

## Corncrake | *Crex crex* | An Traonach

Supporting document for Article 12 reporting period 2013-2018



**An Roinn Cultúir,  
Oidhreachta agus Gaeltachta**  
Department of Culture,  
Heritage and the Gaeltacht

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## Background

This report contains statistics on the status and trends of breeding Corncrake in Ireland, for the Birds Directive Article 12 reporting period of 2013-2018. It also references how these figures were obtained as well as the threats and pressures observed and conservation action taken.

## Population size

Corncrakes were common and widespread across Ireland up to the latter half of the 20<sup>th</sup> century. In the 1970s it was estimated that the national population was 4,000 calling males but in 2018, there were just 151 calling males recorded.

The population of Corncrakes in Ireland has been monitored annually since 1993. Due to its shy, elusive nature, the Corncrake is rarely seen and consequently it is the male's loud and distinctive mating call which is used to locate individuals. The Corncrake census in Ireland uses standard methodology described by Stowe & Hudson (1988<sup>1</sup>; 1991<sup>2</sup>). Between 2013 and 2018, contracted fieldworkers undertook the majority of census survey efforts, assisted by NPWS staff on coordinated surveys and offshore islands. This was done in all 10km squares in which Corncrakes were recorded in previous years, focusing on traditional locations and nearby areas of suitable habitat, as well as locations from where reports from the public have been received. Survey sites were visited at least twice annually, during the period 20 May to 10 July, between BST 00.00 and 03.00 hours. In areas where there were multiple birds, census visits were more frequent, as Corncrakes can move during the season and this allowed for a more accurate population measure from accumulated records at season's end. Visits were made primarily in mild, calm conditions. Corncrakes call less during cold, wet and windy weather, and are not easily heard in wind speeds above Beaufort force 4. Suitable weather conditions allowed for most 1km squares to be covered by two survey stations. More stations were required to cover the same area in less suitable conditions. Vehicles were driven throughout pre-determined survey areas, with frequent stops (stations) to listen for calling corncrakes. Geo-referenced OSI 1:50,000 maps and GPS units were used to ensure that all areas were adequately surveyed. Surveyors were familiar with the survey areas and their gross habitat composition prior to the census period. At each stop, surveyors listened for a minimum of 2 to 3 minutes, which is sufficient to ascertain whether or not a bird is calling within earshot. Where reports from third parties were being investigated, a greater amount of time would be invested and if nothing was heard on the first visit, the site (if it contained suitable habitat) was checked again within a week. Habitat considered suitable included grassland with a height exceeding 20cm (from

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<sup>1</sup> Stowe, T.J., & Hudson, A.V., (1988) Corncrake studies in the Western Isles. RSPB Conservation. Review 2: RSPB, Sandy, Beds.

<sup>2</sup> Stowe T.J. & Hudson A.V. (1991) Radio telemetry studies of Corncrake in Great Britain. *Vogelwelt* **112**, 10-16.

which vegetation is periodically removed) and herbaceous vegetation such as nettles, iris, reed canary grass, common reed and dock leaf. Often, birds were calling from the middle of farmland where they couldn't be safely approached at night. Locations were obtained by triangulation (taking bearings from different survey points) or by marking the spot and returning in daylight.

The Corncrake presents obvious monitoring issues due to its shy, secretive behaviour. In Ireland, the census technique used is based on the results of studies of radio-tagged individuals (Stowe & Hudson, 1988, 1991) which suggest that males rarely move more than 250m between calling sites and that males call on 75-80% of nights. Calling males that were recorded twice, more than five nights apart, were classified as a 'confirmed calling male record'. Based on Stowe & Hudson's results, 250m is used as a rule of thumb for the maximum distance which a male moves between calling sites. Thus birds recorded calling >500m away from current or previous 'confirmed calling male records' were considered as new individuals.

There are two main possible sources of error when performing counts in this way:

1. The possibility of missing individuals, which can occur where surveys are carried out infrequently (e.g. on islands), where males call irregularly or have a weak call, and where newly arriving males use almost identical sites as males already or recently present (observed in a study by Schäffer & Koffijberg 2006)<sup>3</sup>.
2. The possibility of counting the same individual two or more times when males move >500m between breeding attempts. Recent studies across Europe show that it is not unusual for birds to travel over 10km between breeding attempts, and several movements of over 100km have even been recorded (Hoffman 1999<sup>4</sup>, Pinechot 2017<sup>5</sup>, Mikkelsen 2010<sup>6</sup>).

