Northern Ireland Species Action Plans

Irish Hare
Chough
Curlew

BIODIVERSITY IN NORTHERN IRELAND

ENVIRONMENT AND HERITAGE SERVICE

Biodiversity In Northern Ireland

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Environment and Heritage Service

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ENVIRONMENT
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SERVICE

An Agency within the
Department of the
Environment

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INTRODUCTION

We know, both from ordinary observations and from systematic research, that many wild species of plants and animals are declining in Northern Ireland. Some species, once common, are now hard to find. Others are critically rare, and a few are now extinct.

Through the Convention on Biological Diversity, the UK Government is committed to playing its part in a world-wide drive to arrest and reverse the decline in biodiversity. Its overall approach is set down in the UK Biodiversity Action Plan.

A cross-sectoral partnership, the Northern Ireland Biodiversity Group (NIBG), has now developed recommendations for a Biodiversity Strategy for Northern Ireland. The recommendations take account of the particular circumstances of Northern Ireland, identify the main reasons for loss of biodiversity, and forward an extensive suite of measures to be undertaken over a 15-year period.

The UK approach includes action plans for a substantial number of named habitats and species which are particularly at risk. These will be implemented in Northern Ireland where appropriate, but by their nature, the habitats and species involved tend to be localised in distribution and many do not occur naturally here. On the other hand, there is evidence that some other species or habitats are under threat in Northern Ireland. The NIBG has therefore recommended that a limited number of additional action plans specific to Northern Ireland should be drawn up and implemented.

These three action plans have been produced as pilots to illustrate the approach. They are being published by Environment and Heritage Service (EHS) on behalf of the NIBG. They are statements of the practical measures required to conserve the Irish Hare, chough and the curlew. Each of the three plans presents its own set of challenges which will require a wide range of actions by a number of different groups and individuals. Some of the actions contained in the plans will be specific to individual plans. Others will be dependent on the achievement of the NIBG recommendations contained in the Northern Ireland Biodiversity Strategy, such as those relating to agricultural systems and support. The costs relating to these individual plans will be estimated as part of a continuing exercise to develop indicative costs of implementing all habitat and species action plans.

There are good precedents from elsewhere to show that with determination, co-operation and carefully targeted resourcing, populations of wild species can be stabilised and restored. There is every reason to hope that we can do the same for these three species here in Northern Ireland.

The structure and delivery of Northern Ireland species action plans is largely based on the model established for the UK action plans. EHS will act as an initial contact for the plans. In addition, there are lead partners for each plan who will give a positive lead, prepare work programmes and provide guidance in carrying out activities on the work programmes. The lead partners for the three action plans presented here are listed below.

Species	Lead Partner
Irish Hare	UWT
Chough	RSPB
Curlew	RSPB

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Comments or feedback on these plans would be welcomed and should be addressed to Environment and Heritage Service, Conservation Science Unit, Commonwealth House, 35 Castle Street, Belfast BT1 1GU. Further information about the Northern Ireland Biodiversity Strategy and developments relating to it such as these species action plans can be found on the EHS website at www.ehsni.gov.uk.

Irish Hare *(Lepus timidus hibernicus)*

Northern Ireland Species Action Plan

1. Current status

1.1 The Irish hare is a sub species of *Lepus timidus* (L.) and is endemic to Ireland. It is found in many different habitats including unimproved and semi-improved pasture, expanding into adjacent improved pasture; upland habitats including heather dominated heath and bogs and in coastal habitats including dunes, coastal strips and sea shore. They also tend to occur on golf courses and airfields [1,2].

1.2 Historically, the Irish hare was widespread and common throughout Ireland, including Northern Ireland, though populations are thought to have undergone a substantial decline in the last 10-20 years. Estimates indicate that the present Northern Ireland population may be as low as 8250 [1]. Population levels may have fallen to critical levels in some areas. There are believed to be small populations of the introduced brown hare *Lepus europaeus* (L.) in Northern Ireland. This species is known to have declined throughout Europe but there is little information on European *Lepus timidus* populations [1].

1.3 The Irish hare is a quarry species and only enjoys limited protection under the Games Acts and Schedule 6 of the Wildlife (Northern Ireland) Order 1985. It is listed in Annex V (a) of the EU Directive 92/43/EEC (Habitats Directive), which determines that such species may be exploited provided that this is compatible with their maintenance at a favourable conservation status [4]. In the Irish Red Data book it is listed as internationally important [5].

