NEW DIRECTIONS IN RESEARCH IN GRAZING ECOLOGY

RESEARCH REQUIREMENTS FOR FUTURE POLICY

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Scottish Executive

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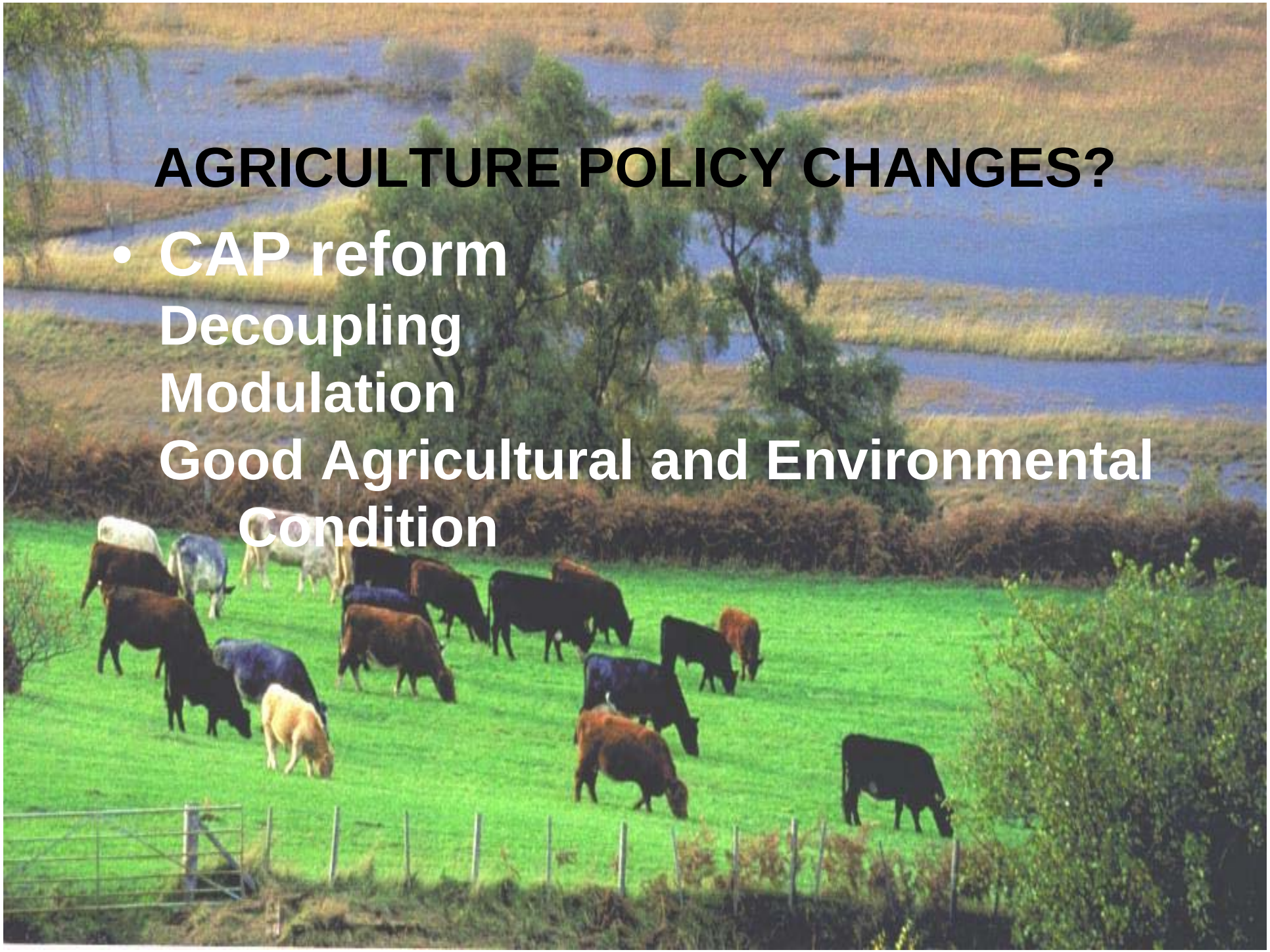
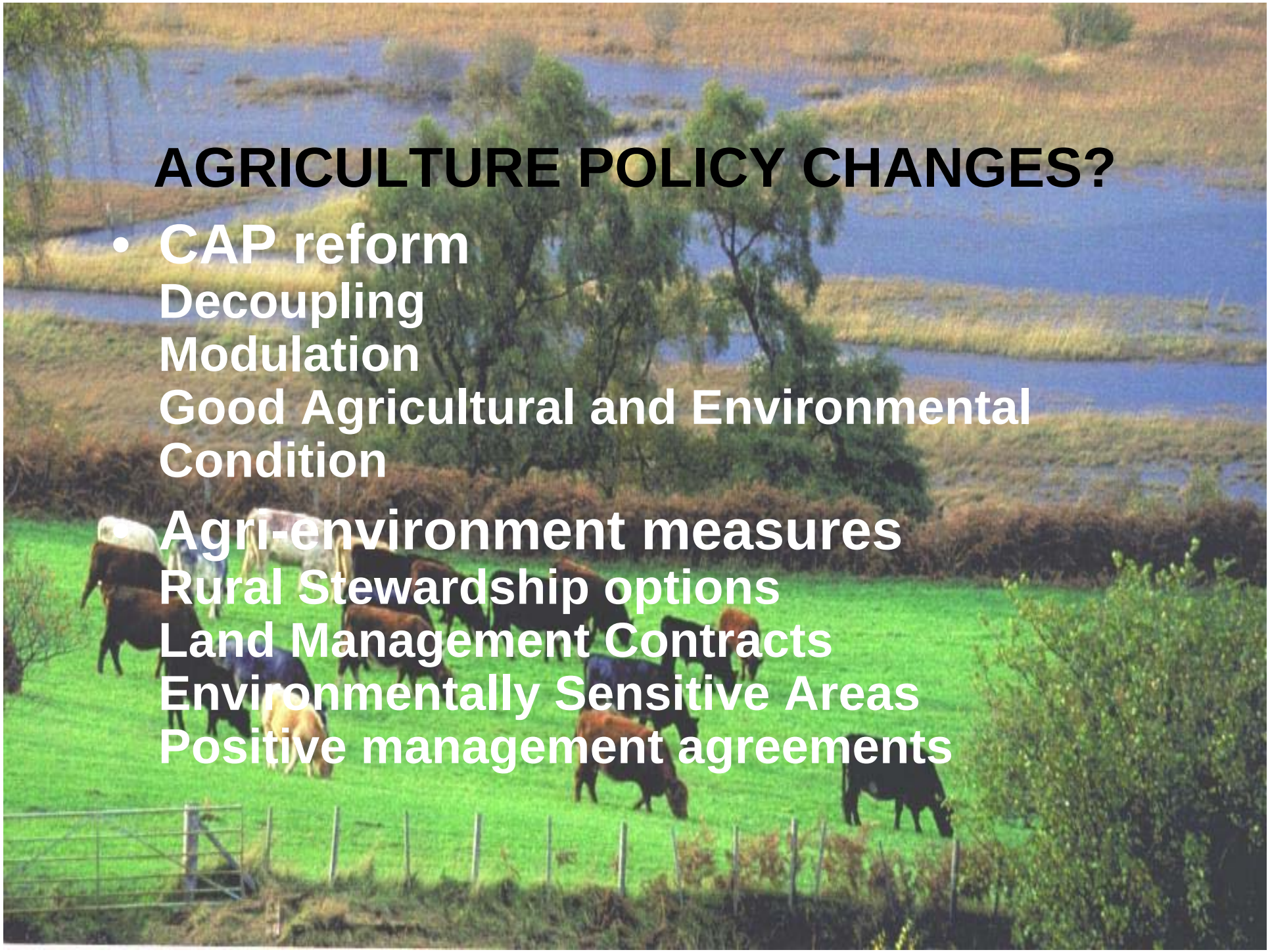
- What research needs to follow these?
- What tools will be needed to assess the effects of change and provide good feedback?


