



HEN HARRIER PROGRAMME



Hen Harrier Monitoring 2021

November 2021



An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine



'The European Agricultural Fund
for Rural Development: Europe
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AGRICULTURE & INNOVATION

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SEEN A HEN HARRIER?

We would be very interested in any casual sightings of Hen Harriers in your area. The Golden Eagle Trust are the Project partners undertaking annual monitoring of Hen Harriers within the SPAs and also monitor a range of other species as part of the Programme.

You can let the Project know in confidence by either contacting your local Project Officer; by submitting a sighting via the Contacts Page on our website; by emailing the Project; or, by contacting the Hen Harrier Monitoring Team Manager:

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GLOSSARY

Territory: any area of suitable habitat defended or occupied by a Hen Harrier(s) for such purposes as mating, nesting, roosting, or feeding.

Confirmed breeding pair: observed evidence of behaviours that indicate a pair of Hen Harriers are holding a territory and breeding or attempting to breed.

Possible breeding pair: a pair of Hen Harrier observed in courtship or a pair or female observed in suitable nesting habitat during the breeding season.

Territorial pair: an occupied territory supporting a confirmed or possible breeding pair of Hen Harrier.

The Hen Harrier Programme

HEN HARRIER MONITORING

The Hen Harrier Project monitor the numbers of territorial pairs of birds in each Special Protection Area (SPA) during the breeding season. Monitoring also aims to establish the breeding outcome (i.e. success or failure of a nest and if successful, establish the number of fledged young). Nest visits are not undertaken as part of the monitoring.

Suitable Hen Harrier habitats in the SPAs are surveyed from Vantage Points (VPs) that provide good views of the study area. More than 785 individual VP observations were undertaken across the SPA network in 2021, equivalent to over 2,268 hours of surveyor effort. All 55 10km squares which overlap SPAs were surveyed during 2021.

In 2021 there were 62 confirmed breeding pairs and seven possible breeding pairs of Hen Harriers within the SPA network (a population range of 62 - 69 territorial pairs). This is similar to the total numbers of territorial pairs recorded within the SPAs since annual monitoring began in 2017 (58 - 70 pairs); 2018 (53 - 68 pairs); 2019 (56 - 63 pairs); and, 2020 (58 - 62 pairs).

The stabilisation of numbers of territorial pairs in 2021 ends a year on year decline in the SPAs observed between 2018 and 2020. However, the 2021 breeding season was the least productive on record with a third of nesting pairs in the SPA network successfully fledging 34 young.

A comparison of the estimated Hen Harrier numbers in 2005 shows that the total SPA population in 2021 is 25% smaller than that recorded during designation.

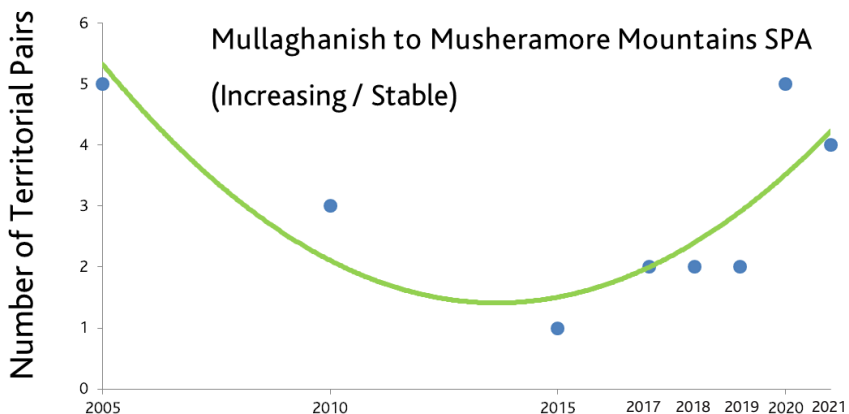
The monitoring team put in a huge effort from early Spring, to late Summer every year. We would like to thank the monitoring team for all their hard work.

Mullaghanish to Musheramore SPA



3 confirmed pairs; 6 young

The Hen Harrier population in the Mullaghanish to Musheramore Mountains SPA at designation was five breeding pairs. No pairs were recorded breeding in the SPA in 2014 and between 2015 - 2019 the population fluctuated between one and two pairs. There was a significant recovery in 2019 when the population increased to five territorial pairs. In 2021 there were three confirmed and one possible breeding pairs of Hen Harrier in this SPA. There were two successful pairs which fledged six young in 2021. One pair failed at the late chick stage, possibly due to predation. Scrub such as Gorse and briars are the preferred nesting habitat of Hen Harrier in this SPA.