2. Current factors causing loss or decline

Threats to this species are generally poorly understood, but the following factors are thought to have a negative affect on hare populations.

2.1 Loss of refuge areas for daytime lie-up sites, particularly rushes and good quality hedgerows[1,6].

2.2 Conversion of species-rich grasslands to ryegrass *Lolium* spp. and clover mixes[1].

2.3 Increased levels of disturbance due mainly to high livestock stocking densities on farms, increased use of farm machinery, peat cutting machines and disturbance by cats and dogs [1,7].

2.4 Increased mortality from mechanised harvesting [1].

2.5 Increased levels of predation on leverets by foxes, crows and magpies [1].

2.6 Habitat fragmentation [1].

2.7 Illegal coursing, lamping and over-hunting [1].

2.8 Direct grazing competition with sheep in upland areas [1].

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3. Current action

3.1 A survey was carried out from 1994 to 1997 by The Queen's University of Belfast, which examined the distribution of the Irish hare in Northern Ireland, as well as some aspects of the ecology of the species [1]. The results indicated that the Irish hare is widely distributed especially in areas with semi-natural grassland, heath or bog, although at generally low densities and there was evidence of a reduction in both population and range.

3.2 Research is currently being carried out at University College Dublin on the genetics of the species in Ireland.

3.3 Research is being carried out at Aberdeen University into aspects of the Scottish mountain hare *Lepus timidus scoticus*, and at Uppsala University, Sweden on the genetics of both *Lepus timidus* and *Lepus europaeus* [8].

3.4 Various aspects of brown hare ecology are being studied at Bristol University and at the Game Conservancy Trust.

3.5 Agri-environment schemes, such as Environmental Sensitive Areas (ESAs) and the new Countryside Management Scheme (CMS), can make an important contribution to the maintenance and enhancement of suitable hare habitat.

4. Action plan objectives and targets

4.1 Maintain the existing range and demonstrate a population increase by 2005.

4.2 Double present population by 2010 over as much of the range as possible.

4.3 Maintain and increase the area and quality of suitable hare habitat.

5. Proposed action with lead agencies

The provision of refuge areas, adequate and varied food supply and freedom from disturbance are essential if Irish hare numbers are to be maintained at present levels. If hare numbers are to be increased then habitat improvements must also be a priority. Further research is required in order to improve the current understanding of threats to hares and habitat use by hares. Research is also required to determine whether numbers are still declining.

5.1 Policy and legislation

5.1.1 Take account of the requirements of Irish hares when reviewing or developing agri-environment schemes. A specific clause could be considered for present ESA and new CMS schemes for Irish hares. Particular consideration should be given to reducing stocking levels and encouraging good hedgerow management. (ACTION: DARD)

5.1.2 Consider the requirements of this species in the implementation of the 2000-2006 agri-environment programme. (ACTION: DARD)

5.1.3 Review and if necessary, increase the level of protection given to the Irish hare in the Wildlife (Northern Ireland) Order 1985. (ACTION: EHS, DOE)

5.2 Site safeguard and management

5.2.1 Ensure that state owned lands are managed, where possible, with a view to conservation of Irish hares. (ACTION: All Government Departments)

5.2.2 Establish hare sanctuaries or hare reserves at suitable locations by acquisition of shooting rights. (ACTION: EHS, Water Service, DARD, MOD, Prison Service)

5.3 Species management and protection

5.3.1 Seek to develop a strategy for the conservation and monitoring of the Irish hare (possibly as part of a wider UK mammal strategy or on an all-Ireland basis). (ACTION: EHS, JNCC)

5.4 Advisory

5.4.1 Prepare and distribute a publication containing management advice about hares. Distribute to landowners / land managers, farmers, golf courses, airports and other known hare localities. (ACTION: EHS, DARD)

5.4.2 Ensure that relevant staff in DARD are sufficiently trained and informed to advise on management for the Irish hare. (ACTION: DARD)

5.5 Future research and monitoring

5.5.1 Promote general research into the biology, ecology and population dynamics of the Irish hare. (ACTION: EHS, DARD)

5.5.2 Establish the status of the brown hare in Northern Ireland and investigate its impact on Irish hare populations. (ACTION: EHS)

5.5.3 Investigate the relative importance of hares as game species or pests, to assist farmers and foresters to make informed choices in hare management. (ACTION: DARD, Forest Service)