In this context, the identification of individuals would improve the accuracy of population estimates. Acoustic analyses of Corncrake song have shown this to be an effective tool in differentiating and identifying individuals, with certain limitations. The most often used variable in identifying Corncrake calls is the Pulse-to-Pulse Duration (PPD). Each Corncrake call consists of two syllables and two intervals and each syllable consists of a number of pulses of sound separated by smaller intervals. The time from the start of one pulse to the start of the next pulse has been defined as the PPD.

Peake & McGregor (2001) showed that traditional census techniques in North Uist, Scotland, underestimated true numbers by 20-30%. The census technique used is similar to that in Ireland, with the exception that areas were surveyed a maximum, rather than a minimum, of two nights per season.

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<sup>3</sup> Schäffer, N. and Koffijberg, K. (2006) Corncrake *Crex crex*. In: The Birds of the Western Palearctic on interactive DVD-ROM. 2006 Update. BirdGuides Ltd. and Oxford University Press.

<sup>4</sup> Hoffmann, M. 1997. Rufplatzwahl des Wachtelkönigs *Crex crex* und Verbleib von Individuen nach Verlust des Bruthabitats in Nordostpolen. Diplomarbeit, Universität Freiburg. 84 pp.

<sup>5</sup> Pinechot, J. (2017) Suivi bioacoustique du Rôle des genêts en MVO –ANNEE 2016  
Rapport 12/09/2017 - B.E.C.

<sup>6</sup> Mikkelsen, G. (2010) Individual Corncrake *Crex crex* song reveals long distance movements within the breeding season. Masters Thesis, Dept. of Ecology and natural resource management, Norwegian University of life sciences.

In Norway true numbers were shown to be overestimated by 67% (Mikklesen 2010). In this study the main source of error was the high rate of long-distance movements observed and the fact that many new Corncrake observations were made after 15 June, whereas these were in fact thought to be disturbed birds. In France studies over 5 breeding sites highlighted a slight underestimate of calling males; 15 using bioacoustics and 8-13 using traditional methods (Pinechot 2017).

Bioacoustic research has been and will continue to be explored by the Corncrake Conservation Project and it is hoped to upscale this and investigate other innovative technologies and methods, should a LIFE application made in January of 2019 be successful.

