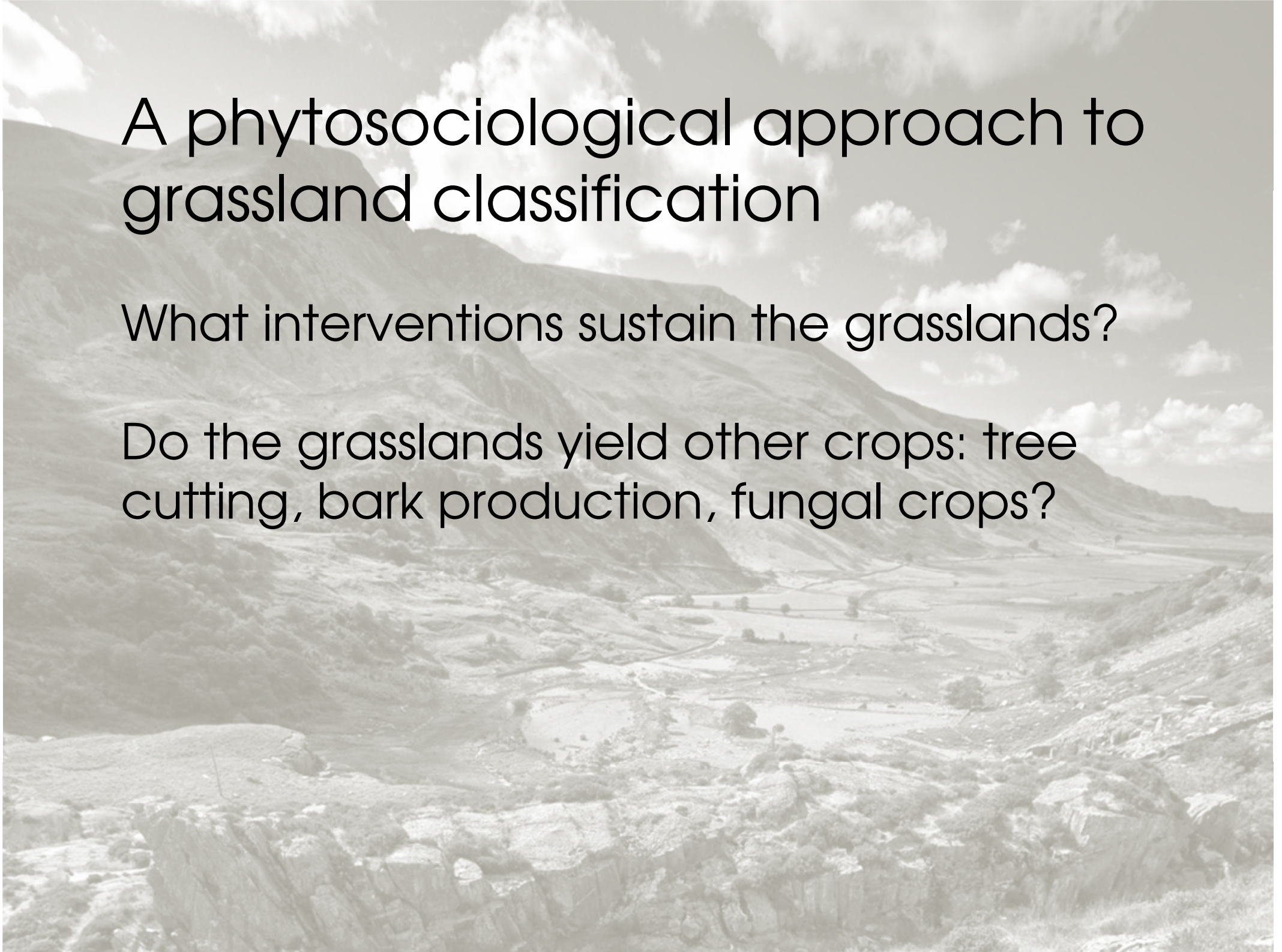
What interventions sustain the grasslands: stock-grazing, mowing, burning?