5.5.4 Repeat surveys similar to the Northern Ireland Hare Survey at intervals of 3-5 years until 2010 to measure the success of this action plan. (ACTION: EHS)

5.5.5 Co-ordinate results of on-going Northern Ireland hare surveys with compatible surveys in the Republic of Ireland. (ACTION: EHS)

5.5.6 Ensure that distribution information gathered in surveys is passed to CEDaR and other relevant centres. (ACTION: EHS)

5.6 Communication and publicity

5.6.1 Ensure that the decline of the Irish hare is publicised and use salient points as examples of how land management practices can benefit hare populations. (ACTION: EHS, DARD)

5.6.2 Use publicity leaflets to highlight the conservation issues surrounding the Irish hare. (ACTION: EHS)

5.6.3 Encourage public participation in survey work and encourage the reporting of incidental sightings to CEDaR. Produce leaflets so that the public can easily tell the difference between Irish and brown hares and rabbits. (ACTION: EHS)

5.7 Links with other action plans

5.7.1 It is likely that the implementation of this plan will also benefit the Northern Ireland populations of the following UK priority species: skylark *Alauda arvensis*, corncrake *Crex crex*, marsh fritillary *Eurodryas aurinia* and reed bunting *Emberiza schoeniclus* as well as the curlew *Numenius arquata (*a Northern Ireland action plan species).

5.7.2 This plan should be considered in conjunction with the following UK Habitat Action Plans:-

- Purple moor grass and rush pastures
- Coastal and floodplain grazing marsh
- Lowland meadows
- Lowland dry acid grassland
- Upland calcareous grassland
- Lowland raised bog
- Blanket bog
- Upland heathland

5.7.3 There may be additional links with species and habitats listed in the Northern Ireland Biodiversity Strategy which will be added later.

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Chough *(Pyrrhocorax pyrrhocorax)*

Northern Ireland Species Action Plan

1. Current status

1.1 The chough, *Pyrrhocorax pyrrhocorax*, is a member of the crow family and is confined mainly to western coastal cliffs throughout Britain and Ireland. They nest in crevices in the cliff face and feed on short coastal heath and grasslands on the cliff tops and slopes. Their diet consists mostly of insects, which they dig for in the soil or in cattle dung, though they will also supplement it with spilt grain from stubble fields in winter.

1.2 Historically, the chough has been in long term decline. Over the last 200 years, it has disappeared completely from parts of its former range in Britain and Ireland [4]. For example, in Northern Ireland, it formerly bred on the coastal cliffs of the Mourne Mountains. More recent evidence from surveys carried out in 1982 and 1992 suggest that throughout Britain and Ireland, the overall population is stable or even increasing in some areas [1,2]. The most notable exception to this trend is Northern Ireland where the population has continued to decline. In the early 1960's, there were 20-22 breeding pairs, 10-12 of which were on Rathlin Island, once the stronghold for the species in Northern Ireland. By 1982, the total was just 9-10 breeding pairs and by 1992, just 2-3, all confined to the mainland north Antrim coast; for the first time they did not breed on Rathlin Island that year. The population has remained more or less stable since then, though breeding success appears to be very poor: only six young fledged in the period 1995 - 2000.

1.3 The chough is listed in Annex I of the EU Birds Directive (79/409/EEC) and its European status is listed as a SPEC 3, having undergone a large decline [6]. It is red listed in Birds of Conservation Concern in Ireland and is included in the Irish Red Data Book [7] in the INTERNATIONALLY IMPORTANT category. It is listed in Schedule 1 Part I of the Wildlife (Northern Ireland) Order 1985.

2. Current factors causing loss or decline

2.1 Low productivity and small population size are the main constraints on the current breeding population. These and the recent decline are believed to be related to a year-round lack of suitable feeding areas as a result of the loss, fragmentation and deterioration in quality of natural and semi-natural grasslands and coastal heath. These have resulted mainly from the intensification of pastoral and arable management and associated changes in stocking rates, increased in-housing of cattle and improved veterinary products [3, 5].

3. Current action

3.1 The remnant population is surveyed annually by RSPB and National Trust.

3.2 DARD have introduced a Chough Option into the Antrim ESA,

based on research carried out by EHS and RSPB to identify the remaining important chough feeding areas. Relevant landowners have been targeted in these areas and all have taken up this option. DARD is monitoring the effects of this option and is concluding a scientific study on a range of fields.