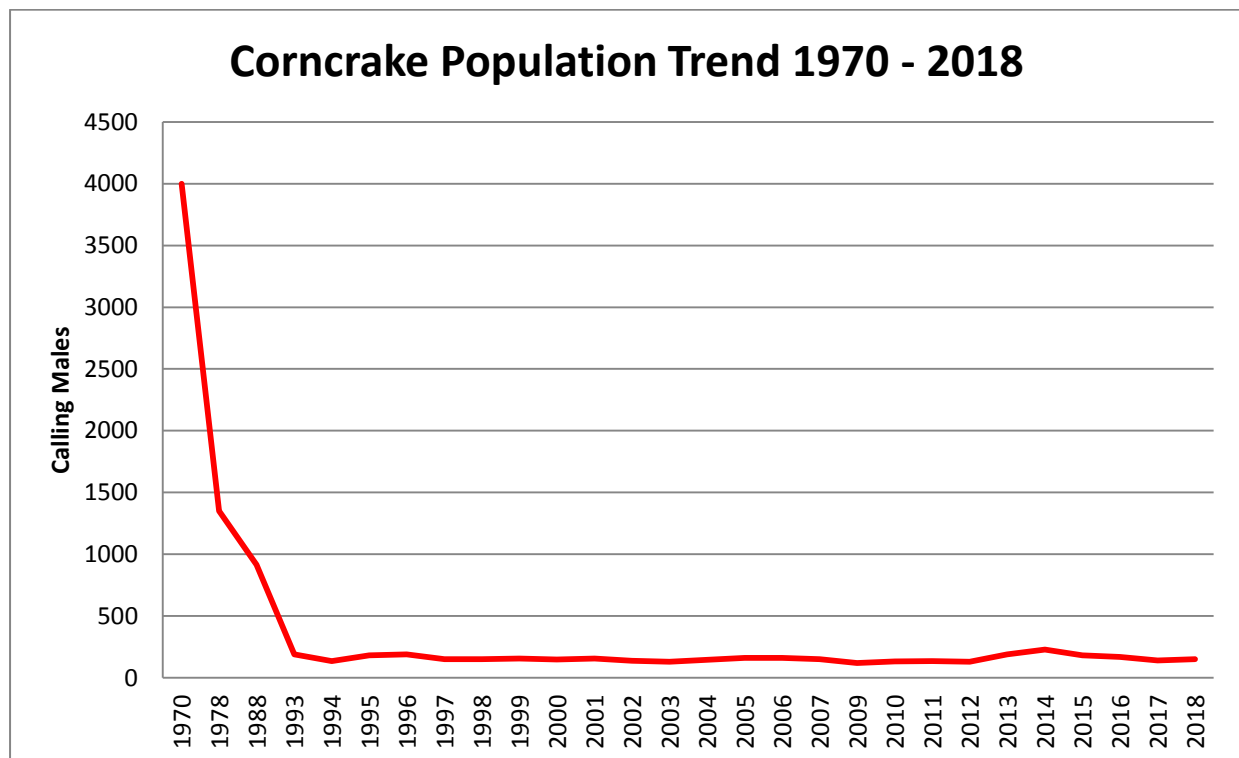


Figure 1. Corncrake population in Ireland 1970 (estimate) - 2018

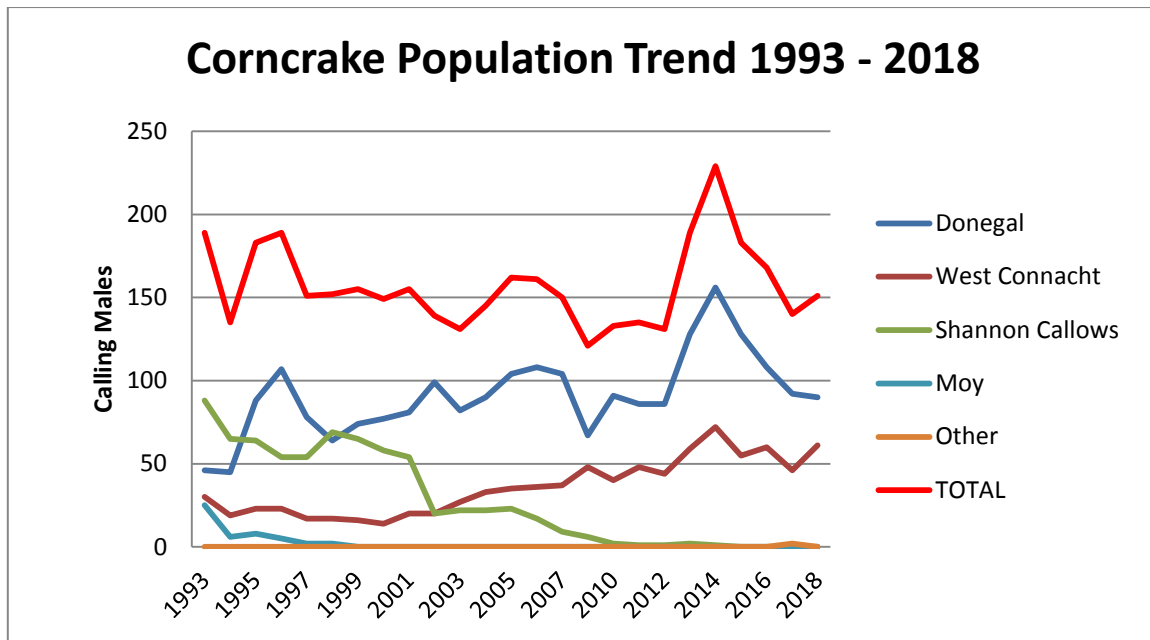


Figure 2. Corncrake population in Ireland 1993 – 2018. National conservation efforts and surveys for Corncrake began in 1993. This graph also presents trends for individual regions.

