

PEATLANDS



1/2008

International

**Peatlands on the Tibetan Plateau
and on the Altiplano Plateau of the
Central Andes**

**IPS Commission II Survey:
Peat Covers 77 Percent of the
Growing Media Production in the EU**

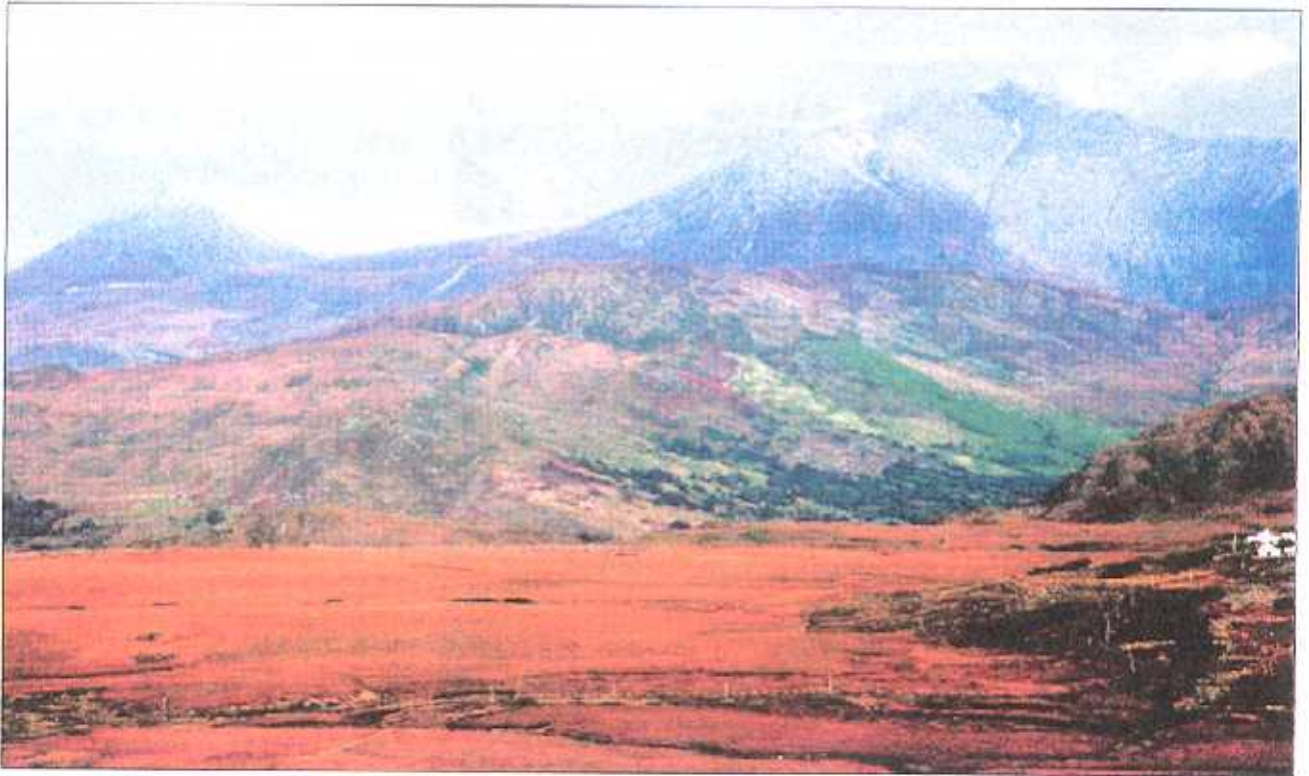
Special Theme:

PEAT IN IRELAND

Conservation and Restoration of Bogs in Ireland

The role of National Parks and Wildlife Service

Text and photos: Caitriona Douglas



Ballygisheen Blanket Bog, Co. Kerry

Due to their rare and threatened status Active, or peat-forming, raised and blanket bogs have been prioritized for protection by the EU Commission. The National Parks and Wildlife Service (NPWS) of the Department

of Environment, Heritage and Local Government in Ireland has statutory responsibility for nature conservation including survey and designation of sites for the protection of habitats and species. Legal protection has

been achieved for a total of 251 sites, including 103 Natura 2000 sites and comprises 7% and 19% of Ireland's original resource of raised bog and blanket bog respectively. This represents all of the country's known area of Active raised bog and the majority of the remaining areas of

Active blanket bog. Ireland is required by the EU Commission to maintain the extent, range, typical species, and structure and function, of bog habitat or, if necessary, restore it to a favourable conservation status. Due to ongoing loss and damage to both habitats major restoration work is required to achieve this (NPWS 2007a and 2007b).

Raised Bog

There has been a dramatic decline of over 35% in the area of actively forming peat on raised bogs between 1995 and 2005 (Fernandez et al. 2005). Within the total area of raised bog designated of 21,519ha only 1,945ha is Active while the balance consists of Degraded habitat (still capable of natural regeneration to Active bog within 30 years). The total area



Colourful close-up of Sundew from Active Blanket Bog SAC, Ballygisheen, Co. Kerry

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Raised bog SAC at Redwood, Co. Tipperary showing extensive area impacted by turf-cutting. Photo: Fernando Fernandez Valverde



Raised Bog SAC at Barroughter, Co. Galway showing extensive area impacted by turf-cutting. Photo: Fernando Fernandez Valverde

designated includes all known Active or peat-forming raised bog habitat in Ireland. Despite this, Ireland still has the most extensive area of conservation worthy raised bog sites remaining in Western Europe. As the combined area of Active and Degraded bog currently stands at just over 21,000ha this is the target area of Active raised bog that Ireland must restore, i.e. over 10 times the current Active area.

NPWS co-ordinated, and collaborated, in a decade of multidisciplinary research on raised bogs with the Staatsbosbeheer of the Netherlands and the Geological

Survey of Ireland. This research greatly increased the understanding of raised bog eco-hydrology, degradation processes, and, conservation requirements (Schouten 2002). The most severe impacts are from drainage, peat-cutting and burning which were found to seriously disrupt the hydrology of the high (uncut) bog, leading to desiccation, bog subsidence, increase in surface run off and loss of characteristic micro-topographical features and eventually of flora and fauna (Schouten 2002).

Between 1994 and 1999 NPWS established a Raised Bog Restoration Project with EU Cohesion funding

support (Ryan and Streetkerk 1998). The aim was to restore bog hydrology and required the raising of water levels in the cutaways; the blocking of drains on the uncut or high bog; and, where it was appropriate and feasible, the construction of facebank dams. This necessitated acquisition of raised bog land; survey of high bog and lagg systems and, establishment of a monitoring program. Works were carried out on 10 sites, mainly drain blocking on the high bog, and the construction of dams. Blocking of drains was carried out on three additional sites in 2003 and one in 2006. To date restoration work has been carried out on 17 bogs (J. Ryan, pers. comm.). The results are considered positive overall, as there is some expansion and new Active raised bog habitat formation occurring (Fernandez et al. 2005). A pre requisite of undertaking restoration requires acquisition of raised bogs or successful establishment of management agreements to allow implementation of required restoration measures. Such agreements would have to remain with the land on change of ownership. As there are considered to be in excess of 20,000 turbarry rights holders, current rates of progress on securing these essential pre-requisites, are a major constraint on raised bog restoration.

Most obvious commercial turf cutting operations have been phased out on designated sites however extensive domestic cutting has been permitted to continue to 2008 (10 year derogation after SAC designation). Of the 20,000 or more turf-cutting rights in designated areas more than 2,500 were exercised in 2003 (Fernandez et al., 2006). The Irish Government is currently considering options in relation to the cessation of cutting on designated bogs.