A phytosociological approach to grassland classification

What interventions sustain the grasslands?

Do the grasslands yield other crops: tree cutting, bark production, fungal crops?

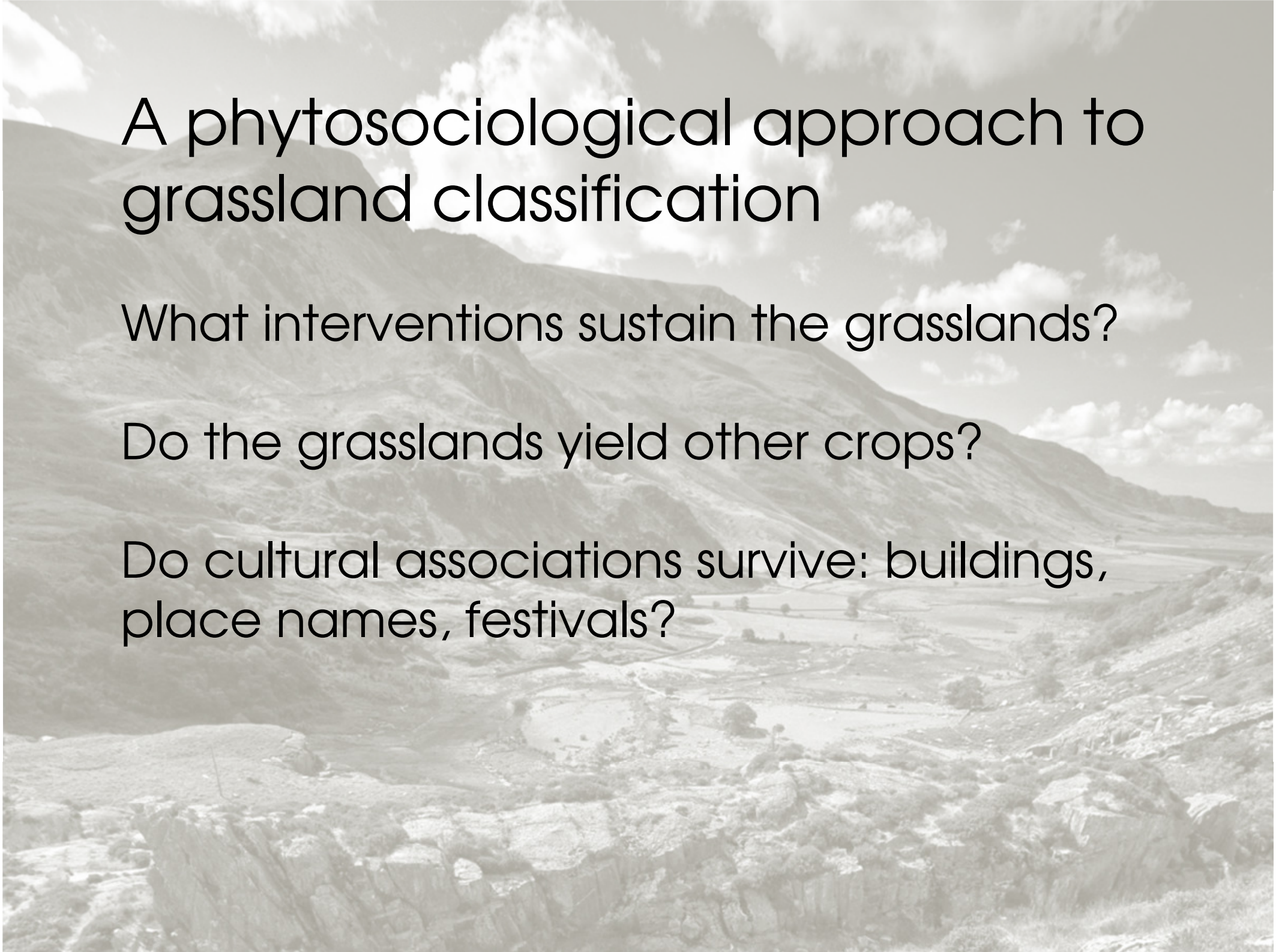


A phytosociological approach to grassland classification

What interventions sustain the grasslands?