WHAT WILL ‘FUTURE POLICY’ BE?
• Agriculture
• Forestry
• Biodiversity
• Protected sites and nature conservation
• Deer management
• Introductions and non-native species



AGRICULTURE POLICY CHANGES?

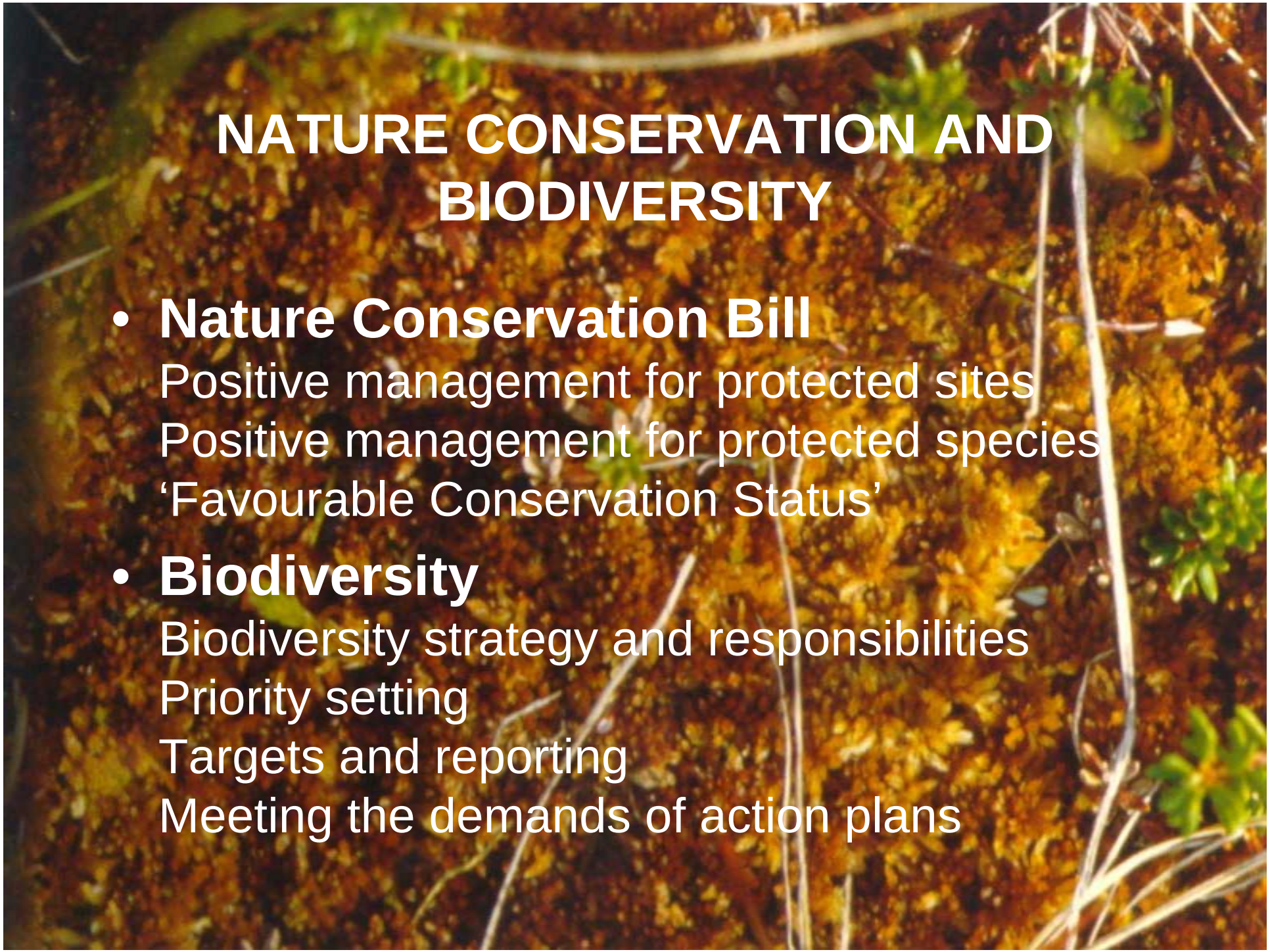
- **CAP reform**
  - **Decoupling**
  - **Modulation**
  - **Good Agricultural and Environmental Condition**



AGRICULTURE POLICY CHANGES?