3.3 RSPB and the National Trust have devised a monitoring scheme to assess the effectiveness of management carried out under the Chough Option.

3.4 National Trust has acquired two farms on the north Antrim coast and manages these, *inter alia*, for chough.

4. Action plan objectives and targets

4.1 Maintain chough as a breeding species in Northern Ireland.

4.2 Restore the breeding population and range to at least 1982 levels by 2010.

5. Proposed action with lead agencies

The maintenance and restoration of suitable chough feeding habitat is essential, through a combination of agri-environment measures, land acquisition and specific management agreements where necessary.

5.1 Policy and legislation

5.1.1 Develop, promote, monitor and review the effectiveness of appropriate agri-environment measures in the Antrim ESA. (ACTION: DARD)

5.2 Site Safeguard

5.2.1 Seek positive management agreements with landowners on ASSIs and other key sites, which support or have recently supported (within the last 5 years), feeding choughs at some time of the year. (ACTION: EHS)

5.2.2 Establish a comprehensive condition and compliance monitoring programme for ASSIs to prevent further piecemeal damage to habitats. (ACTION: EHS)

5.2.3 Consider designating sites of importance for chough as ASSI. (ACTION: EHS)

5.2.4 Ensure cliff slopes within the current range of the species are grazed short to provide suitable feeding areas. (ACTION: EHS, DARD)

5.2.5 Ensure that nesting sites are protected from disturbance and other adverse developments. (ACTION: EHS)

5.2.6 Consider the acquisition of further sites in Co. Antrim and ensure that existing reserves are appropriately managed. (ACTION: EHS)

5.3 Species Management and Protection

5.3.1 Ensure that breeding success is not further reduced by disturbance by visitors and rock climbers. (ACTION: EHS)

5.4 Advisory

5.4.1 Ensure that those responsible for implementing and supporting agri-environment schemes receive training and up-to-date advice on the targeting and management of land for chough. (ACTION: DARD)

5.4.2 Ensure that farmers and landowners are aware of the presence of chough on their land and promote and encourage them to adopt appropriate management for chough. (ACTION: DARD)

5.5 Future Research and monitoring

5.5.1 Continue to monitor the breeding population and assess breeding success annually. Causes of failure should be assessed wherever possible by checking nests and investigating the possible impact of peregrine falcons on newly fledged chicks. (ACTION: EHS)

5.5.2 Continue to monitor the effect of the Chough Option on chough foraging distribution. (ACTION: DARD)

5.5.3 Investigate further the effects of existing and new generation livestock anti-parasitic drugs on chough food resources. (ACTION: DARD)

5.6 Communications and publicity

5.6.1 Reduce disturbance by visitors and rock climbers at nesting sites by providing information and advice. (ACTION: EHS)

5.6.2 Use agri-environment schemes, including measures such as the Chough Option, to promote the need for agricultural and rural support schemes which encourage sustainable agriculture whilst protecting and enhancing biodiversity. (ACTION: DARD)

5.7 Links with other action plans

5.7.1 It is likely that the implementation of this plan will also benefit the Northern Ireland populations of the following UK priority species: skylark *Alauda arvensis*, linnet *Carduelis cannabina.*

5.7.2 This plan should be considered in conjunction with the following UK Habitat Action Plans:-

- Lowland dry acid grassland
- Lowland heathland
- Upland heathland.

5.7.3 There may be additional links with species and habitats listed in the Northern Ireland Biodiversity Strategy which will be added later.

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Curlew *(Numenius arquata)*

Northern Ireland Species Action Plan

1. Current status

1.1 The curlew, *Numenius arquata*, is a large ground nesting wader. It is a characteristic breeding bird of upland areas, where it nests on moorlands and damp, rushy pastures and also of lowland wet grasslands, wet pastures and meadows. It occurs in winter in coastal areas with three Northern Ireland estuaries holding numbers of national importance.

1.2 The total UK breeding population is estimated to be at least 75,000 breeding pairs, up to 30% of the European population [5]. The Irish population, which is widely dispersed over all but the most south-easterly counties, is estimated at 12,000 pairs[8] with the nationally important population in Northern Ireland being estimated at 5,000 pairs in 1988[7]. Key areas include the wet grassland complexes of the Lough Erne and Lough Neagh basins, the islands in Lower Lough Erne, the southern slopes of the Sperrins, the Antrim Hills and the Fairywater bogs of Co. Tyrone.