Do the grasslands yield other crops?

Do cultural associations survive: buildings, place names, festivals?





A phytosociological approach to grassland classification

What interventions sustain the grasslands?

Do the grasslands yield other crops?

Do cultural associations survive?

Is traditional management abandoned?

A phytosociological approach to grassland classification

What interventions sustain the grasslands?

Do the grasslands yield other crops?

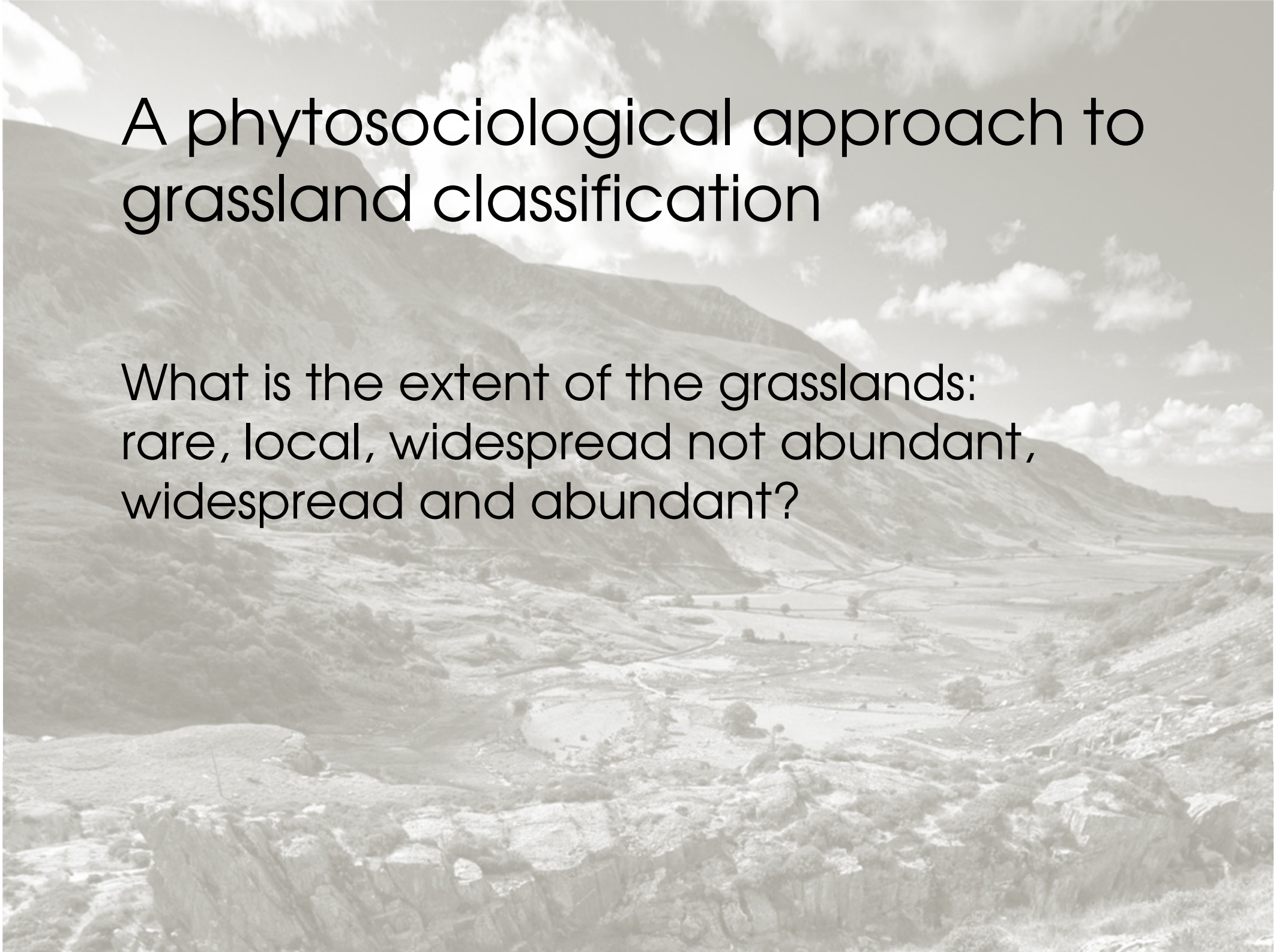
Do cultural associations survive?