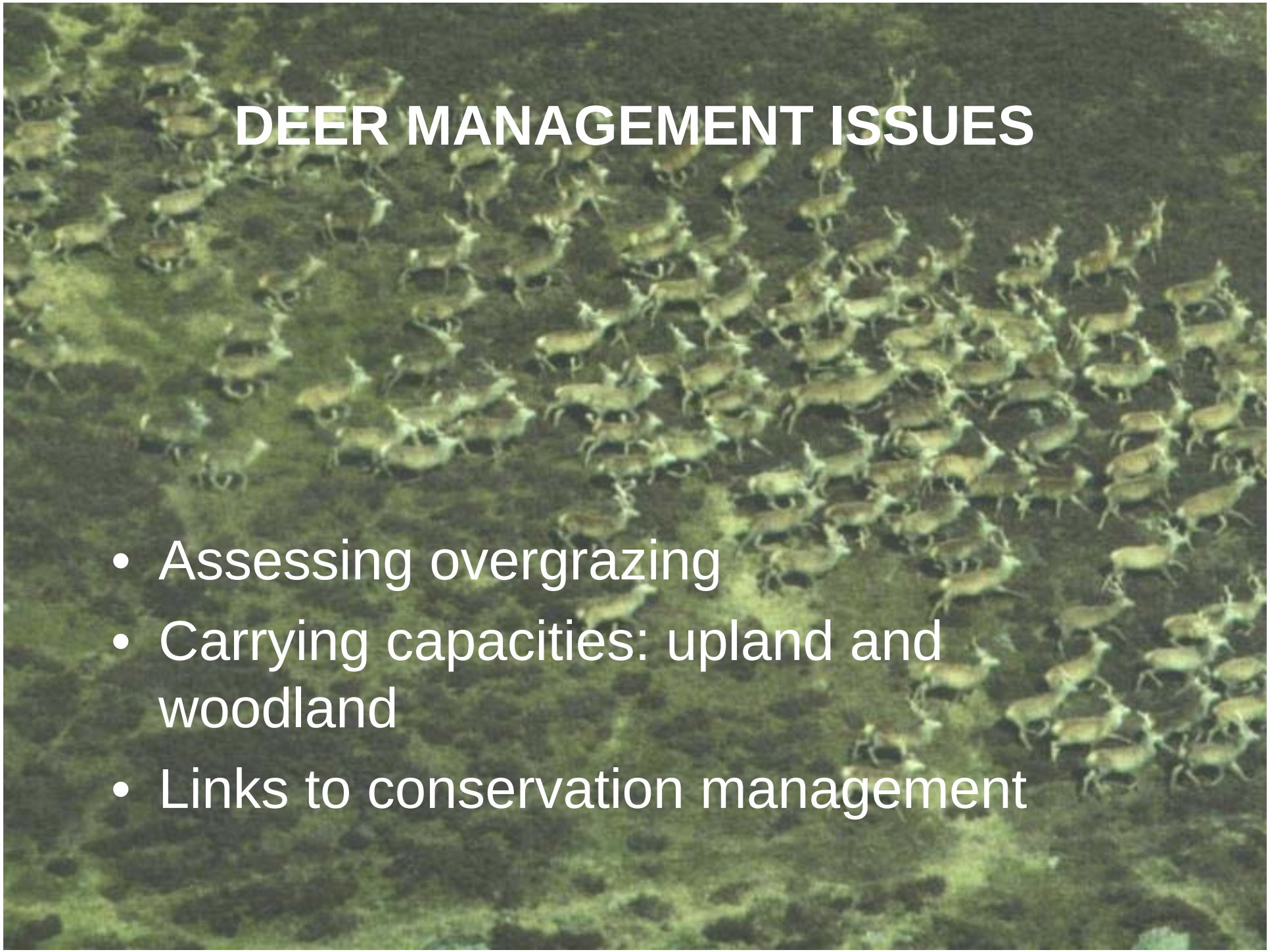
- **CAP reform**
  - Decoupling
  - Modulation
  - Good Agricultural and Environmental Condition
- **Agri-environment measures**
  - Rural Stewardship options
  - Land Management Contracts
  - Environmentally Sensitive Areas
  - Positive management agreements


FORESTRY POLICY CHANGES?
• Greater integration with other land use?
• Increased environmental and social forestry
• A future for agro-forestry?
• New uses for biomass?



NATURE CONSERVATION AND BIODIVERSITY

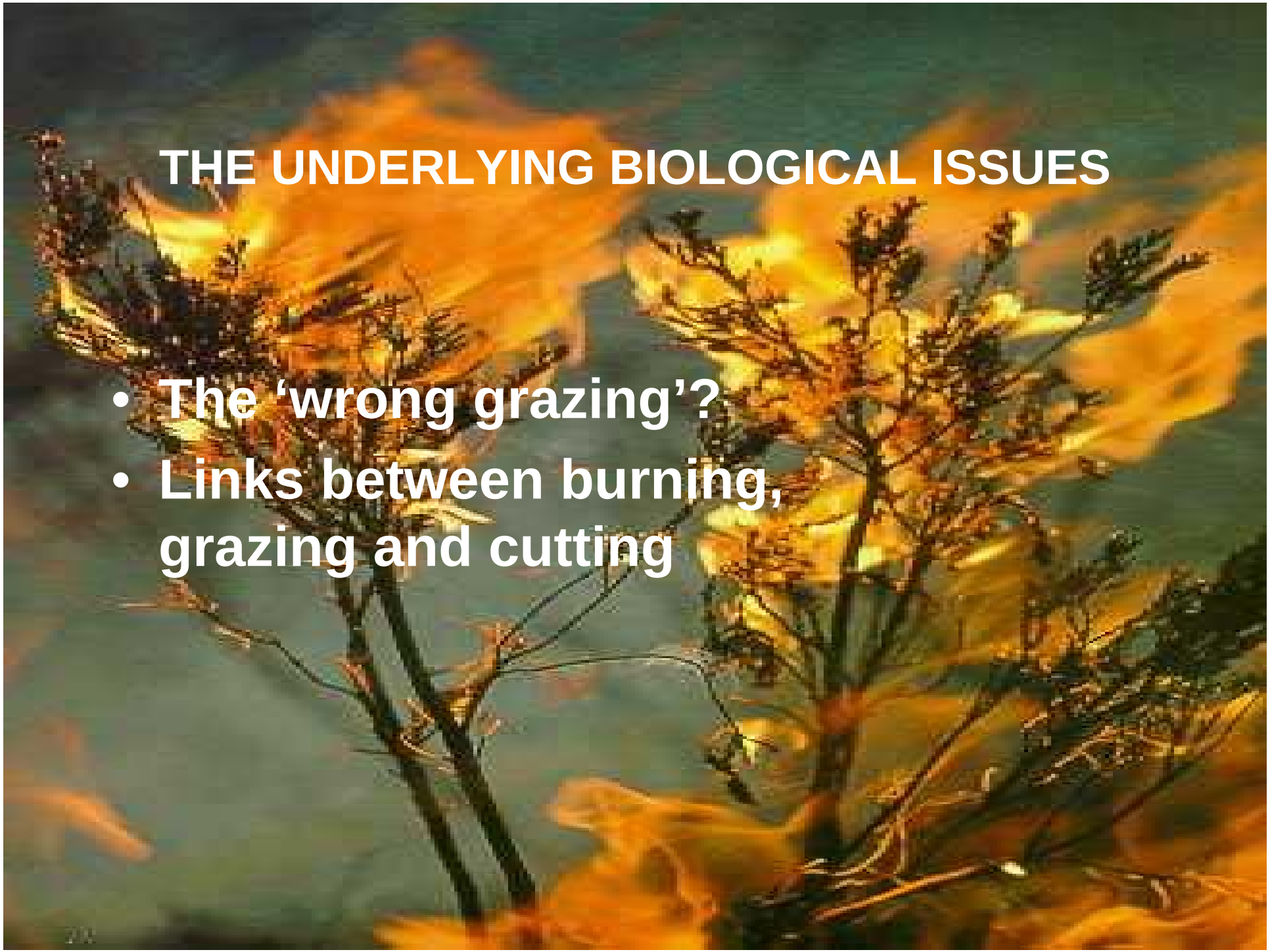
- **Nature Conservation Bill**
  Positive management for protected sites
  Positive management for protected species
  'Favourable Conservation Status'
- **Biodiversity**
  Biodiversity strategy and responsibilities
  Priority setting
  Targets and reporting
  Meeting the demands of action plans