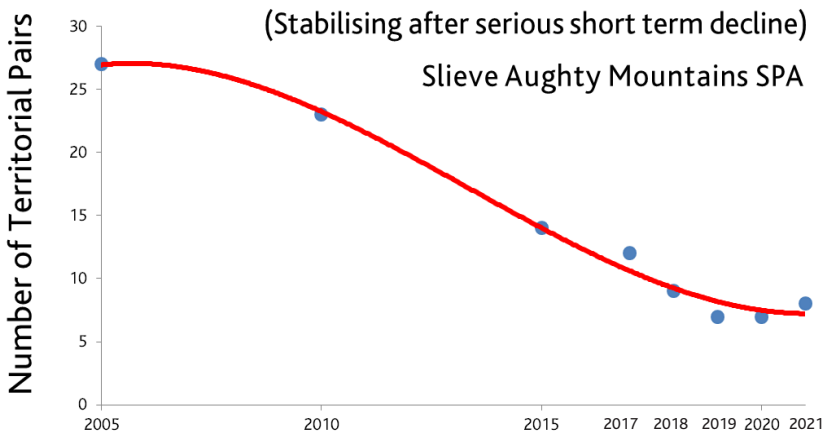


Slieve Aughty Mountains SPA



7 confirmed pairs; 4 young

The breeding Hen Harrier population in the Slieve Aughty Mountains SPA has more than halved from 27 territorial pairs at designation. There were seven confirmed breeding pairs recorded during surveys in 2021 and one possible pair, a slight increase on 2019 and 2020. Recent monitoring shows that few nests successfully fledge young in this SPA. The 2021 breeding season was another poor year in terms of productivity with just three successful pairs fledging a total of four young. A significant pressure on Hen Harrier in this SPA is the direct and indirect effects of habitat loss and fragmentation. The extent and age profile of the forest plantations in the SPA may be leading to an increased vulnerability to predation. Forestry activities along with recreational traffic are regularly observed near nests and pose an ongoing risk of disturbance.

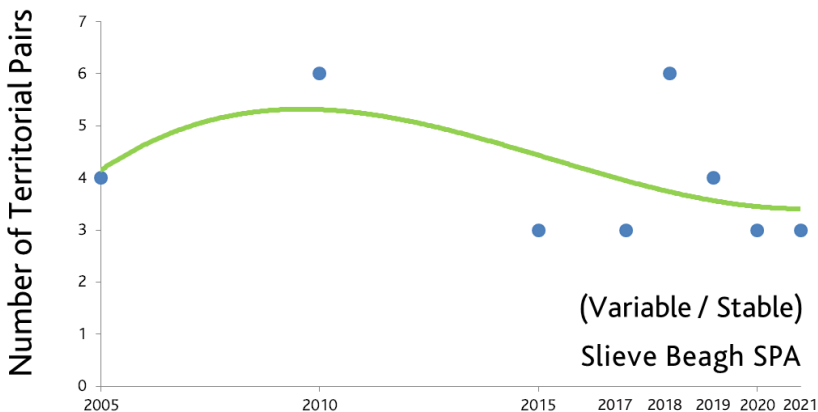


Slieve Beagh SPA



3 confirmed pairs; 2 young

The small Hen Harrier population in this SPA is part of a larger cross border population within the Slieve Beagh - Mullaghfad - Lisnaskea SPA designation in Northern Ireland. The number of pairs recorded annually in the southern portion fluctuates in response to the movement of pairs across the border. Three confirmed breeding pairs were recorded in this SPA in 2021. Two pairs fledged one young each. One pair were disturbed by turf cutting activities during incubation. This pair later abandoned their territory after extensive damage to the surrounding habitats was caused by illegal burning. Slieve Beagh is a relatively accessible site and is popular with locals and visitors alike. The combination of disturbance from peat extraction, forestry activities and recreation are significant pressures on Hen Harrier during the breeding season in this SPA.