Is traditional management abandoned?

Is the grassland now maintained by nature management or for amenity?

A phytosociological approach to grassland classification

What is the extent of the grasslands:
rare, local, widespread not abundant,
widespread and abundant?



A phytosociological approach to grassland classification

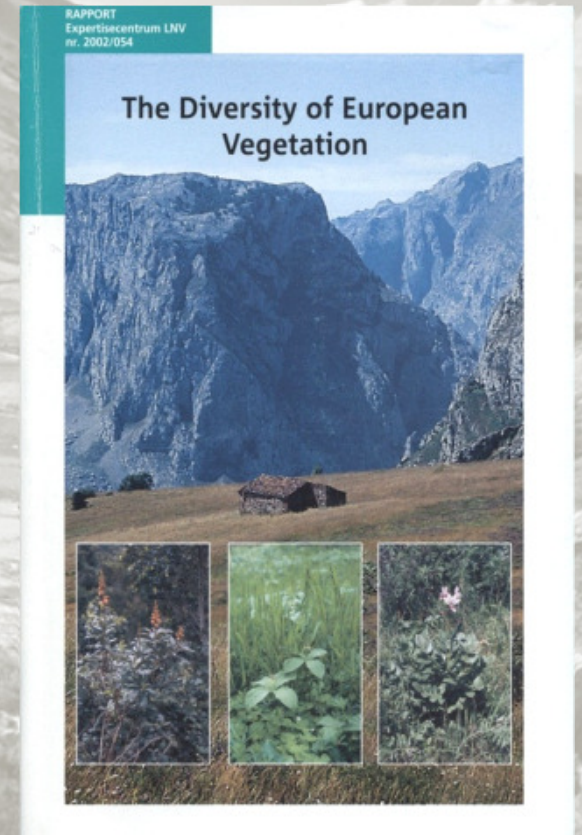
What is the extent of the grasslands:
rare, local, widespread not abundant,
widespread and abundant?

How threatened are the grasslands:
extremely endangered, endangered,
vulnerable, in no immediate danger?

A phytosociological approach to grassland classification

Using *The Diversity of European Vegetation*
as a framework

7 classes of grasslands
with 183 alliances



The kinds of agriculture dependency

Stock grazing: 73 alliances (61% total)

Mowing: 27 alliances (23%)

Burning: 14 alliances (12%)



Abandonment of agriculture dependency

Stock grazing: 70% with major abandonment

Mowing: 81%

Burning: 78%



Nature management of abandoned grasslands

Stock grazing: 70% with major abandonment

Mowing: 81%

Burning: 78%

Nature management in 29% of abandoned grassland alliances (in theory)