DEER MANAGEMENT ISSUES

- Assessing overgrazing
- Carrying capacities: upland and woodland
- Links to conservation management


THE UNDERLYING BIOLOGICAL ISSUES
• The ‘wrong grazing’?



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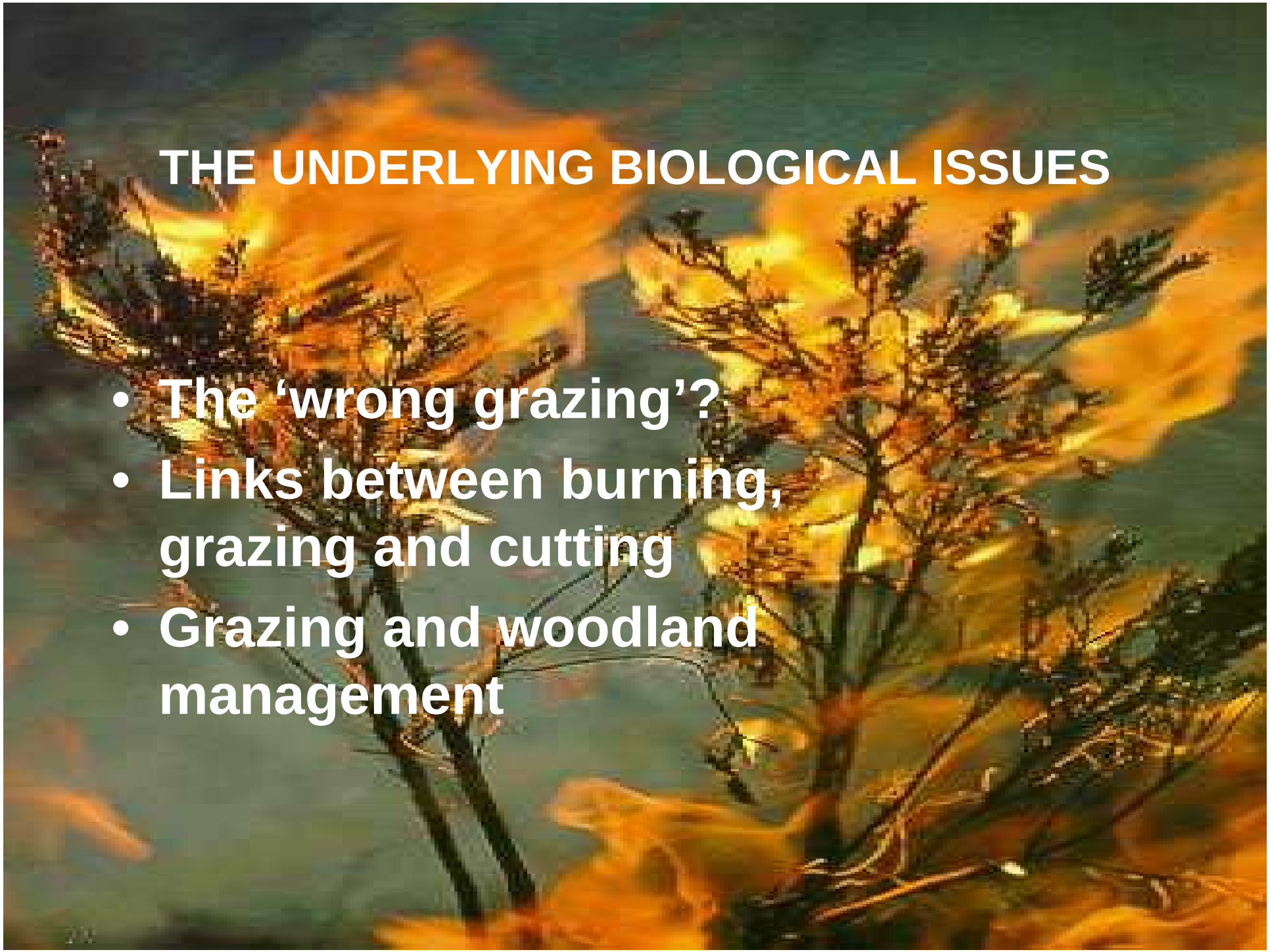
- The ‘wrong grazing’?
- Links between burning, grazing and cutting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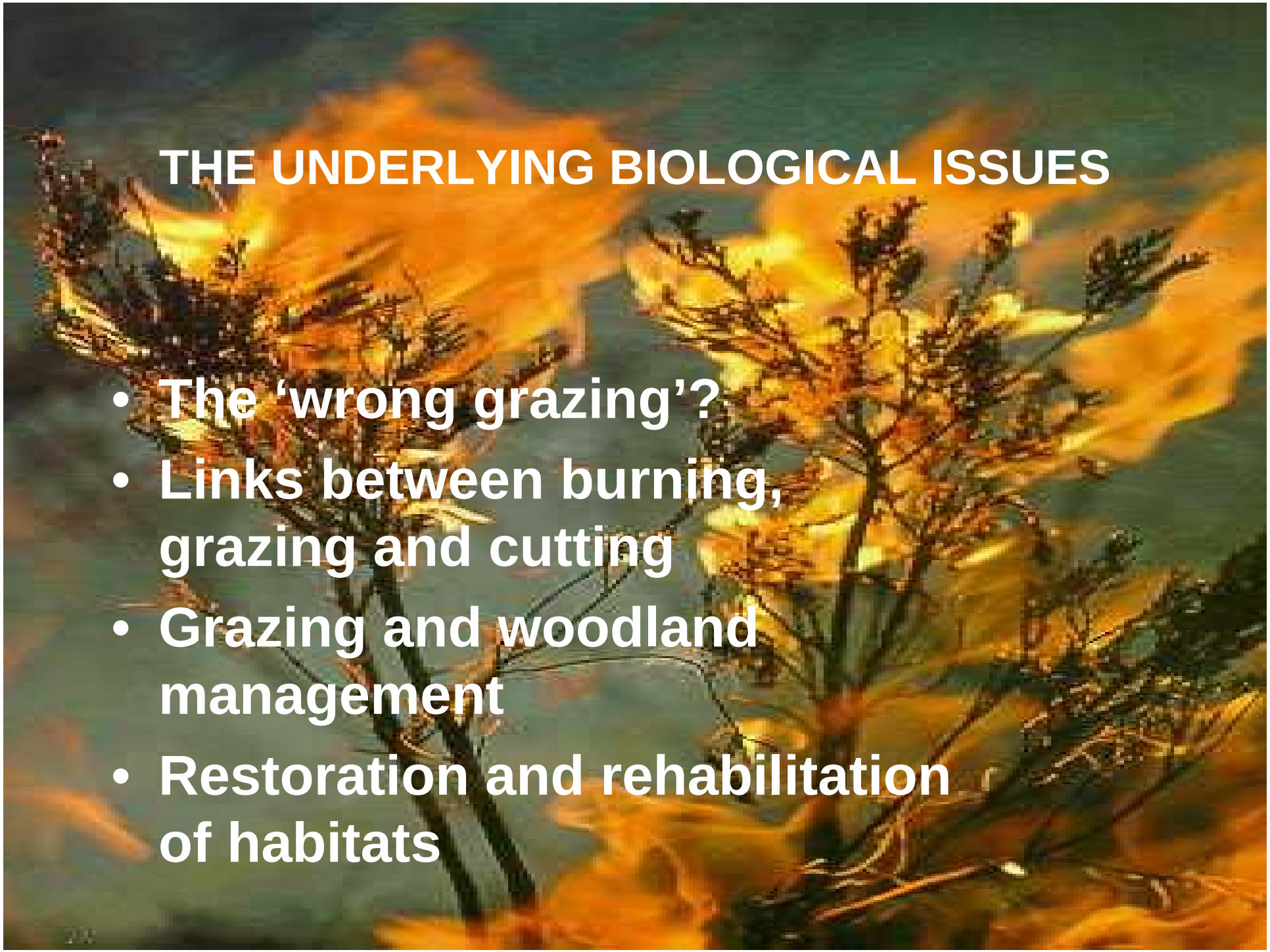
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• The ‘wrong grazing’?
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• Grazing and woodland management
• Restoration and rehabilitation of habitats