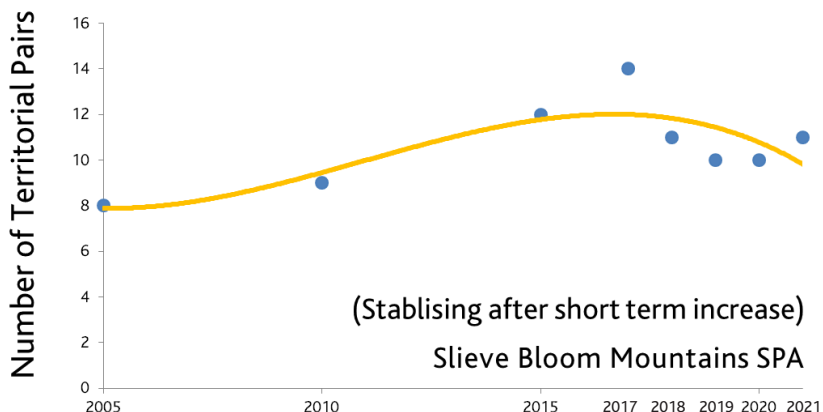


Slieve Bloom Mountains SPA



10 confirmed pairs; 0 young

The population in this SPA has declined from a peak of 14 territorial pairs in 2017 to 11 territorial pairs in 2021. Despite the high density of breeding Hen Harrier within the SPA, the numbers of chicks fledging each year has been variable. Very small numbers fledged in 2018 (five young) and 2020 (three young) compared to 16 chicks in both 2017 and 2019. Evidence of ground predators in nesting areas strongly indicates that predation is the main reason for high rates of nest failure in the Slieve Blooms. These predators are associated with conifer plantation forestry, which covers 62% of the total land area in this SPA. In 2021, ten confirmed pairs were recorded, equivalent to 16% of the total SPA population. All ten known Hen Harrier pairs in the Slieve Bloom Mountains SPA failed in 2021. Zero productivity from this significant population in 2021 is an alarming setback.

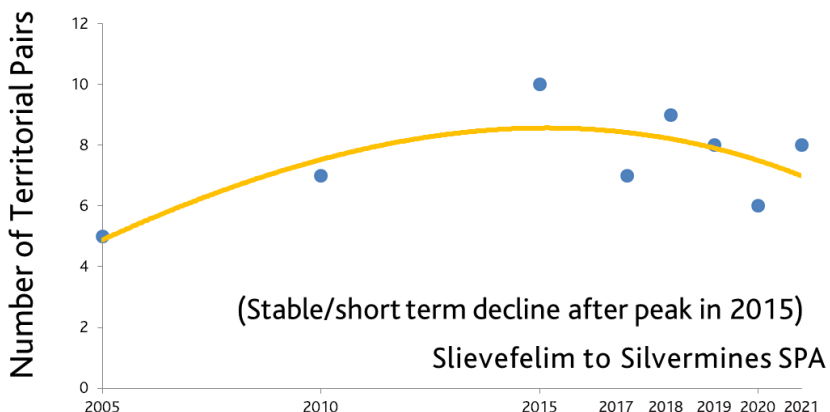


Slievefelim to Silvermines SPA

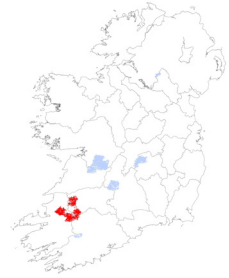


5 confirmed pairs; 3 young

The number of breeding Hen Harrier in the Slievefelim to Silvermines SPA is higher than that recorded at the time of designation. However there has been a flux in the numbers of territorial pairs from a peak of ten in 2015 to a low of six pairs in 2020. Monitoring in 2021 showed a slight increase to seven territorial pairs. Five confirmed and two possible breeding pairs were recorded in 2021. Productivity in this SPA has been very low in recent years with just one young fledged in 2019 and three in 2020. Two pairs successfully fledged three chicks in 2021. Motorbike, turbary and forestry related disturbance are recorded frequently across the site. A range of habitats (heath/scrub/pre-thicket forest) are selected for nesting in this SPA.