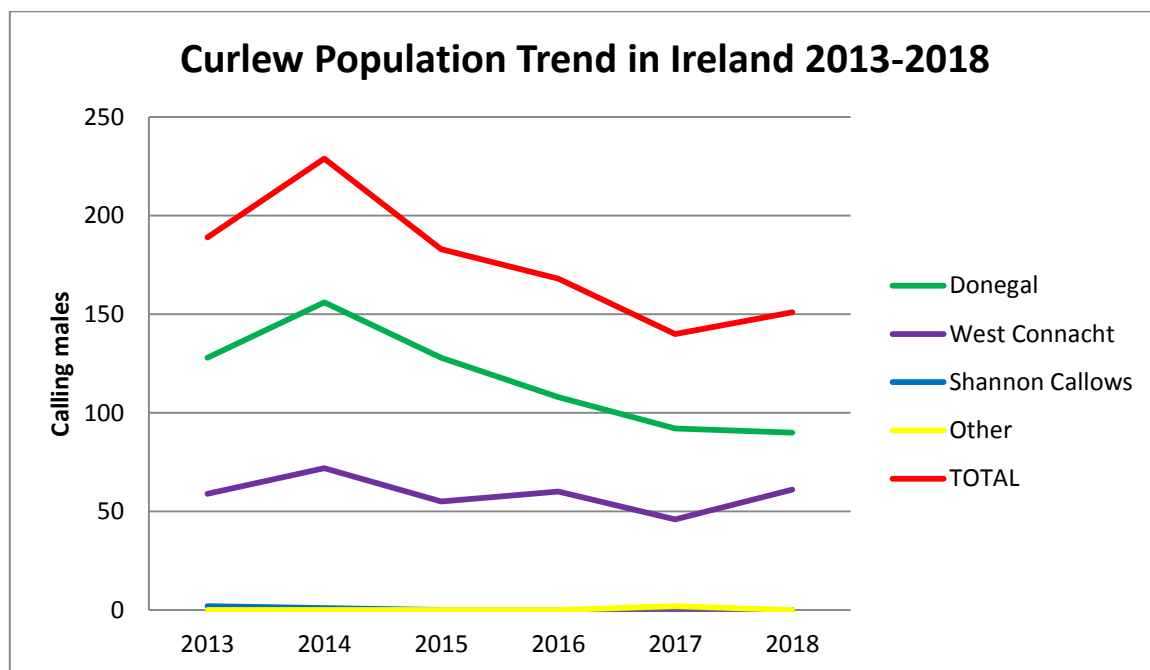


Figure 3. Corncrake population in Ireland 2013 – 2018. This reflects trends nationally and regionally for the Article 12 reporting period 2013-2018. During this period, the Corncrake has been lost from the Shannon Callows (2014).

Table 1. Calling males recorded annually during the Article 12 reporting period of 2013-2018

| Year                 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|----------------------|------|------|------|------|------|------|
| <b>Calling Males</b> | 189  | 229  | 183  | 168  | 140  | 151  |

## Range

As with the population of Corncrakes in Ireland, the species range has declined significantly since the 1970s. Where once it was heard in fields all across Ireland, it is now restricted to two main areas – West Connacht and Donegal. Since the turn of the century, Corncrakes have been lost from the Moy and Shannon catchments. The offshore islands, particularly off Donegal, are now of critical importance. While Special Protection Areas have been designated for Corncrake, in 2018, more calling males were located outside the Corncrake SPA suite (78 calling males or 52% of total) than inside.

Table 2. Range of Corncrakes in Ireland in 2018, according to 10km square.

| County            | 10 km Grid Square |     |     |     |     |     |     |
|-------------------|-------------------|-----|-----|-----|-----|-----|-----|
| Donegal           | B61               | B70 | B72 | B82 | B83 | B84 | B93 |
| No. of Corncrakes | 2                 | 2   | 14  | 1   | 31  | 16  | 2   |
| Donegal           | C03               | C14 | C22 | C23 | C24 | C45 | C46 |
| No. of Corncrakes | 7                 | 3   | 1   | 1   | 3   | 6   | 1   |
| Mayo              | F52               | F61 | F63 | F72 | F73 | G23 |     |
| No. of Corncrakes | 2                 | 2   | 25  | 1   | 5   | 2   |     |
| S. Mayo           | L67               | L88 |     |     |     |     |     |
| No. of Corncrakes | 1                 | 1   |     |     |     |     |     |
| Galway            | L46               | L55 | L56 |     |     |     |     |
| No. of Corncrakes | 2                 | 2   | 14  |     |     |     |     |
| Sligo             | G43               |     |     |     |     |     |     |
| No. of Corncrakes | 2                 |     |     |     |     |     |     |