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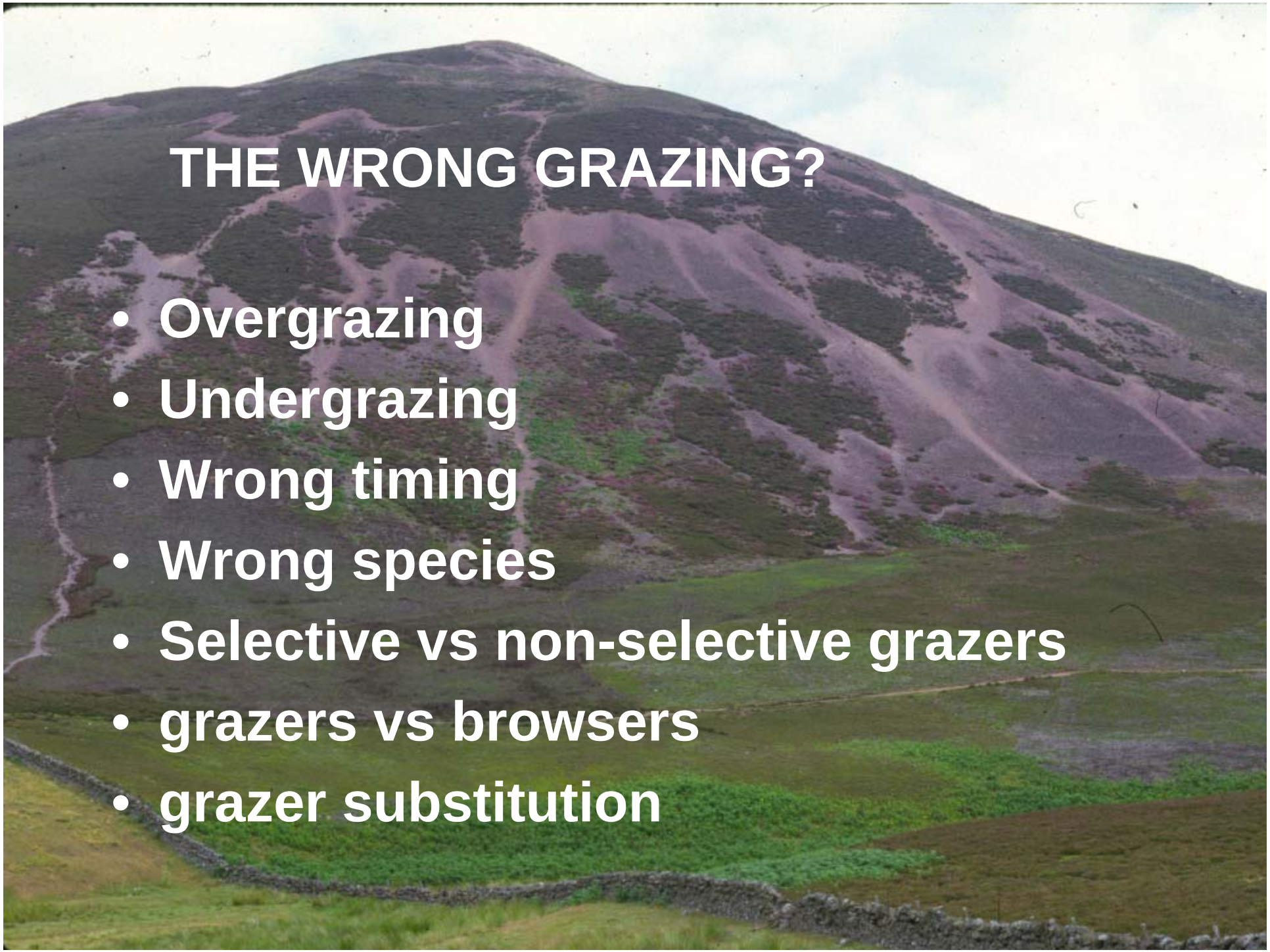
• Grazing and woodland management
• Restoration and rehabilitation of habitats
• Effects of trampling