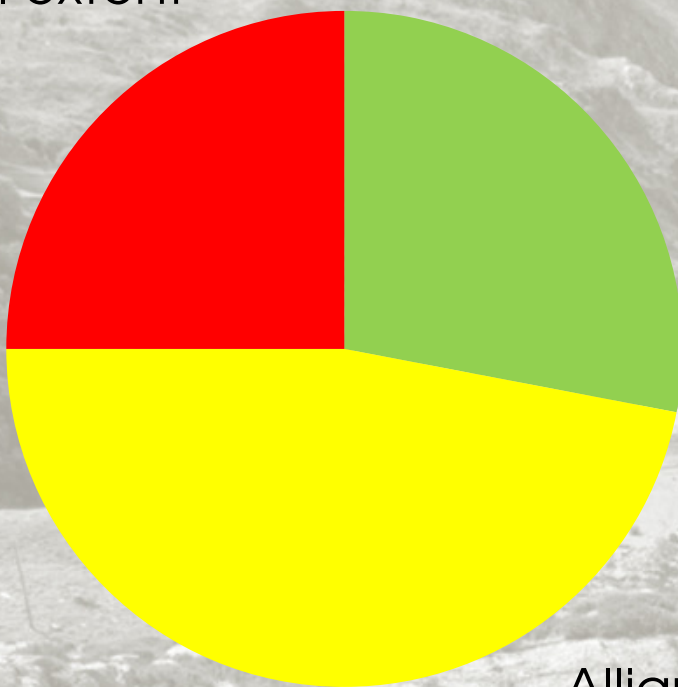


Overall extent of European grasslands

Alliances of
small extent

Alliances of
wide extent

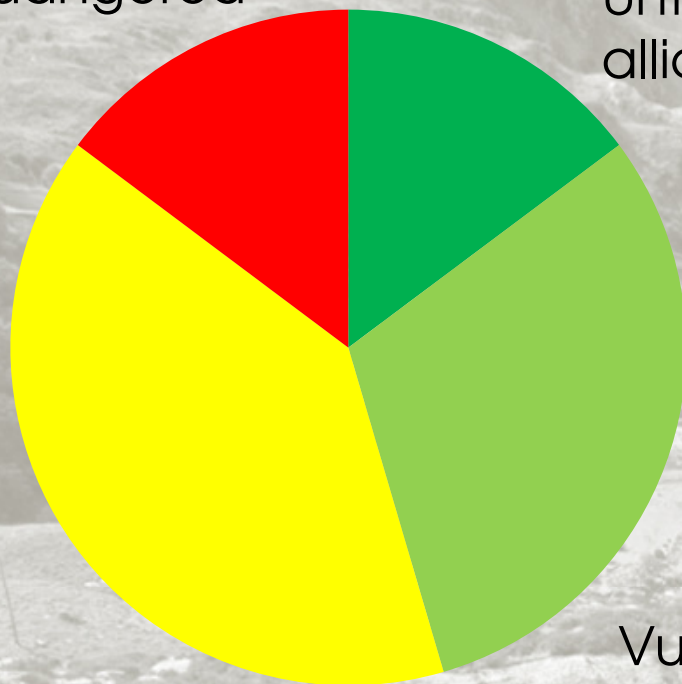
Alliances of
local extent



Degree of threat to European grasslands

Extremely
endangered

Unthreatened
alliances



Endangered

Vulnerable

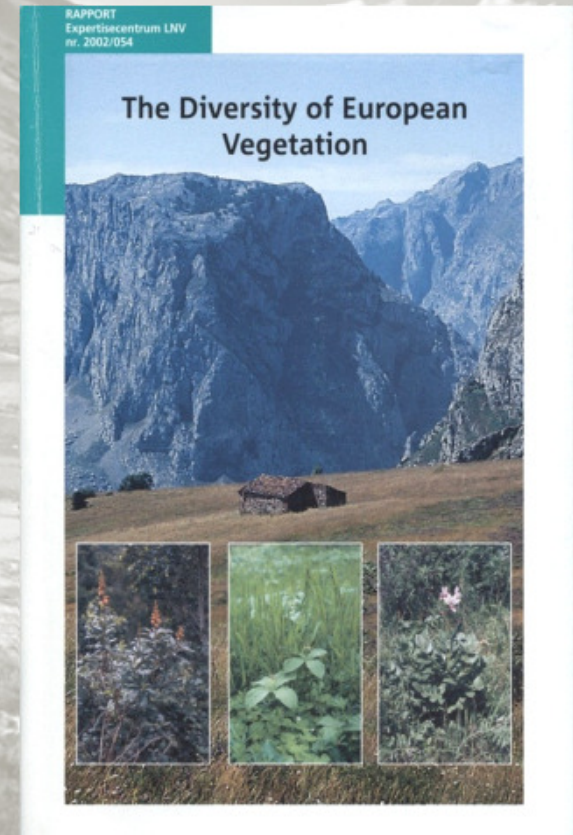


A phytosociological approach to grassland classification

Using *The Diversity of European Vegetation* as a framework

7 classes of grasslands with 183 alliances

Crosswalk to EUNIS habitat classification (Davies et al 2002)

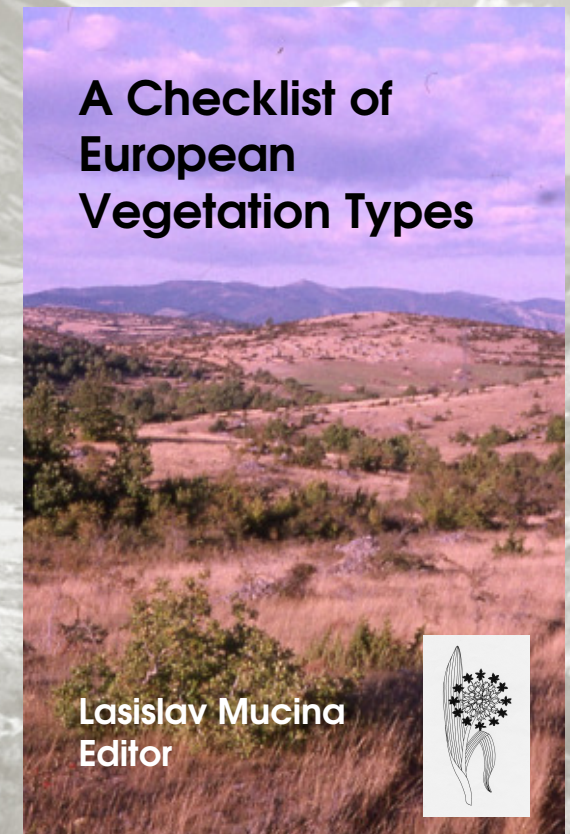


A phytosociological approach to grassland classification

Using *The EuroVegChecklist*
as a framework

11 classes of grasslands
with >200 alliances

Crosswalk to EUNIS
habitat classification
(Davies et al 2002)



A phytosociological approach to grassland classification

Using *The EuroVegChecklist*
as a framework

11 classes of grasslands
with >200 alliances

Crosswalk to EUNIS

Crosswalk to European
Red List Habitats

Red List Assessment of European
Habitat Types

- A feasibility study -



John Rodwell
John Janssen
Susan Gubbay
Joop Schaminée

April 2013

A phytosociological approach to grassland classification

Red List Habitats Grasslands

31 Dry Grasslands

8 Mesic Grasslands

7 Seasonally Wet Grasslands

6 Alpine & Subalpine
Grasslands

52 Grassland types

E3.3. Submediterranean moist meadows

Description: Andriat Čarni

Habitat description

These are lowland hay meadows that cover riverside terraces and depressions. This is typical lowland vegetation but can appear sometimes up to 1000 m. The surfaces are flat, rarely the inclination

and underground water during winter and spring during summer months change of phenophases yellow flowering *Ranunculus* meadows are traditionally practiced change the river deposits, sites are vegetation belongs to submediterranean with the coastal part of the edge of the Pannonic

Indicators of good quality

These grasslands are in maintained traditionally watered artificially and these sites are fertile, the other side they surface secondary succession I sawing of seeds. One composition. The true h grazing would change. The following character: Species richness of the: Absence of invasive, la Regular mowing Absence of intensive gr