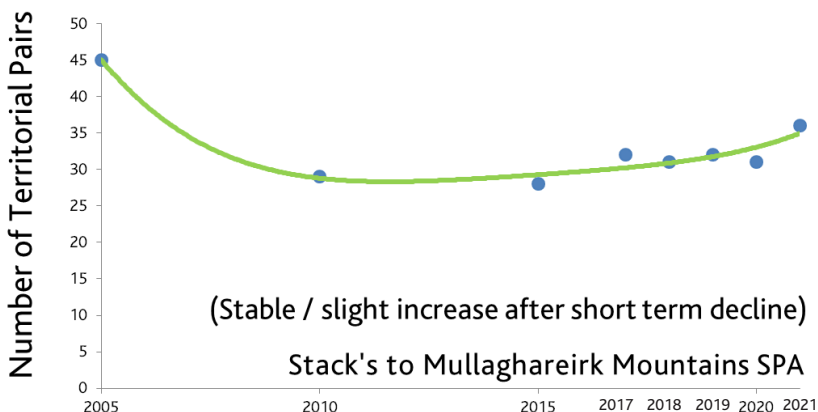


Stack's to Mullaghareirk Mountains SPA

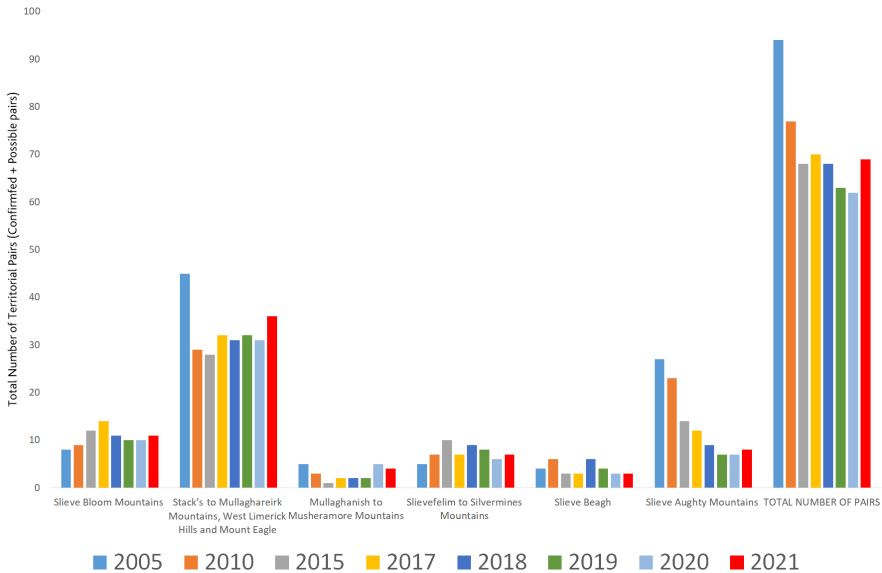
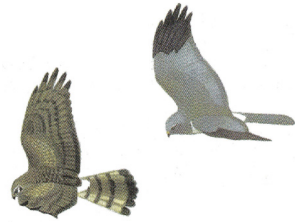


34 confirmed pairs; 19 young

The Stacks, Mullaghareirks, Mount Eagle and West Limerick Hills SPA supports the largest population of breeding Hen Harrier in the SPA network. The population has declined by a third since 2005, however it appears to have stabilised in the last five years. There were 34 confirmed pairs and two possible pairs recorded during 2021. Following a record-breaking year for numbers of fledged young in 2019 (51 fledged from 17 confirmed pairs), a drop in productivity was noted in 2020 (33 fledged from 13 pairs). Despite higher numbers of territorial pairs in the SPA and 32 confirmed nests, the failure rate was high (80%) with only eight pairs successfully fledging 19 young in 2021. Observed presence and evidence of ground predators in and around nesting areas strongly indicates predation as one of the main reasons for nest failures.