THE WRONG GRAZING?
• Overgrazing
• Undergrazing
• Wrong timing
• Wrong species
• Selective vs non-selective grazers
• grazers vs browsers
• grazer substitution

RESTORATION & REHABILITATION

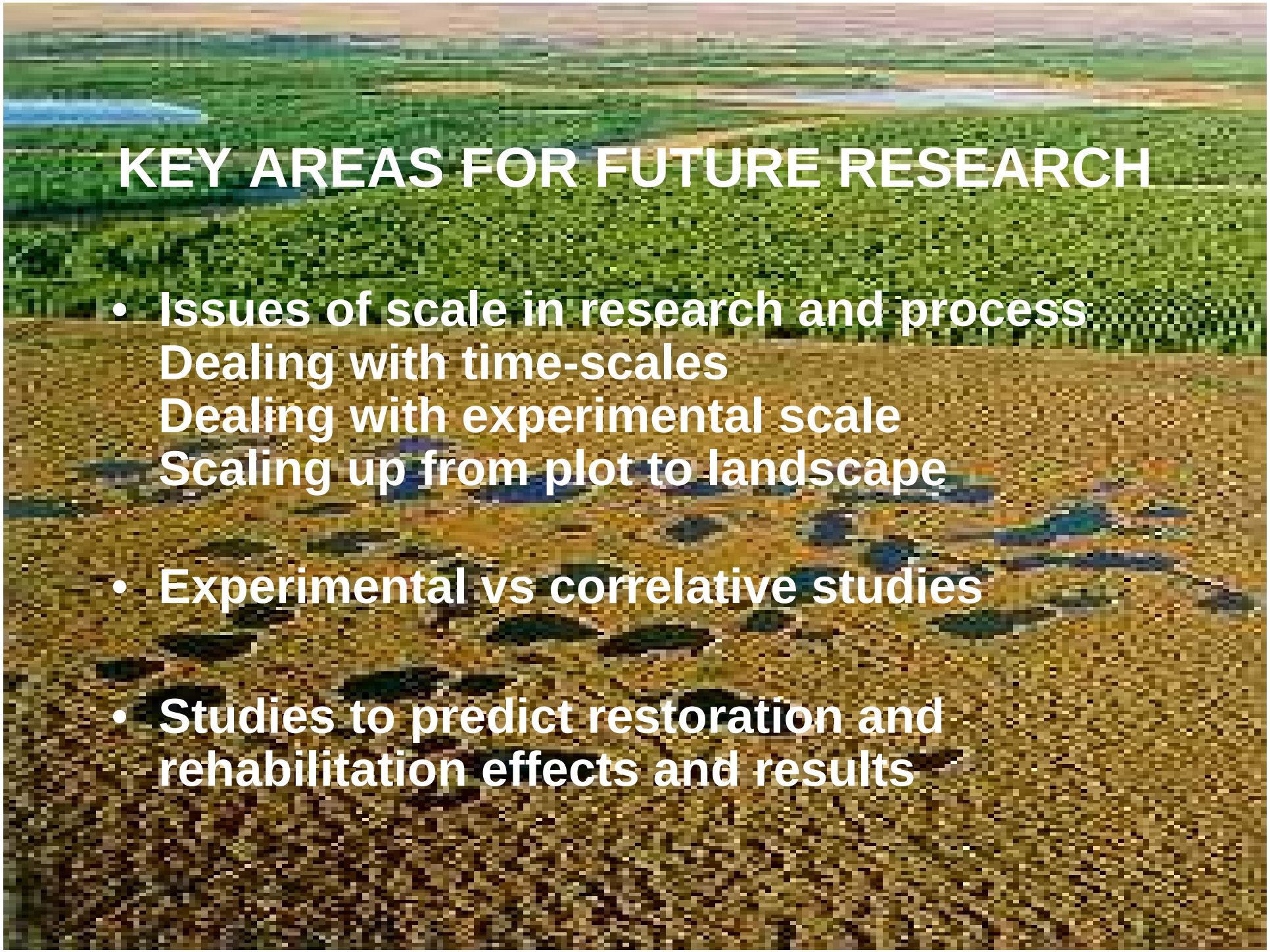
- **Reversion or progression?**
  Assumptions vs reality
  Nutrient status issues
  Ecological benefits and costs
- Defining ends objectives
  What habitats are we seeking to ‘restore’?
  What effects does this have on management?