1.3 The breeding bird atlas [2] indicates declines in breeding range, most notably in the south and east of Ireland. In Northern Ireland, an overall decline of 25% in the number of breeding pairs at the main sites was recorded between 1985-7 and 1992 [7] with further declines recorded in 1996 [4]. A survey undertaken in 1999 indicated that the population had declined to an estimated 2,091 pairs, a decline of 58% from the 1988 population [6].

1.4 The Wetland Bird Survey [11] indicates that a relatively stable population of over 6,500 curlew winters in Northern Ireland. Most occur on the coast particularly at sites with extensive intertidal areas such as Strangford Lough and Lough Foyle.

1.5 The curlew is protected under Article 4.2 of the EC Birds Directive, Appendix 2 of the Berne Convention and as a quarry species, under Article 4 of the Wildlife (Northern Ireland) Order 1985. It is also included on the red list of Birds of Conservation Concern in Ireland and is listed as a SPECIES THAT REQUIRES MONITORING in the Irish Red Data Book [10]. The species European status is listed as a SPEC 3 [8], a moderately declining winter species.

2. Current factors causing loss or decline

2.1 Low productivity levels as a result of predation of eggs and chicks is currently the major factor limiting breeding success[4]. This is believed to result from increased populations of predators (foxes, crows and gulls), possibly brought about by reduced levels of control and increased feeding opportunities arising from higher stocking densities and other agricultural improvements.

2.2 Past and current loss, fragmentation and reduced quality of breeding habitat as a result of agricultural improvement, afforestation and peat extraction have reduced the area in which breeding can occur

and, by concentrating breeding birds into smaller areas, also may have increased vulnerability to predators [1,3, 6, 7].

2.3 Although numbers in winter are not declining, loss of intertidal feeding habitats through development and disturbance of feeding and roosting areas are important potential threats.

3. Current action

3.1 DARD's agri-environment programme contains habitat prescriptions of benefit to curlew, such as the wet grassland prescriptions in the Fermanagh ESA and there is an Upland Breeding Wader Option in the Countryside Management Scheme (CMS).

3.2 DARD and RSPB will be jointly employing a project officer for three years to contribute to the effective delivery of agri-environment prescriptions for a range of important species, including curlew.

3.3 The majority of key wet grassland sites and some other sites, such as the Fairywater bogs in Co. Tyrone, have been notified as ASSI.

3.4 A regular programme of surveys of the key sites, including assessments of breeding success, has been implemented by RSPB with funding from EHS.

3.5 RSPB manages and monitors several key islands in Lower Lough Erne as a Reserve for breeding waders, including curlew.

3.6 The Queen's University of Belfast, in association with RSPB, is seeking a CAST award to study the relationship between land-use and the abundance and diet of foxes.

3.7 Forest Service policy contained in Afforestation - the DANI Statement on Environmental Policy recognises the value of wetlands used by breeding waders and concludes that afforestation should not take place on such sites.

4 Action plan objectives and targets

4.1 Increase curlew breeding success in core areas to levels sufficient to maintain a stable population by 2005. i.e 0.5 - 0.6 chicks fledged per breeding pair.

4.2 Halt the decline in the breeding population by 2005.

4.3 Restore population size and range to 1985-87 levels by 2010.

4.4 To maintain the range and numbers wintering in coastal habitats at 1993/4 - 1997/98 WeBS count levels.

5. Proposed actions with lead agencies

An integrated approach is required, involving immediate action to increase breeding success at key sites by reducing losses due to predation, coupled with immediate and longer term action to restore the quality and extent of breeding habitat. This will require effective exploitation of current agri-environment arrangements (ESAs and CMS), the development of additional measures where appropriate and long term agricultural policy reform.

5.1 Policy and legislation

5.1.1 Promote CAP reform measures which restructure livestock support payments and provide for the protection and enhancement of marginal upland habitats. (ACTION: DARD)

5.1.2 Implement grazing conditions attached to livestock subsidies. (ACTION: DARD)

5.1.3 Support and promote the uptake of appropriate options of the Countryside Management Scheme. Extend existing and develop new measures as appropriate. (ACTION: DARD)

5.1.4 Ensure that effective mechanisms to reduce the number of carcasses of fallen animals are devised and implemented as a matter of urgency and that existing advice and guidance as set out in DARD advisory notes is closely followed. (ACTION: District Councils, DARD)

5.1.5 Ensure that the influence of forestry on curlew populations is considered in the proposed review of Forest Policy (ACTION: Forest Service)

