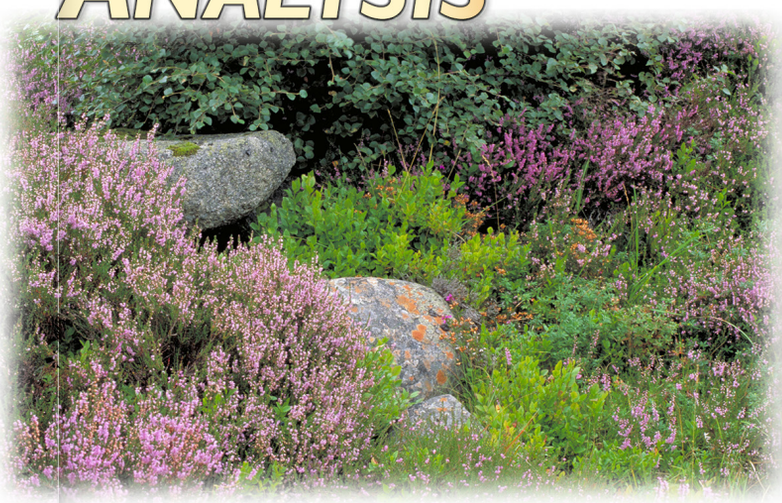
Dwarf Shrub Heath Analysis

4B



Aim

This guide describes analysis of Dwarf Shrub Heath HIA data. The guides BPGs Habitat Impact Assessment: Principles* and Habitat Impact Assessment: Principles in Practice**, and dwarf shrub heath *** are essential introductions to this subject.

Why analyse data?

- Allows site impacts to be clearly summarised and presented.
- Allows impacts to be compared with site objectives.
- Allows comparison with repeat surveys

How to analyse data

There are two steps; analysing the data from each plot, then summarising and presenting the management unit results. Entering the data into the Dwarf Shrub Heath Analysis Workbook± on a phone or tablet in the field does both steps automatically and is the preferred method. Written data could be transferred into a device later but risks transcription errors.

Individual Plots and Management Unit data are summarised in the tables below

Analysis of Individual Plot Data

Impact	Plot summary
Height of dwarf shrubs	Calculate the average (mean) of the five quadrat height measurements
Browsing of heather or blaeberry shoots	Arrange the five assessments in order. Take the median (middle value) of the five (e.g. HMLLL = L, whereas HM**M**LL = M). **This is the plot overall browsing impact**
Dwarf shrub cover	Count the number of quadrats with dwarf shrubs. If there are any, then dwarf-shrubs are PRESENT

Analysis of Individual Plot Data

Impact	Site Summary
Height of dwarf shrubs	Not appropriate to average at management unit level as dwarf shrub layer will not be uniform across the management unit
Browsing impact	Summarise browsing impacts by percentage, for example: 30% (9/30) of plots had LOW browsing impacts 50% (15/30) of plots had MEDIUM browsing impacts 20% (6/30) of plots had HIGH browsing impacts
Dwarf shrub cover	Calculate the percentage of quadrats with dwarf-shrubs. E.g. 390 quadrats in 30 plots (30 x 16 quadrats) = 390/480 quadrats, or 81%. Therefore dwarf-shrubs PRESENT.
Heather stem breakage	Count the number of quadrats with heather stem breakage. If there is any, then heather stem breakage is PRESENT
Presence of herbivores	Summarise the evidence of herbivore presence by counting the number of plots where evidence of different herbivores was seen (for example, deer 21/30 plots, hares 5/30 plots, sheep 15/30 plots, no evidence of cattle).
Presence of burning	Summarise the evidence of burning by counting the number of plots where evidence was seen (for example, old burning 5/30 plots, recent burning 4/30 plots).

** BPG Habitat Impact Assessment: Principles*
***BPG Habitat Impact Assessment: Principles in Practice*
****BPG Dwarf Shrub Heath*
± Dwarf Shrub Heath Analysis Workbook

[1] Guide to Upland Habitats, Surveying Land Management Impacts. Angus Macdonald, Penny Stevens, Helen Armstrong, Philip Immirzi and P Reynolds. SNH
SNH https://www.nature.scot/guide-upland-habitats-surveying-land-management-impacts-volumes-1-and-2