KEY AREAS FOR FUTURE RESEARCH

- Combination studies on grazing and other impacts
- Development and assessment of ‘maximum permissible’, ‘minimum permissible’ and ‘optimal’ grazing models, fitted to place and circumstance
- Understanding the processes of habitat change as a result of grazing regime change
- Understanding the effects of grazing change on other biota

KEY AREAS FOR FUTURE RESEARCH

- Issues of scale in research and process
  Dealing with time-scales
  Dealing with experimental scale
  Scaling up from plot to landscape



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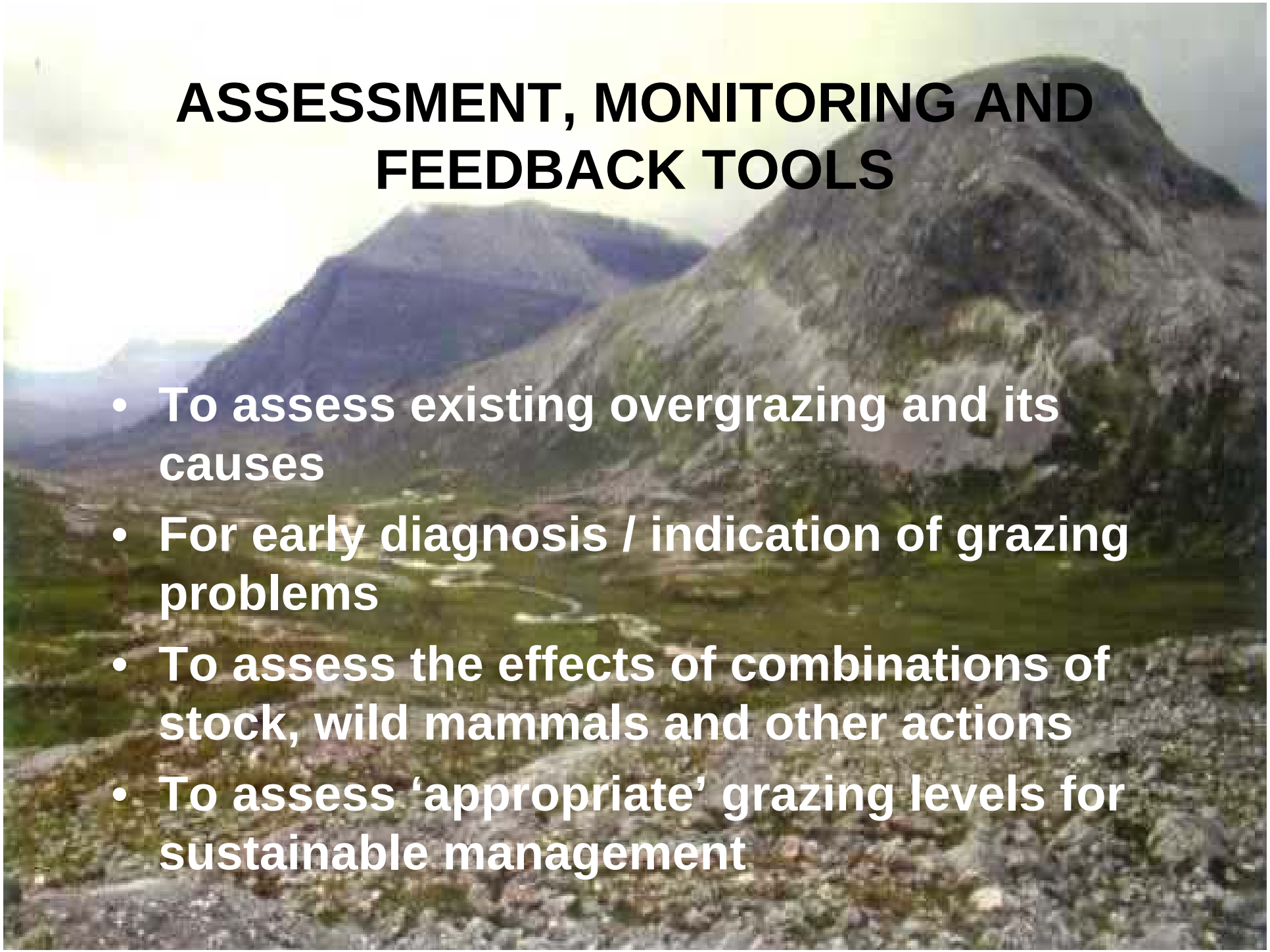
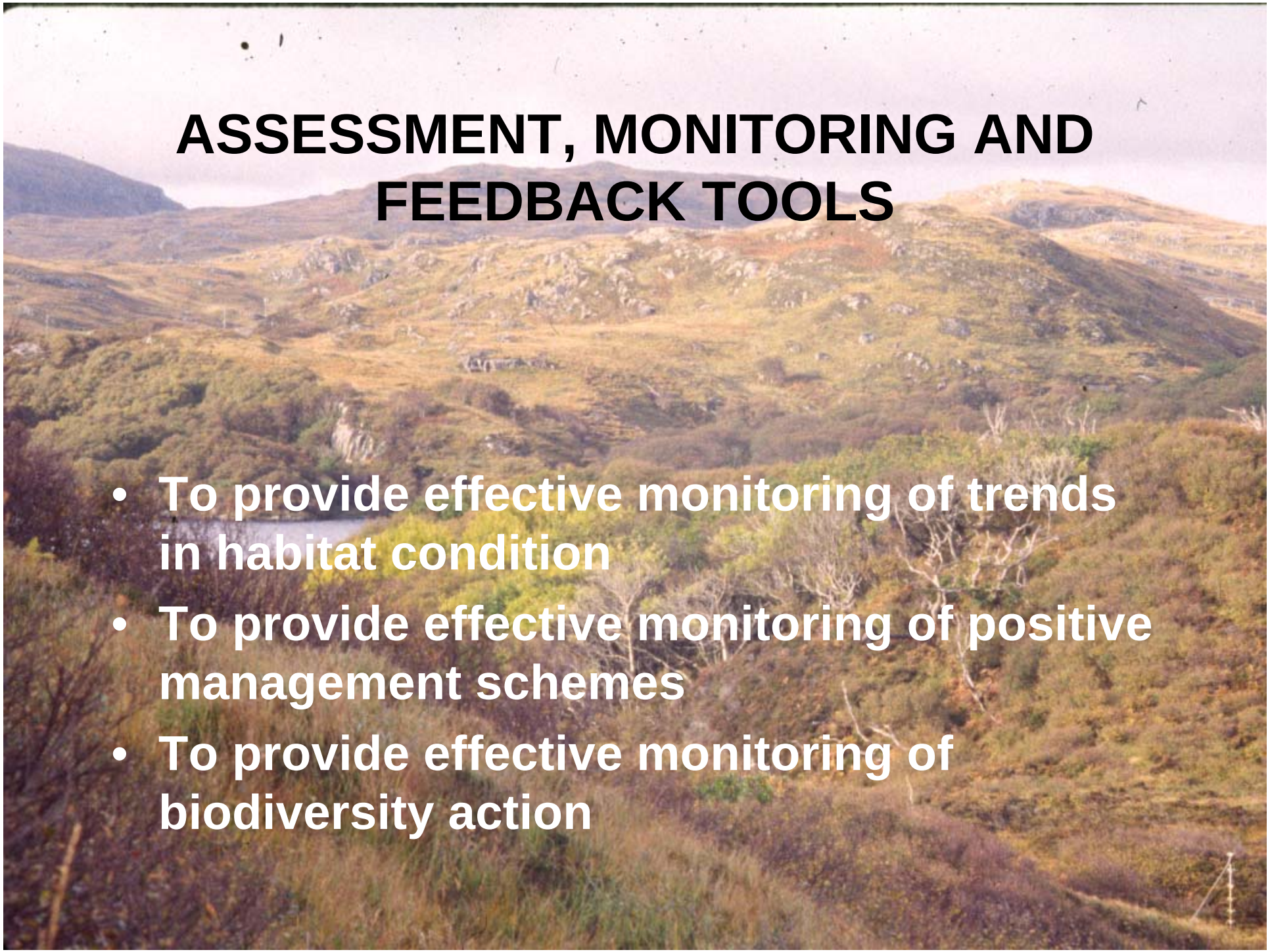
- Issues of scale in research and process
  Dealing with time-scales
  Dealing with experimental scale
  Scaling up from plot to landscape
- Experimental vs correlative studies
- Studies to predict restoration and rehabilitation effects and results



