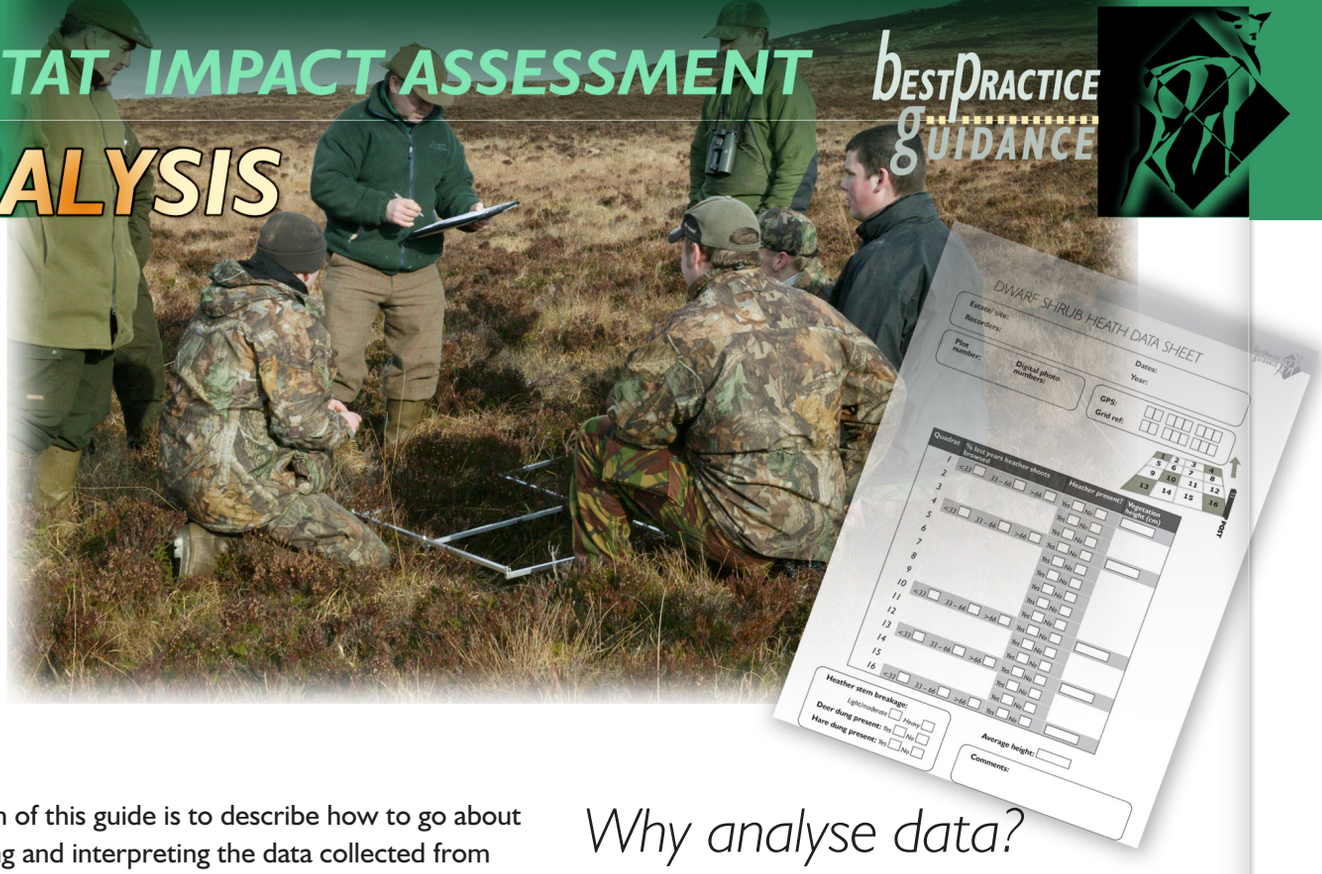
HABITAT IMPACT ASSESSMENT

ANALYSIS

BestPractice Guidance



Aim

The aim of this guide is to describe how to go about analysing and interpreting the data collected from habitat impact assessment. Interpretation will depend on objectives but a clear trend will indicate which way the habitat is 'going'.

The guides 'Habitat Impact Assessment: Principles' and 'Habitat Impact Assessment: Principles in Practice' should be regarded as essential introductions to this subject.

Why analyse data?

