

MODULE DESCRIPTOR (AD3)

This document provides detailed information on the module named below. It will be updated as necessary when modifications to the module are approved. Modules are allocated to a Subject Network not a programme, and may be accessed by students studying on different programmes.

1 SUMMARY MODULE INFORMATION		
a	Module title	Sustainable Deer Management
b	SITS module code	UD411980
c	UHI Subject Network	Science, Environment and Rural Resource Management
d	Exam board	Science, Environment and Rural Resource Management
e	SCQF level	11
f	SCOTCAT credit points	20
g	Module leader(s) and contact details	Module Leader: Rob Mc Morran Centre for Mountain Studies, Perth College-UHI E. Robert.mcmorran@perth.uhi.ac.uk T. +44 (0)1738 877757
h	Brief description of module	This module will explore the role and position of deer in the Scottish Highlands from sustainable rural development and integrated land management perspectives. Deer are a keystone species in shaping the ecology of mountain environments. They are also a national resource. 'Sustainable deer management' is essential to optimise the multiple public and private benefits associated with deer, whilst minimising negative impacts. Sustainable deer management means managing wild deer by taking account of the full range of environmental, social and economic factors. This module will explore the montane ecosystem context for deer management planning and deer ecology and behaviour. The module will also explore deer population modelling and cull target setting as well as maximising the economic benefits of deer through paid stalking, eco-tourism and venison marketing. Collaborative management of deer, through deer management groups and wider social impacts and benefits of deer management will also be explored.
i	Pre-requisites or co-requisites	Achieved qualification or equivalent at Level 10 (Degree level).
j	Primary mode(s) of delivery and support	Indicate which mode(s) will be used and approximate proportions
		___ % Face-to-face (this must be ticked if there is <u>any</u> FTF delivery)
		___ % Situated study (ie student must be physically attending at AP or Learning Centre)
		100 % Online
		This module uses pre-recorded lectures, teaching and learning materials and online resources. Alongside the above, each lecture/section of lecture will comprise weekly objectives which will form the focus of discussions on Blackboard. This will promote and facilitate discussion and debate amongst the students supporting learning and assessment.

k	Assessment	<p>Essay/essay-like assignment: 2000 words, 40%</p> <p>Report (formulating and/or critiquing a deer management plan, or component of same): 2000 words, 50%</p> <p>Ongoing assessment (discussion forums), 10%</p> <p>To pass the module overall, you must get at least 50% in each of the assignments and the discussion board, as well as an overall weighted mark of at least 50%.</p>
l	Library resources – core texts	See 2f. Below
m	Suitable for access via Learning Centres?	Yes, but primarily designed for home / work based study on-line.
n	Keywords	Sustainable deer management; uplands; Scotland

2	MODULE DESCRIPTOR
a	Aims
	<ol style="list-style-type: none"> 1. To enable students to understand and evaluate the principles and practice of sustainable deer management. 2. To provide a sound theoretical and applied framework to aid the understanding and implementation of sustainable deer management
b	Intended learning outcomes
	<p>On completion of the module the student should be able to:</p> <ol style="list-style-type: none"> 1. critically assess the processes and scientific principles which underpin the concept of sustainable deer management; 2. evaluate and critically assess processes and techniques relating to deer management planning, from both theoretical and practical perspectives; 3. critically analyse the objectives for deer management in relation to sustainable land management, particularly in rural and mountain areas.
c	Indicative content
	<ul style="list-style-type: none"> • General background, wider land use and management context for deer • The policy, legal and institutional framework • Deer biology and behaviour • The impacts of red deer on upland ecosystems and the wider environmental context for deer management • Integration of deer management with other land uses • Deer population biology, population modelling and dynamics • Principles and practice of sustainable deer management; habitat monitoring/deer impact assessments, deer population counts, cull target setting and records, deer welfare. • Deer management planning and collaborative approaches (Deer Management Groups) • Deer management and the rural economy (economic benefits and impacts venison marketing etc.) • Deer management and rural society (Community involvement, human welfare, education etc.) • Case studies of sustainable deer management

d	Mode(s) of delivery and support for teaching and learning
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Face-to-face	... hours or	... %
Video-conference	... hours or	... %
Supported online learning	40 hours or	%
Self-directed learning	110 hours	... %
On-line seminar		
Total activity	150	100%