5.1.6 Develop and implement a strategy for the integrated safeguard of the coastal zone environment (ACTION: DOE)

5.1.7 Review and if necessary, increase the level of protection given to the curlew in the Wildlife (Northern Ireland) Order 1985 (ACTION: EHS, DOE)

5.2 Site safeguard and management

5.2.1 Continue to declare and manage ASSIs for breeding and wintering curlew. (ACTION: EHS)

5.2.2 Establish agreements with landowners for the positive management of areas important for breeding curlews within ASSIs, including a comprehensive condition and compliance monitoring programme. (ACTION: EHS)

5.2.3 Seek opportunities to restore areas of wet grassland that in the recent past were important for breeding waders. (ACTION: EHS, DARD)

5.2.4 Consider the acquisition of further key sites and ensure the effective management through the control of predators and appropriate grazing of existing reserves or sites under management agreements. (ACTION: EHS)

5.3 Species management and protection

5.3.1 Establish trial and 'control' areas to determine the effects of predator control and the removal of carcasses of fallen animals on the abundance of foxes and crows and on the breeding success of curlew. (ACTION: EHS)

5.3.2 Take steps to ensure effective implementation of the statutory suspension of wildfowling in severe weather. (ACTION: DOE)

5.4 Advisory

5.4.1 Ensure that those responsible for implementing and supporting agri-environment schemes continue to receive effective training and up-to-date advice on land management practices which would benefit breeding curlew. (ACTION: DARD)

5.4.2 Ensure that farmers and landowners are aware of the presence of curlews on their land and promote and encourage them to use the information available on appropriate management. (ACTION: DARD)

5.5 Future research and monitoring

5.5.1 Establish a comprehensive five year monitoring programme to monitor curlew numbers and breeding success and monitor fox and crow abundance in areas used in the predator control trials (5.3.1). (ACTION: EHS)

5.5.2 After three years of the trials (5.3.1), undertake two years of intensive studies of curlew nest and chick survival in the area in which predators are controlled and carcasses are removed for comparison with data from existing studies in Northern Ireland. (ACTION: EHS)

5.5.3 Carry out research into the diet of crows and foxes to determine which aspects of land-use change may be related to increases in predator populations. (ACTION: DARD, EHS)

5.5.4 Evaluate the impact of wildfowling on breeding and wintering curlew. (ACTION: EHS)

5.6 Communications and publicity

5.6.1 Develop and implement a comprehensive public affairs campaign to explain, support and promote the predator control trial. (ACTION: EHS, DARD)

5.6.2 Use the curlew issue in Northern Ireland to help promote the need for agricultural and rural support schemes which encourage sustainable agriculture whilst protecting and enhancing biodiversity. (ACTION: DARD)

5.7 Links with other action plans

5.7.1 It is likely that the implementation of this plan will also benefit the Northern Ireland populations of the following UK priority species; skylark *Alauda arvensis*, marsh fritillary *Eurodryas aurinia*, reed bunting *Emberiza schoeniclus* and pennyroyal *Mentha pulegium*. Implementation will also benefit the Irish hare *Lepus timidus hibernicus* (a Northern Ireland action plan species).

5.7.2 This plan should be considered in conjunction with the following UK Habitat Action Plans:-

- Purple moor grass and rush pastures
- Coastal and floodplain grazing marsh
- Lowland meadows
- Lowland raised bog
- Blanket bog

5.7.3 There may be additional links with species and habitats listed in the Northern Ireland Biodiversity Strategy which will be added later.

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ENVIRONMENT AND HERITAGE SERVICE

ACRONYMS

ASSI	Area of Special Scientific Interest
BAP	Biodiversity Action Plan
CAST	Co-operative Award in Science and Technology
CAP	Common Agricultural Policy
CEDaR	Centre for Environmental Data and Recording (the Northern Ireland Biological Records Centre based at the Ulster Museum)
CMS	Countryside Management Scheme
DARD	Department of Agriculture and Rural Development
DOE	Department of the Environment
EC	European Community
EHS	Environment and Heritage Service
ESA	Environmentally Sensitive Area
EU	European Union
JNCC	Joint Nature Conservation Committee
MOD	Ministry of Defence
NIBG	Northern Ireland Biodiversity Group
RSPB	Royal Society for the Protection of Birds
UWT	Ulster Wildlife Trust
WeBS	Wetland Bird Survey