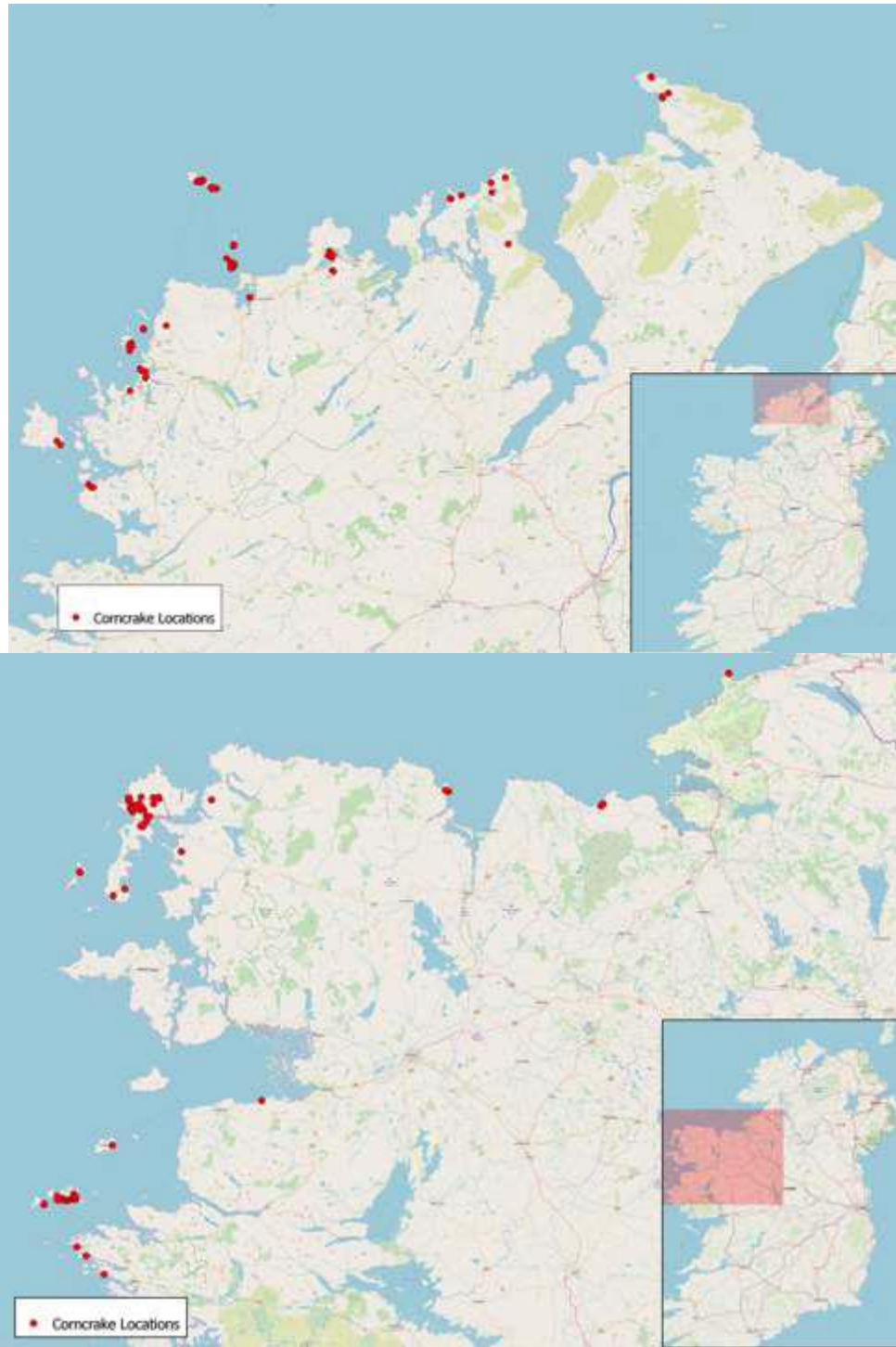


Figure 4. Range of Corncrakes in Ireland in 2018. Donegal above and West Connacht below.