e	Assessment			
	Assessment	LO1	LO2	LO3
	Essay	Y		Y
	Report (Sustainable Deer management Plan)	Y	Y	Y
f	Key learning resources			
	<p>Core Texts:</p> <p>No single core textbook is recommended; however, multiple Best Practice Guidance notes on deer management are available from Scottish Natural Heritage here:</p> <p>http://www.bestpracticeguides.org.uk/Default.aspx These should be downloaded and read as they link very strongly with a number of key elements within this module. To increase your knowledge of environmental management in Scotland generally, including deer management, we also strongly encourage you to purchase the following text:</p> <p>Warren, C (2010) <i>Managing Scotland's Environment</i> (2nd Edition) Edinburgh University Press.</p> <p>Recommended Texts/journals:</p> <p>Rose, R.D. (2010) <i>Sustainable Deer management: A case study report to the Deer Commission for Scotland</i>. http://www.snh.gov.uk/docs/B660938.pdf (Summary report: http://www.snh.gov.uk/docs/A438700.pdf)</p> <p>Putman, R.J. (2003) <i>The Deer Manager's Companion: a guide to the management of deer in the wild and in parks</i>. Swan Hill Press, Shrewsbury. 180 pp.</p> <p>Goldspink, C.R., King, S. And Putman, R.J. (eds.) (1998) <i>Population Ecology, Management and Welfare of Deer</i>. Manchester Metropolitan University.</p> <p>Clutton-Brock, T.H. & Albon, S.D. (1989) <i>Red Deer in the Highlands</i>. Blackwell: Oxford.</p> <p>Milner J.M., Alexander J.S. And Griffin A.M. (2002) <i>A Highland Deer Herd and Its Habitat</i>. Red Lion House, London 2002</p> <p>MacMillan D. (2004). Tradable hunting obligations – a new approach to regulating red deer numbers in the Scottish Highlands? <i>Journal of Environmental Management</i>, 71: 261-270</p> <p>Nolan, A. J., Hewison, R. L., & Maxwell, T. J. (2002). <i>Deer Management Groups: Operation and Good Practice</i>. Deer Commission for Scotland commissioned report. The Macaulay Institute.</p> <p>Mitchell, B., Staines, B.W. and Welch, B. (1977) <i>Ecology of Red Deer. A research review relevant to their management in Scotland</i>. Institute of Terrestrial Ecology, Banchory.</p> <p>Buckland, S.T., Ahmadi, S., Staines, B.W., Gordon, I.J. and Youngson, R.W. (1996) Estimating the minimum population size that allows a given annual number of mature red stags to be culled sustainably. <i>Journal of Applied Ecology</i>, 33, 118-130.</p> <p>Putman, R.J., Duncan, P. And Scott, R. (2005) 'Demographic changes in a Scottish red deer population (<i>Cervus elaphus</i> L.) in response to sustained and heavy culling: an analysis of trends in deer populations of Creag Meagaidh National Nature Reserve 1986-2001' <i>Forest Ecology and Management</i> 206 (1-3): 263-81.</p> <p>Putman, R.J., Duncan, P. And Scott, R. (2008) 'Tree regeneration without fences? An analysis of vegetational trends within the Creag Meagaidh National Nature Reserve 1988-2001, in response to significant and sustained reduction in grazing pressure'. <i>Journal of Practical Ecology and Conservation</i> (In</p>			

Press).

Mitchell, B., McCowan, D. And Parish, T. (1986) Performance and population dynamics in relation to management of red deer cervus elaphus at Glenfeshie, Inverness-shire, Scotland. *Biological Conservation*, **37** (3) 237-267.

SNH (1994) Red deer and the natural heritage. SNH Policy Paper. Scottish Natural Heritage, Battleby. 70pp.

SNH (2000) The effects of mammalian herbivores on natural regeneration of upland, native woodland. Scottish Natural heritage Information and Advisory Note 115. 8pp

Quine, C., Shore, R. and Trout, R (eds.) Managing Woodlands and their Mammals. Forestry Commission, Edinburgh. Pp. 55-60.

Hunt, J.F. (2003) Impacts of Wild Deer in Scotland: how fares the public interest? Report for RSPB Scotland and WWF Scotland. RSPB, Edinburgh, 58pp.

Rose, H. (2004) Wild deer impacts in Scotland – how fares the public interest? *Deer* 12 (10): 10-13.

Key websites:

For all of the outputs so far from the joint research project on Deer management groups. See <http://www.macaulay.ac.uk/RELU/>

DCS (Previous Website):

<http://www.dcs.gov.uk/information/Section%20Content/DCS%20Research.aspx>

British Association for Shooting and Conservation (BASC) www.basc.org.uk/

Scottish Gamekeepers Association www.scottishgamekeepers.co.uk/

British Deer Society www.bds.org.uk

Other links:

<http://www.thedeerinitiative.co.uk/pdf/Annual%20Review%202005-2006.pdf>

<http://www.snh.gov.uk/docs/C249915.pdf>

<http://www.snh.gov.uk/docs/C249918.pdf>

<http://www.snh.gov.uk/docs/B700311.pdf>

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Specialist learning resources

Students must have access to the following minimum computer hardware and software to access the programme:

1. Dial-up internet connection (broadband recommended)
Students are expected to make full and regular use of UHI's e-library resources, as relevant to their research topic, on a weekly basis;
2. Microsoft Windows XP or Vista;
3. Internet Explorer 7 or above;
4. Soundcard with connected speakers and/or headphones;
5. Ability to play DVDs;
6. Microsoft WORD 2003 (or more recent version); and
7. Adobe Acrobat Reader - available as a free download from www.adobe.com. This is necessary to allow students access to some of the materials made available to them.

Students are expected to:

1. Be competent users of Microsoft Office - in particular WORD, EXCEL and PowerPoint; and
Be able to surf the internet and download files with confidence.