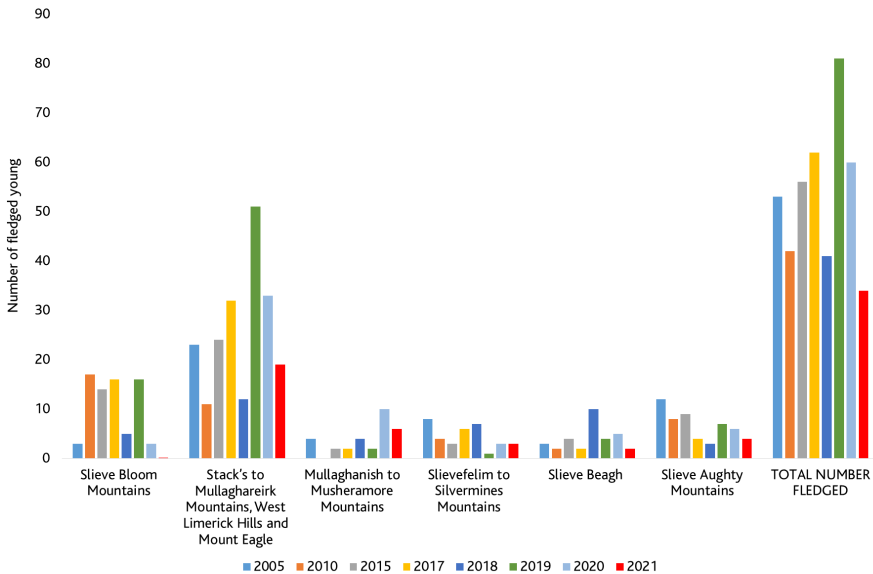


Hen Harrier Population Trend within the SPA Network



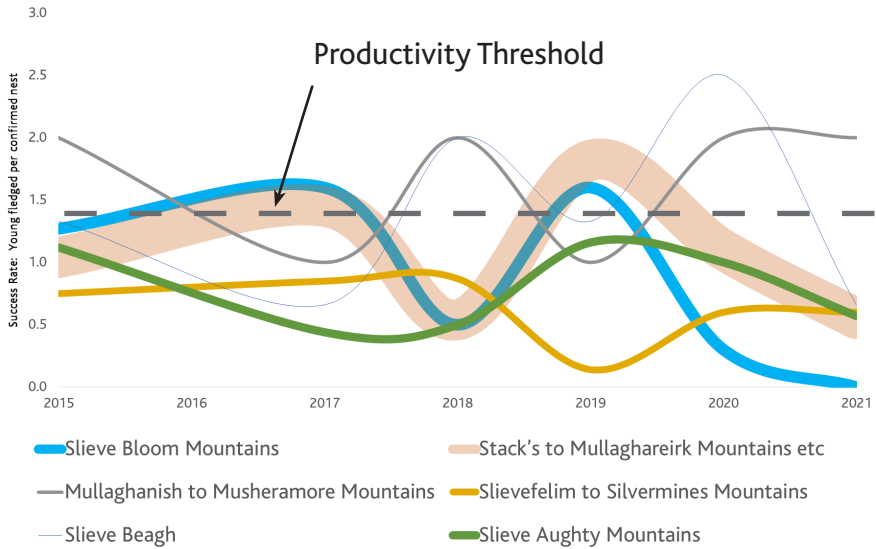
The six Special Protection Areas (SPAs) designated for breeding Hen Harrier were identified using data from the 2005 national survey. At that time the population in the SPAs was estimated to be 94 pairs. Since then the population trend within the SPAs has been downward, sinking to 62 pairs in 2020 at its lowest. Monitoring in 2021 showed a slight increase in the number of territorial pairs in the two largest SPAs, the Slieve Aughty Mountains, and the Stack's to Mullagherierk Mountains etc. Total numbers of territorial pairs are similar to those in 2017 and 2018. While a halt to the annual decline is positive, and is a cause for cautious optimism, the status of the population is still precarious. The observed increase in territorial pairs along with recruitment into the breeding population must be sustained for many years to deliver a long term recovery. Of the 62 confirmed breeding pairs recorded in 2021, 18 pairs were successful in rearing and fledging young (30%).

Hen Harrier Productivity within the SPA Network



Productivity is quantified by the number of fledged young in each SPA. For the Hen Harrier population to be capable of maintaining itself, or expanding, reproduction and survival must exceed the combined effects of mortality and dispersal to other areas. Productivity can be linked to habitat availability, habitat quality, predation pressure and weather. As the graph shows, productivity between sites and between years in the SPA network can vary considerably. In 2019, 81 young fledged from nests across the six SPAs, the highest number within the network in the last 15 years. This peak in 2019 may be a factor in the stabilisation in territorial pairs observed in 2021, as statistically, more fledged birds could survive to sexual maturity and return to natal areas to establish a territory. Despite the number of territorial pairs stabilising, the 2021 breeding season was the least productive on record with just a third of nesting pairs in the SPA network successfully fledging 34 young.

Fledged Young per Confirmed Pair



The graph above shows the numbers of fledged Hen Harrier chicks per confirmed pair as a measure of breeding success. The lines are weighted in thickness relative to the number of Hen Harrier in each SPA as of 2021. Research indicates that for Hen Harrier populations to be stable or expanding the number of fledged young must exceed the productivity threshold of 1.45 young per breeding pair. The last national Hen Harrier survey in 2015 showed the national population was in decline with a mean number of fledged young per breeding pair estimated to be 0.94. SPA monitoring data (2015 - 2021) shows that mean fledging rates across the SPA network range from 0.73 - 1.25 fledged young per breeding pair. The mean fledging rate in 2021 was the lowest yet recorded at 0.73 fledged young per confirmed pair.

This is below what is required for the population to be self-sustaining. Breeding success varies considerably between the different SPAs and from year to year. There are a large number of factors that can influence nest success. These include habitat quality, predation, inclement weather, disturbance and subsequent nest abandonment.

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