EuroVegChecklist (allia)
Molinia-Hordeum secal
Trifolium resupinatum Mice
Trifolium-Ranunculus pec
Trifolium pallidum iljanč 19
Ranunculus veitulinii Pe

Characteristic species

Vascular plants: *Achillea millefolium*, *Agrostis stolonifera* agg., *Alopecurus pratensis*, *Alopecurus rendlei*, *Anthoxanthum odoratum*, *Bromus racemosus* agg., *Carex distans*, *Carex hirta*, *Carex otrubae*, *Carex vulpina*, *Centaurea jacea* agg., *Centaurea pannonica*, *Cichorium intybus*, *Cirsium canum*, *Clematis integrifolia*, *Convolvulus arvensis*, *Crepis setosa*, *Cynosurus cristatus*, *Daucus carota*, *Deschampsia cespitosa*, *Deschampsia media*, *Elymus repens*, *Festuca pratensis* agg., *Galium debile*, *Galium verum* agg., *Gaudinia fragilis*, *Gratiola officinalis*, *Holcus lanatus*, *Hordeum murinum*, *Hordeum secalinum*, *Lathyrus nissolia*, *Lathyrus pannonicus*, *Lathyrus pratensis*, *Leucanthemum vulgare* agg., *Leucocorydalis aestivum*, *Lolium perenne*, *Lolium comiculatum*, *Lychnis flos-cuculi*, *Lysimachia nummularia*, *Lythrum salicaria*, *Medicago arabica*, *Medicago hispida*, *Moenchia mantica*, *Molinia caerulea* agg., *Narcissus poeticus*, *Oenanthe silaifolia*, *Oenanthe stenoloba*, *Ophioglossum vulgatum*, *Orchis laxiflora*, *Peucedanum coriaceum*, *Plantago lanceolata*, *Poa pratensis*, *Poa trivialis*, *Poa trivialis* ssp. *sylvicola*, *Podospermum canum*, *Potentilla reptans*, *Prunella vulgaris*, *Ranunculus acris*, *Ranunculus marginatus*, *Ranunculus polyanthemus*, *Ranunculus repens*, *Ranunculus sardous*, *Ranunculus stevenii*, *Ranunculus velutinus*, *Rhinanthus minor*, *Rorippa sylvestris*, *Rumex acetosa*, *Rumex crispus*, *Scilla litardierei*, *Scutellaria hastifolia*, *Serratula tinctoria*, *Symphytum officinale*, *Taraxacum officinale* agg., *Moenchia mantica*, *Tragopogon orientalis*, *Tragopogon pratensis*, *Trifolium balansaе*, *Trifolium cinctum*, *Trifolium dubium*, *Trifolium fragiferum*, *Trifolium patens*, *Trifolium pallidum*, *Trifolium pratense*, *Trifolium repens*, *Trifolium resupinatum*.

Classification

Annex 1 relationships

6510 Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)

Emerald relationships

MAES-2 relationships

Terrestrial - Grassland

IUCN relationships

4.4 Temperate grassland

Photographs



Cynosurus-Coriceum hirtae (*Trifolium resupinatum*) from neighbouring of Debar (W Macedonia). Photo V. Malevski
Trifolium nigrescenti-subterranei (*Trifolium resupinatum*) from neighbouring of Lake Dojan (Macedonia). Photo V. Malevski

Countries (EU28plus)

1, HR, BH, MNE, SER, KO, A, MK, GR, RO, BG, TR

A phytosociological approach to grassland classification

Red List Habitats definition

Habitat code & name
Relationship to EUNIS-3
Habitat description
EuroVegChecklist alliances
Characteristic species
Indicators of quality (1-5 scale)
Annex 1 relationships
Emerald relationships
MAES relationships
IUCN ecosystem relationships
Photograph
Countries list & Map

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Countries (EU28plus)
B, HR, BG, MNE, SER, RO, A, MK, GR, RO, BG, TR

With thanks to EVS & EDDG questionnaire respondents:

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...and the Laco Mucina and the contributors to the EuroVegChecklist.