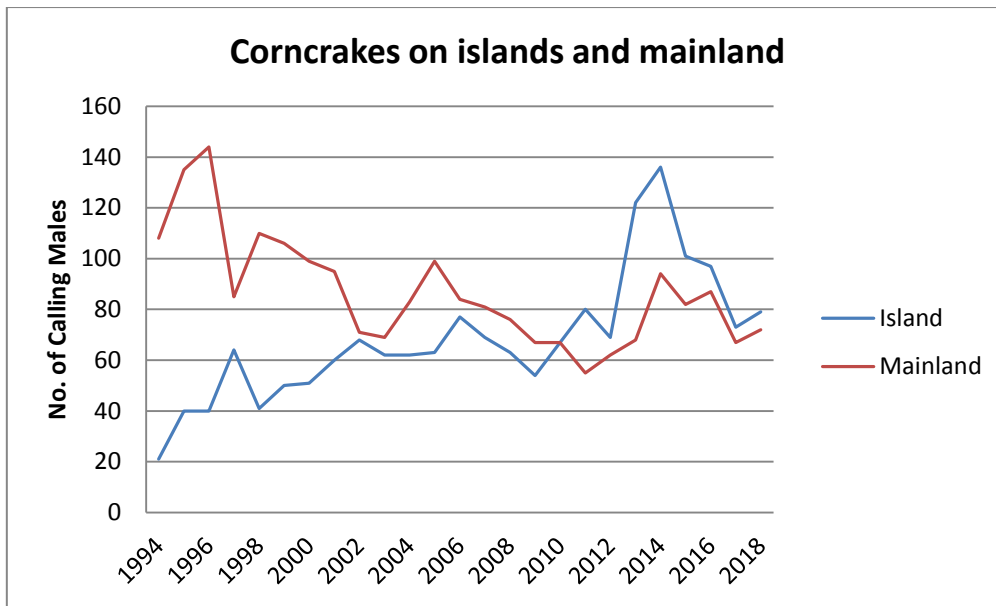


Figure 5. Population of Corncrakes on islands vs mainland in Ireland.

### Conservation Measures

Corncrakes in Ireland require:

- Contiguous, suitable habitat mosaics - c.17ha or more with 1 to 4ha of early cover adjacent to meadow habitats for each male/pair (in reality, if the quality of the habitat is high, less area will be required per male/pair)
- Total area should be made up of 1-10% early cover and this should be good quality and dominated by broad-leaved herbaceous species e.g. Iris or nettle
- A suitable Corncrake friendly mowing regime with late cutting (from an assigned date in August) and friendly mowing pattern (centre-out cutting and ideally reduced mower speed)
- Late cover provision by leaving some field edge strips unmown until September and maintaining early cover stands through to season end
- In-field operations reduced or removed - from late April and general access to meadows kept to a minimum May – August.
- Predator and disturbance levels at low levels - Cover areas and key meadows well away from dwellings and farms

The main issues believed to have affected Corncrake in Ireland include:

1. Loss of hay and extensive mown grass crops
2. Reduction in early cover
3. Earlier & mechanisation of mowing



4. Predation and disturbance
5. Loss of field biodiversity
6. Flooding
7. Roads and buildings (and there may be secondary associated issues, e.g. cats/dogs/rats/lights).

Any successful conservation story needs to be based on close cooperation with the local community and landowners. There are various options to deliver habitat and conservation status for Corncrake.

The models of supporting this delivery during the 2013-2018 period included:

*Green Low-carbon Agri-environment Scheme (GLAS)*

The “Green Low-carbon Agri-environment Scheme” (GLAS) is part of Ireland’s Rural Development Programme (RDP) for 2014-2020. The Rural Development Programme is part of the European Commission’s Common Agricultural Policy, often referred to as CAP; which is a primary source of financial supports for Irish farmers. The GLAS Corncrake measure, which opened in February 2015, aims to create and maintain cover and nesting shelter for Corncrakes when they arrive from Africa throughout their breeding season (April to September).

Farmers in Corncrake SPAs in County Donegal and parts of West Connaught were prioritised for entry to GLAS, so that they can manage at least part of their land for Corncrake conservation. It focusses on the Corncrakes requirement for vegetation which is at least 20cm (8 inches) high for the breeding season. Farmers undertaking the measure are required to:

1. Produce a suitable cover of tall herbaceous vegetation when the meadow is closed off.
2. The action can be delivered on full or split LPIS parcel(s). Where the action is on a split parcel, it must be digitised out and marked on the map submitted. Parcels must be fenced and stock-proof from the commencement date of the GLAS contract.
3. Grazing, mowing, topping and/or other field operations requiring the use of machinery are not permitted from 10 March to 10 August annually.