To assess:

1. Whether any impacts are changing over time;
2. What changes mean in relation to the objectives for the habitat.*

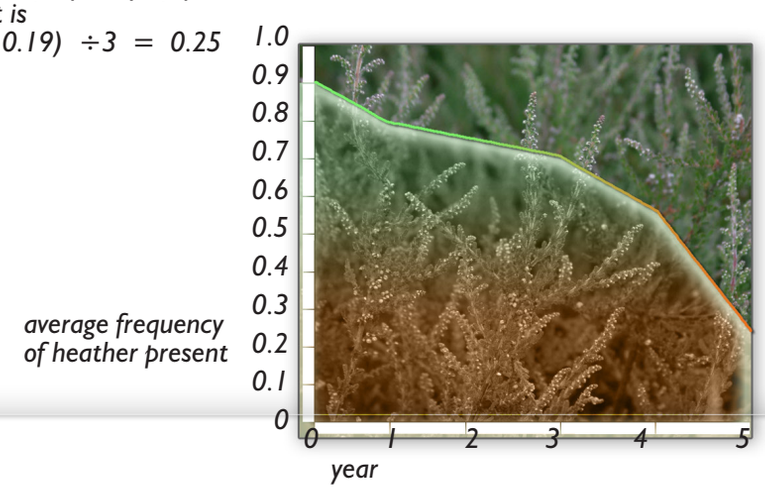
Averaging the frequency

Example of averaging the frequency of quadrats with heather present within a plot

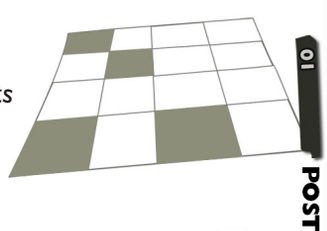
Habitat area (site) has minimum of 30 random plots. Each plot (2m x 2m) is subdivided into sixteen 0.5m x 0.5m quadrats. For this example, only 3 plots have been used for simplicity

Step 1: *For each plot calculate the frequency of quadrats with heather. That is*
Plot 1: 4/16 = 0.25
Plot 2: 5/16 = 0.31
Plot 3 3/16 = 0.19

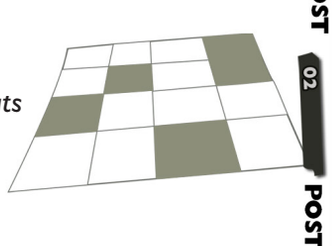
Step 2: *Average the frequency of quadrats with heather for all plots. That is*
(0.25 + 0.31 + 0.19) ÷3 = 0.25



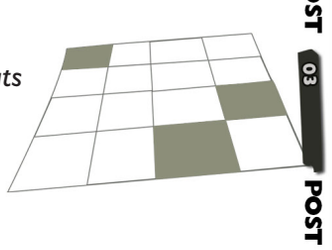
Plot 1: *heather present in 4 quadrats*



Plot 2: *heather present in 5 quadrats*



Plot 3: *heather present in 3 quadrats*



How to analyse

For each habitat:

1. Average the frequency of each impact (see an example for heather overleaf);
2. Look at the trend in the averages over time (i.e. is the impact increasing, decreasing or staying the same?).

Interpretation

1. Compare changes against the objectives for the habitat (see example table below).
2. Consider other relevant data (for example, deer count information, sheep numbers).
3. Take into account timescale and likely impact of changes recorded (for example, in woodland: are sufficient seedlings escaping browsing to replace existing trees?). Normally habitat change is quite slow. A series of measures over 3 – 5 years will probably be needed.
4. Note that it is not just trends that need to be taken account of but the level of impact. For example if Moderate or High impacts (greater than 33% shoots browsed**) are recorded on heather year after year (but no change in trend) then they are likely to lead to a loss of heather.

What next?

Depending on the trends and the objectives – public or private, may need to:

1. Consider changing deer management, for example increasing cull;
2. Look at incentives available i.e. grants to improve habitat.

Example of how BPG Habitat Impact Assessment trend data may be interpreted in relation to objectives

Public interests and deer management objectives for dwarf shrub heath	Specific definition of 'damage'	Who determines 'damage'?
*Authorisation (prevent serious damage) ****	*Heavier impact recorded than owner willing to accept.*	*DCS*
*Section7 control agreement (prevent serious damage)*****	*Deterioration from baseline in either extent or integrity.*	*DCS*
Good Agricultural and Environmental Condition	*Clear evidence that growth, quality or species composition of the vegetation is deteriorating to a measurable extent.*	*SGRPID (Scottish Government Rural Payments and Inspections Department)*
*SSSI interests ******	*Measurable decline in the area of the feature or deterioration in condition.*	*SNH DCS SGRPID FCS*
*Natura interests******	*Extent, structure and function of impacted habitat threatened. Negative consequences for typical species.*	*SNH DCS SGRPID FCS*
Occupier rights to shoot in close season[1]	*Heavier impact recorded than required.*	*owner/ occupier*
Owner/ occupier objectives (open season)	*Habitat not in condition required.*	*owner/ occupier*

** See BPG Habitat Impact Assessment: Principles ** See BPG Habitat Impact Assessment: Dwarf Shrub Heath *** See DCSG Approvals & Authorisations **** See DCSG Section 7 Control Agreements ***** See DCSG Natural Heritage Statutory Designations*

[1] (Section 26(1) of Deer Scotland Act 1996)