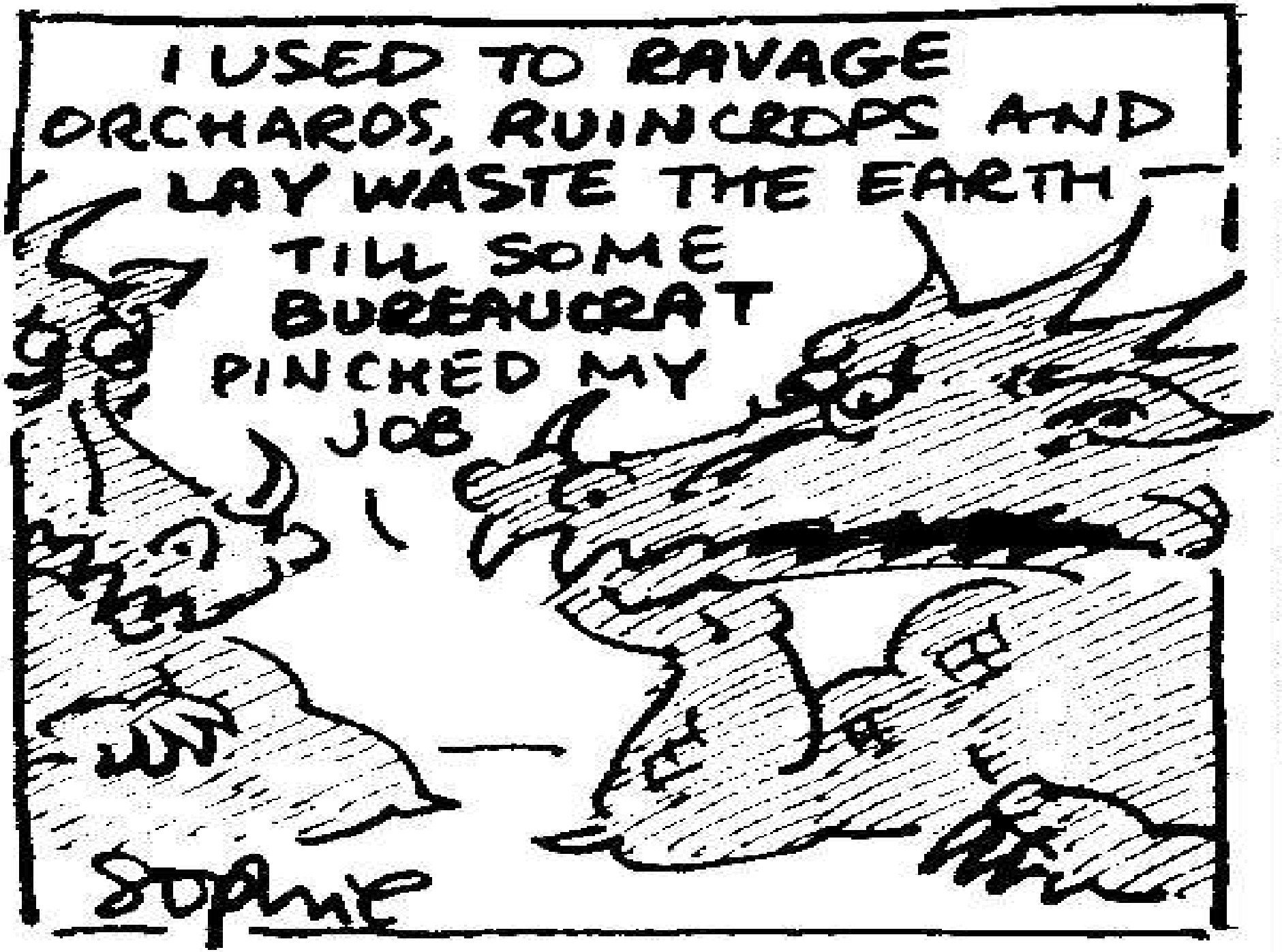
ASSESSMENT, MONITORING AND FEEDBACK TOOLS

- To assess existing overgrazing and its causes
- For early diagnosis / indication of grazing problems
- To assess the effects of combinations of stock, wild mammals and other actions
- To assess ‘appropriate’ grazing levels for sustainable management



ASSESSMENT, MONITORING AND FEEDBACK TOOLS

- To provide effective monitoring of trends in habitat condition
- To provide effective monitoring of positive management schemes
- To provide effective monitoring of biodiversity action


I USED TO RAVAGE ORCHARDS, RUIN CROPS AND LAY WASTE THE EARTH —
TILL SOME BUREAUCRAT PINCHED MY JOB
SOPWITH