Understanding Results

5

Aim

The Best Practice Guides (BPGs) on Habitat Impact Assessment (HIA)* show land managers how to collect, present and interpret habitat data to inform deer management. This guide shows how HIA results are presented. The BPGs HIA Principles*, Principles in Practice** and the BPGs for individual habitats*** are essential additional reading.

Introduction

Surveys should be undertaken across the management unit, property, or landscape. Results are presented as tables, diagrams, and maps. This builds a broad understanding of deer impacts, which informs deer management planning.

Presenting results – tables and maps

The main HIA results (expressed as HML scores) are presented in tables, as below. The table records date and number of plots falling into each category. Repeat results are added and compared over time.

Table 1 - example presentation of results over 6 years

Browsing Impacts (Number of plots)					Trampling Impacts (Number of plots)				
Habitat	Year of HIA	High	Medium	Low	High	Hi-Med	Med	Med-Low	Low
Blanket bog	2010	3	15	12	5	8	15	2	0
Blanket bog	2013	2	12	16	1	5	12	8	4
Blanket bog	2016	0	5	25	0	4	8	9	9

The table above shows monitoring conducted over 6 years on a blanket bog. The 2010 baseline indicated the majority of herbivore impacts fell into the MEDIUM, HIGH-MEDIUM or HIGH categories. Following a reduction in the deer population and the off-wintering of sheep, repeat monitoring in 2013 and 2016 show a steady recovery towards the habitat target of 90% of samples in the LOW or MEDIUM-LOW categories.

Plotting HIA results on a map shows impacts and their distribution. There is often uneven spread of impact across different habitats on a site. Impacts may be higher in areas favoured for shelter or on more palatable habitat, such as grassland. Trampling impacts may be higher in more sensitive habitats (e.g. bogs) or in areas of high deer traffic. Look for general patterns, do not concentrate on individual plot results. Knowledge of the site and how deer and other herbivores use the area, is invaluable in interpreting results.

Maps of repeated surveys show the changes in impacts over time, see Map 1.

Other data

3 Together, HIA tables and maps are used to:

- Identify areas of high, medium and low impact, where management should be targeted
- Document where there has been a change in impact (repeat assessments)
- Document responses to management (repeat assessments).

Other survey data (e.g. presence of other herbivores, or the height of dwarf-shrubs) are important aids to interpretation. It is critical for instance, all sources of impact are taken into account e.g. damage by insects, birds, as well as other herbivores. The following will help identify the source of highest impact

- Presence of dung (note difficulties in separating sheep and deer dung)
- Browsing signs on plants measured
- Relative numbers from counts and stocking densities.

Use of other data is discussed in BPG Interpretation and Management Actions guides for individual habitats.

Linking results to management

Deer management should be informed by up to date information. HIA indicates current levels of herbivore impact. The results help guide future management decisions.
Tables in BPG Interpretation and Management for individual habitats*** provide guidance on interpreting results and possible management action.

3 Use all current information available including HIA results, cull and count data, as well as local knowledge to inform future management decisions.

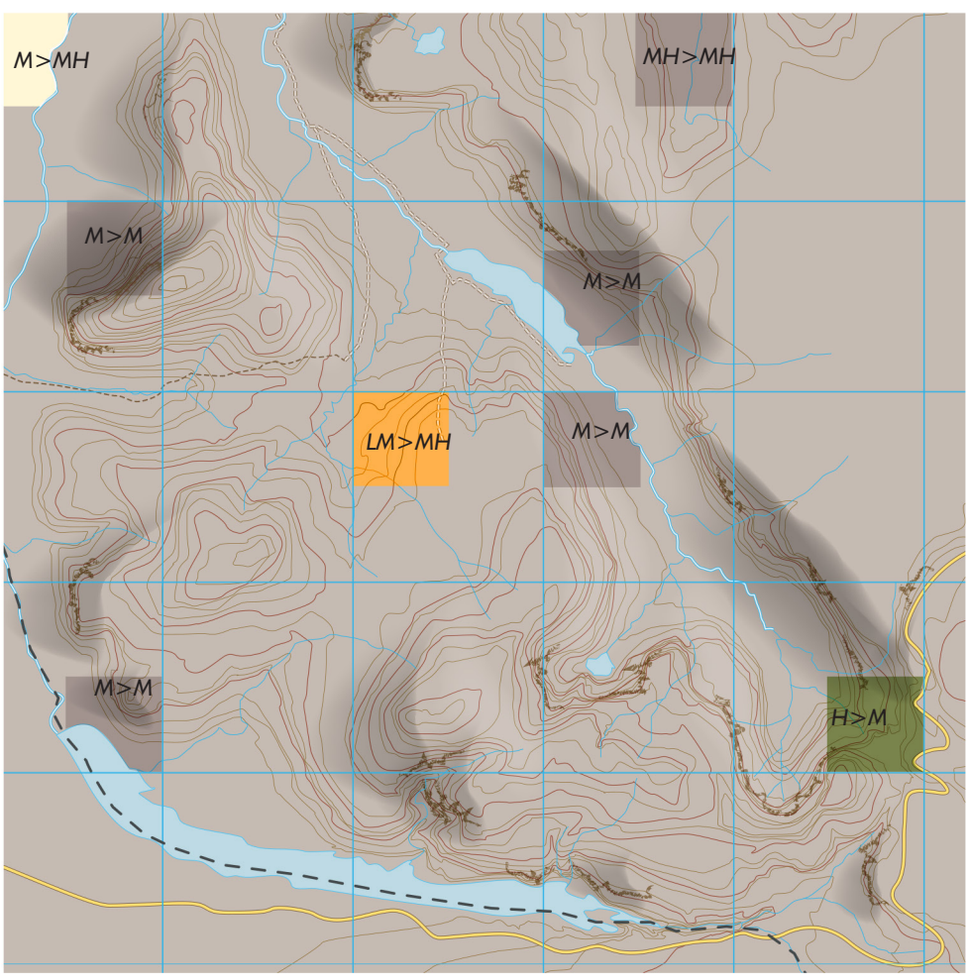
Map 1. Example HIA results over 10 years

Difference in grazing and trampling Impact Classes due to wild and domestic herbivores

- *1.0*
- *0.5*
- *0 no change in impacts*
- *-0.5*
- *-1.0*
- *-1.5*
- *DMG Boundary*

H>M *2004 > 2014 value*

Positive values indicate a decrease in impacts between 2004 and 2014
Negative values indicate an increase in impacts between 2004 and 2014



** BPG Habitat Impact Assessment: Principles*
*** BPG Habitat Impact Assessment: Principles in practice*
****BPG Habitat Impact Assessment: Habitat guides*

[1] Guide to Upland Habitats, Surveying Land Management Impacts. Angus Macdonald, Penny Stevens, Helen Armstrong, Philip Immirzi and P Reynolds. Scottish Natural Heritage.