A joint NGO response to NPWS (2021). Conservation Objectives Supporting Document: Breeding Hen Harrier. Circulation Draft.

BirdWatchIreland

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Irish Raptor Study Group
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Introduction

This is a joint response to the 'NPWS (2021). Conservation Objectives Supporting Document: Breeding Hen Harrier. Circulation Draft' on behalf of the environmental NGO representatives on the Hen Harrier Threat Response Plan Consultative Committee; namely An Taisce, BirdWatch Ireland, the Environmental Pillar and the Irish Raptor Study Group.

The views expressed are in keeping with our long standing commitment to the development of a Hen Harrier Threat Response Plan (HHTRP), in accordance with the requirements of Regulation 39 of S.I. No. 477/20111; Section 2(b) of which lays the obligation "to preserve, maintain or re-establish a sufficient diversity and area of habitats" for Hen Harriers (Circus cyaneus) "including the creation of protected areas, as appropriate, the upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones, the re-establishment of destroyed biotopes and the creation of biotopes." Or as it has been summarised by the National Parks and Wildlife Service at the first meeting of the consultative committee, the HHTRP aims to 'cease, avoid, reverse, reduce, eliminate or prevent threats to the Hen Harrier'.

On Mon 22nd of November in an email circulated to the consultative committee the NPWS it was indicated that: *"..., at the July Consultative Committee meeting , NPWS committed to circulating the site specific conservation objectives for the breeding Hen Harrier SPAs to the Committee, when ready, so that you could use them to inform your views on the adequacy of the draft Threat Response Plan"***, additionally adding** *"we have been working on these continuously* ***since*** *the meeting"* (our emphasis).

The email additionally indicates the view that the conservation objectives *"have been based, to the best extent possible, on the available scientific information* ***on the ecological requirements of the species and the need for its restoration and with due consideration of the precautionary principle****."* (our emphasis)

Key Recommendations:

- Unfortunately, it is our assessment that the draft SSCO's and the draft HHTRP is not fit for purpose. Both the SSCO's and the measures outlined within the HHTRP should be designed to deliver Favourable Conservation Status (FCS) for the species at a population and Member State level. The establishment of Favourable Reference Values (FRVs) for the species, in line with the best available guidance and science is an essential foundational step that must be carried out to underpin both the SCCOs and the HHTRP. FRVs have not been identified for the species and therefore both the draft SSCO's and the actions within the draft HHTRP are inadequate. Our submission provides guidance on how these deficiencies should be addressed.
- Given the serious deficiencies in the States' ongoing approach to the conservation of the species both within and outside the Natura 2000 network, there is a clear and urgent need to review the legality of past plans and projects. This review must include an assessment of the potential need for remediation of sites.
- It also follows that a comprehensive suite of measures must be urgently adopted to ensure that future plans and projects both within and outside the Natura 2000 network do not negatively impact on the State's ability to achieve FCS for the species. This package of measures should give particular attention to the key sectoral pressures of forestry, agriculture and wind energy.
- Notwithstanding the deficiencies in the daft SSCOs we have endeavoured to provide feedback on the draft text and in particular the sites' attributes, with a view to informing the development of SSCOs in the future (Specific Observations on the draft SSCO's).

- Any future SSCOs need to be specific, targeted, measurable and timebound and a review process needs to be put in place to verify the effectiveness of such measures in delivering FCS for the species. A timeline for the review should be clearly communicated to the HHTRP consultative committee and the results of that review should be made publicly available.

On the establishment of SSCOs within the HHTRP

In this NPWS process, the development of the Site Specific Conservation Objectives (SSCO) has come therefore at the end of the process of development of a draft Threat Response Plan for Hen Harriers; SSCOs having been absent from previous drafts of the HHTRP presented to the consultative committee. Leaving the establishment of Favourable Reference Values (FRV) and SSCO's until the end of the process is of course completely the opposite approach to that appropriate to the requirements of the Habitats Directive and Birds Directive. In essence:

- A Threat Response Plan is but a subset of **conservation measures** necessary to deliver on:
    - Objectives relevant for sites (SCCOs), which in turn contribute to:
        - The objective of the Habitats Directive of Favourable Conservation Status[1] and obligations under the Birds Directive.
            - It is therefore necessary to also consider Favourable Reference Values, as being the distance from Favourable Conservation Status as opposed to the distance from extinction or Minimum Viable population. This perspective is clearly outlined in the 2019 Technical report[2] which acknowledges the distinctions between the objectives of the Birds Directive and the Habitats Directive, stating:

> "In the context of the Habitats Directive, the concept of Conservation Status applies to species and habitats at the national/regional scale and not to sites, the condition of a site or the condition of a species of habitat in a site. At the site level the concept of Degree of conservation is used.
>
> The Birds Directive requires that Member States shall take the requisite measures to maintain the population of the species (referred to in BD Article 2) at a level, which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or to adapt the population of these species to that level. Article 3 also includes the equivalent of the concept of favourable reference value for range ('area and diversity of habitat'), with diversity understood in the geographical extent. For the purposes of this report when defining and applying FRVs the terms and definitions used under the HD are being used for birds as well (see Preface of this report)."

Therefore, the hierarchy should have commenced with the identification of what is Favourable Conservation Status, at a population and / or national level for Hen Harrier.

This belated approach to the focus on SSCO's might have been accommodated, if used to then robustly evaluate the adequacy of the Draft HHTRP as the email from the NPWS to the consultative committee on Nov 22nd appears to suggest. However, the issues with the overall approach have been further compounded by issues also with the approach then

[1] This is bearing in mind the effect of Article 7 of the Habitats Directive, which replaces the first sentence of Art 4(4) of the Birds Directive with the obligations of Article 6 paragraphs (2),(3) and (4) when the Habitats Directive came into effect of the site is fully designated, whichever is the latter.

[2] "Defining and applying the concept of Favourable Reference Values for species and habitats under the EU Birds and Habitats Directive", Bijlsma, R.J. ; Agrillo, E. ; Attorre, F. ; Boitani, L. ; Brunner, A. ; Evans, P. ; Foppen, R. ; Gubbay, S. ; Janssen, J.A.M. ; Kleunen, A. van; Langhout, W. ; Pacifici, M. ; Ramirez, I. ; Rondinini, C. ; Roomen, M. van; Siepel, H. ; Swaaij, C.A.M. van; Winter, H.V. (2019b). Defining and applying the concept of Favourable Reference Values for species habitats under the EU Birds and Habitats Directives: examples of setting favourable reference values. Wageningen Environmental Research. URL: https://www.researchgate.net/publication/331063602_Defining_and_applying_the_concept_of_Favourable_Reference_Values_for_species_and_habitats_under_the_EU_Birds_and_Habitats_Directives

taken to the specification of SSCO's as further outlined below, and notwithstanding some useful and important information in the Draft SSCO document.

In short over 6 years[3] of consultation on a Threat Response Plan for Hen Harriers, and over 40 years after the effective date of the Birds Directive - the current draft and status represents a catastrophic and unacceptable failure by successive Ministers (and the Departments responsible, including the NPWS), to deliver on fundamental national law[4] and EU law obligations[5] in respect of this iconic and threatened species. This is the core context which now must inform a rapid and robust approach to correcting these deficiencies, and to putting in place a truly proactive and comprehensive plan to address all threats to the Hen Harrier, in the context an overall set of conservation measures and a management objective to achieve Favourable Conservation Status for the species. It is now also essential to implement critical mitigation actions needed pending the delivery of the outstanding conservation architecture, to avoid further compounding the current situation and failures in respect of the conservation obligations for Hen Harrier.

The establishment of an initiative to develop a HHTRP is evidence of the acknowledgement of the duty on successive Ministers and the current Minister, engaged by Regulation 39 of SI 477 of 2011, The European Communities (Birds and Natural Habitats) Regulations 2011. The abject failure to provide for such a threat response plan has compromised multiple other obligations under the regulations. This is quite apart from presiding over a period when Ireland's Hen Harrier population has undergone significant decline. At the same time however, the State has continued to benefit unlawfully, both directly and indirectly, from the development of forestry and wind energy on sites important to Hen Harriers, both within and outside the Natura 2000 network, while effectively attempting to 'run down the clock' on the species. The States approach now, including *i.a*. in State sponsored forestry, fails to reflect the facts that:

a) The duty to achieve Favourable Conservation Status, FCS applies on Ireland as an EU Member State, and will simply be more difficult and onerous and costly to achieve, if the State continues to disregard its conservation obligations to Hen Harrier;
b) A Member State cannot benefit from its failures to implement EU law as clarified by the EU Court of Justice when it stated in case c-374/98[6]: (our emphasis)

> "51 As the Advocate General points out in paragraph 99 of his Opinion, **a Member State cannot derive an advantage from its failure to comply with its Community obligations."**

For ease of reference what the Advocate General had said is reflected below and follows on from an consideration of the implications of the Court's judgment in the Santona Marshes case, c-355/90: (our emphasis)

[3] The Draft HH TRP indicates the Consultative Committee was convened in 2015.