Further details on GLAS can be found at

<https://www.agriculture.gov.ie/farmerschemespayments/glas/>

In 2018, there were 64 GLAS participants with 209ha of land planned for delivering Corncrake habitat. GLAS is closed to new entrants at the time of publication. For any future national agri-environmental schemes aimed at Corncrake conservation, the Department of Agriculture, Food & the Marine and the National Parks & Wildlife Service will continue to target areas identified as of ongoing importance to Corncrake.

*NPWS Farm Plan Scheme for Corncrakes*

The National Parks & Wildlife Service offers incentives to farmers and non-farmers to create and manage habitat for Corncrakes. Landowners nominate a plot or plots they would like to work on and receive payment for creating an environment for Corncrake. They then select measure 1 and/or 2 in combination with measure 3 and/or 4 and manage the land in accordance with a five year plan. The

participant is free to leave the plan at any time, and in most cases, plans are continued after the five year period is completed.

**Measure 1** to create and maintain a suitable area of Early and Late Cover Plots

**Measure 2** to maintain and enhance existing areas as ELC

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**Measure 3** undertake a Corncrake friendly mown grassland management regime

**Measure 4** undertake a Corncrake friendly grazed grassland management regime

Key to the plan is that the participant would establish vegetative cover for the birds upon their arrival from Africa in late Spring/early Summer and delay mowing/grazing until 15 July on nominated plots. A flexible and adaptive approach is followed, whereby if no Corncrake are present at that stage, the meadow can be cut/grazed, and if a calling male is present, the land manager delays mowing/grazing until 20 August or 01 September and is paid additionally for this.

Creating sufficient cover is an essential requirement. Satisfactory Early and Late Cover (ELC) creation may take 2-3 years to establish, so requires a 5-year period for effective delivery. Meadows dominated by soft grasses tend to lodge overwinter and become impenetrable, which is why early cover prescriptions focus on rigid or stiff-stemmed but sparsely-growing species like cow parsley, iris and nettles. NPWS are open to trialling different types of ELC with plan participants.

The multi-annual approach of the Farm Plan Scheme allows the participant to plan in a manner that the occurrence of Corncrake on his land will not seriously disrupt his/her year-to-year practices.

Further details of the National Parks and Wildlife Service Corncrake Farm Plan Scheme can be found at <https://www.npws.ie/sites/default/files/files/Corncrake-farm-plan-scheme-2018.pdf>.

In 2018, there were 10 farmers in the NPWS Farm Plan Scheme delivering 63.52ha of habitat for Corncrake.

### **Payment Rates under the Corncrake Farm Plan Scheme**

- **Measure 1**

*Measure 1a* Spread over the five-year plan payment will be available to successfully create an ELC plot(s) at the following rates:

€1.75 per m<sup>2</sup> for the first 0.1 hectare

€1.50 per m<sup>2</sup> is payable for areas greater than 0.1 hectare (noting that the maximum area payable under this Measure is 0.5 hectare)

*Measure 1b* this is a yearly payment to cover the costs of maintaining the newly created ELC plot. It is payable at Measure 2 rates (see below). Once created, the ELC must remain in place for the full five-year duration of the plan

- **Measure 2**

A per hectare rate is payable annually for the maintenance and enhancement of existing ELC plots - provided the required cover is present throughout the breeding season of each year (i.e. Late April to Late September). The rates are as follows:

Up to 0.1 hectare @ €880 per hectare

0.11 – 0.25 hectare @ €440 per hectare

Greater than 0.26 hectare @ €275 per hectare

- **Measure 3**

A per hectare rate is payable annually for the delayed mowing of the nominated fields

Post 15 July meadow mowing: €275 per hectare

Post 20 August meadow mowing: €450 per hectare

Post 01 September meadow mowing: €510 per hectare

- **Measure 4**

A per hectare rate is payable annually for the delayed grazing of the nominated fields

Post 15 July pasture grazing: €275 per hectare

Post 20 August pasture grazing: €450 per hectare

Plan participants with Corncrake on or near (within 250m) of lands included in the NPWS Farm Plan are eligible for an added “bonus” payment of 20% additional payment for that year.