NPWS are liaising with the Coillte forestry company in their undertaking of restorative work on afforested sections of raised bog, totalling 571ha, in their ownership (www.raisedbogrestoration.ie). This is supported by EU LIFE funding.

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Blanket Bog

For blanket bogs the most prevailing impacts are extensive afforestation; widespread severe overgrazing and erosion, peat-cutting and burning, and infrastructural developments including windfarms (Douglas 1998). Forest plantations cover 25 % of the original resource of 773,860 ha. Overgrazing and active erosion affected tens of thousand of hectares of blanket bog. A major initiative to arrest degradation and restore vegetation on western and upland areas including blanket bogs habitats, was jointly devised by NPWS and the Department of Agriculture and Food (Anon, 1998). This entailed an extensive survey of all commonages (shared land) and designated lands to assess heather condition, vegetation cover and the extent of erosion on > 440,000 ha of land of which c. 250,000ha is reported to include blanket bog (though not exclusively as is often associated with wet heath). Guidelines on stock management including destocking are based on the results and published in Commonage Framework Plans (www.agriculture.gov.ie). Implementation of these guidelines requires the

establishment of management agreements with landowners through the Rural Environment Protection Scheme (REPS) or a through the NPWS Farm Plan Scheme. However full implementation of the guidelines is hampered by several factors not least being the voluntary nature of these schemes.

NPWS is devoting significant resources to the monitoring of the condition of commonages and privately owned SACs, with financial assistance from the Department of Agriculture and Food. Results after destocking show improvement in some areas and continuing degradation in others. In general and as expected improvement is occurring on areas that have not incurred severe damage however on actively eroding, especially sloping or upland sites erosion is continuing. This monitoring regime was been tested over the winter of 2005/06 in part of the Owenduff/Nephin SAC, Co. Mayo and results forwarded to the EU Commission. They showed that no appreciable recovery had taken place and consequently further restrictions are required. Restrictions include



Small peat dams blocking drainage channel in Mountain Blanket Bog, Wicklow Mountain National Park and SAC.

full destocking as per the relevant commonage plans, full participation in REPS or the NPWS Farm Plan in the area, guidelines to planners as to appropriate carrying capacities on the commonages and, most significantly, a closed period for all stock on the commonage for 5 months of the year (Bleasdale, pers. comm.).



Severely degraded blanket bog, Co. Mayo. Micro-topography apparent however entire area was virtually devoid of vegetation due to overgrazing and actively eroding and a source of; peat silt pollution of watercourses, and of greenhouse gases. Group of people are clustering around a single remaining vegetated hummock. This photo was taken a decade ago and destocking of sheep has since occurred. Recovery is at early stages and recent monitoring data indicates mixed responses with active erosion continuing in the severely impacted areas such as this.

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Active blanket bog with pools in SAC, Ballygisheen, Co. Kerry

Removal of trees, felling to waste, drain blocking or other restorative measures have been completed by Coillte on 2,000 ha of blanket bog within and adjacent to SACs (www.irishbogsrestoration.ie). Monitoring of recovery is critical and in view of the extent of afforestation (198,000 ha) on blanket bog it is considered that there is much scope for further work of this kind if based on treatments and site types achieving best recovery of hydrology and of blanket bog vegetation while not compromising catchment water quality.

Small scale domestic cutting on drier marginal areas of shallow blanket bog in designated sites is not considered to be of serious concern; however a survey is required to identify areas significantly impacted and requiring the cessation of this activity and also to identify restoration measures, that may be, required.

Local initiatives in restoration have been taken in National Parks. Blocking such as blocking of drains in sections of blanket bog e.g. in Wicklow Mountain National Parks SAC where further work is planned for a steeply sloping cutover where remaining peat is actively eroding. An hydrological study is considered necessary in order

draw up a restoration plan appropriate to this difficult upland site. Further information on management plans for National Parks and for a number of SACs can be obtained from www.npws.ie.

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