### Corncrake Grant Scheme

The **Corncrake Grant Scheme (CGS)** is a grant available for landowners who have Corncrake calling on or near their land. The scheme is available to all landowners who have meadow within 250m of a calling male Corncrake, except for participants in the Agri-Environment Option Scheme (AEOS), the Green Low-carbon Agri-environment Scheme (GLAS) and the NPWS Farm Plan Scheme. Within Corncrake SPAs, there is a legal obligation on landowners/land managers to not mow areas where Corncrakes are breeding, until at least 05 August. The CGS is an ad-hoc, compensatory approach to protecting Corncrake nests, rather than a planned approach. Landowners receive a grant/payment if they agree to delayed mowing of meadows, carry out Corncrake Friendly (CF) mowing when cutting the meadow and leave an unmown strip of meadow along the side of the plot if required. In general the Terms and Conditions of the Scheme are summarized as follows:

- The presence of Corncrakes must be confirmed by a NPWS Corncrake Fieldworker. An application form must be completed as soon as possible after a visit by the fieldworker. This must be signed by both the applicant and the fieldworker.
- To enter the scheme an application form must be completed by 01 July and mowing must be delayed one of the agreed dates. The various cutting dates and associated payment rates are outlined in Table 8. Any applications after 01 July will usually involve delaying mowing for not less than six weeks from the date of the application.

Table 3. Payment rates of the NPWS Corncrake Grant Scheme

| OPTION                                 | PAYMENT €/ha |
|--|--------------|
| <b>Delay mowing until 05 August</b>    | 250          |
| <b>Delay mowing until 20 August</b>    | 325          |
| <b>Delay mowing until 01 September</b> | 375          |
| <b>Centre-Out Mowing</b>               | 45           |

- In relation to Corncrake Friendly Mowing, the applicant must notify the fieldworker as early as possible before mowing the relevant area by calling the Corncrake Hotline or another number as specified by the Corncrake Fieldworker. If no attempt is made to contact the fieldworker in advance of mowing, the grant will not be paid. Corncrake Friendly Mowing involves:
  - cutting a small area for turning at either end of the field, mowing down the centre of the field and then continuing to mow from the centre outwards or cutting the field in strips from one side to the other. It is not allowable to cut any rounds around the outside of the field before starting centre-out mowing.
  - using a mower with width less than 3m.
  - driving the mower at a reasonable speed i.e. c.8 km/hr, to allow the chicks to escape.
  - Livestock must be excluded from grant aided areas between the date of application and the agreed mowing date. Field operations requiring the use of tractor machinery (fertilising, rolling, spraying etc.) are not permitted until after the date of mowing. The grants are payable to the landowner or, in the case of rented land, to the tenant. Payments will be made within three months of verification of compliance.
  - Any variation in the conditions is only acceptable if it is agreed in writing with National Parks and Wildlife Service.

In 2018, a total of 125 participants entered the Corncrake Grant Scheme (CGS), covering an area 352.78 ha.

#### Land Leases/Land Management Agreements

NPWS also leased land from individual landowners in order to deliver habitat for Corncrake for the tenure of the lease contract.

#### Locally-Led Project (European Innovation Partnership)

The European Innovation Partnership by the name of Cúlra Créafóige was approved in 2018, to deliver various outputs, including habitat for Corncrake and benefits for the wider community (including increased farm viability, opportunities for the local youth population, tourism and micro-business prospects). The financial returns to farm families and individuals, including peripheral

benefits outside the cultivation itself, will be a key focus of the EIP activities. It is intended that the investment in this project will stimulate worthwhile engagement and personal advancement of up to 300 individuals.

The project's primary goal is to explore alternative cultivation options for the rough pasture, rush pasture and scrub area within the local area. The combined total of these 3 habitats or land management types is 134.7 hectares or 44% of the Falcarragh to Meenlaragh SPA area in which the project is based. It is envisaged that the project will at Peak cultivation, in Year 5, deliver 24.3 hectares of crops within the local area.

#### Other

In addition to the possible avenues/grants for biodiversity/conservation projects, other proactive community projects can be supported. In January 2019, National Parks & Wildlife Service, along with associated beneficiaries, submitted a detailed and costed application to the European Commission for LIFE funding, to deliver further necessary action for Corncrakes.