[4] S.I. No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011 https://www.irishstatutebook.ie/eli/2011/si/477/made/en/print

[5] Articles 1, 2, 3, 4, and 5 of the Birds Directive and Article 6(2) and compromise of Article 6(3) and (4) at the very least.

[6] Judgement of the Court, 7 Dec 2000, c-374/98 Basses Corbieres, EU:C:2000:670, para 51 referencing the AG Opinion in the case, EU:C:2000:86, para 99 and the case law cited therein, including c-355/90 and in particular para 21-22.

> 99. The legal thinking permeating Community law, whereby **a Member State should be unable to draw <u>any</u> benefit from its failure to comply with obligations under Community law**, is evident from these authorities.[40] If the Court had followed the logic of the Spanish Government's defence in Case C-355/90, it would have signified for Member States that if they had failed to classify special protection areas, they could in any event have been prosecuted for such inactivity. Beyond that, however, they would have found themselves in a quasi 'lawless' area, in view of which they could not have been prosecuted for the pollution or deterioration of the habitats of species of birds meriting protection.
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> 40. Thus, the entire doctrine of direct applicability of Directives is based on this thinking"

Notwithstanding the further issues set out below with the approach taken to the development of SSCO's, the following mitigation actions are set out as imperative and immediate, pending the delivery of an appropriate architecture of conservation measures and management plans including site specific conservation objectives, based on Favourable Reference Values for the species. The full package of measure outlined in the HHTRP must deliver Favourable Conservation Status for Ireland's Hen harrier:

Immediate actions required to address the lawfulness of activities in the HH SPA network:

Under i.a. the duty of sincere co-operation consequent on Article 4(3) of the Treaty of the EU, TEU, and the obvious legal implications there are for consents granted in the absence of compliant and appropriate site-specific conservation for the Hen Harrier SPA's, and pending the development and completion of:

1. Compliant SSCOs, against which the lawfulness of consents granted can be properly assessed and determined, or as the case may be existing unlawful consents be re-visited and necessary actions determined accordingly,
2. Measures capable of ensuring there will be no adverse impacts on the integrity of the sites when evaluated against properly developed site-specific conservation objectives linked to favourable conservation status,

and

3. The further determination of the appropriate course(s) of action identified, including in the context to a holistic assessment of the habitats within the individual SPA's and a management plan capable of delivering on the conservation objectives for the site

there is a clear imperative for:

a) An immediate cessation to all replanting within the Hen Harrier SPA network, even in the context of granted felling licences,
b) An immediate moratorium on felling, road and afforestation licences within the Hen Harrier SPA network,
c) An immediate moratorium on development projects within the Hen Harrier SPA network.

Additionally, there is a clear imperative for the following:

d) The commencement of analysis of the remedies required in respect of the failure to protect sites post designation with particular reference to the failure of the State to prevent habitat loss and degradation resulting from afforestation, agricultural intensification and wind energy development.
e) The commencement of analysis of the remedies required in respect of the failure to protect sites and the failure to adequately designate sites for Hen Harrier in line with the timeline and duties required under the Birds Directive, and in light of the fact that until they were fully designated a higher level of protection actually adhered to such sites under the Birds Directive.[7]

The issue of property rights and interests which will understandably arise in the context of the above, is acknowledged. However, the Constitutional protection for property interests are entirely set at nought by Article 29.4.6 of the Constitution - where obligations consequent on our EU membership effectively trump other provisions of the Constitution. In the acknowledged absence of site-specific conservation objectives and the lack of basis for and inadequacies of protocols relied upon to avoid conclusions of adverse impacts on the integrity of Hen Harrier SPA's - Ireland cannot continue lawfully to pursue forestry in Hen Harrier SPA's (as is indicated in previous drafts of the HHTRP) or to develop other projects within them. Also, where there an economic operators' interests have been compromised by the States failures and where the relevant considerations in respect of the operator as set out by the EU Court of Justice have been met[8] - such an operator can of course pursue State Liability.

It is important to reflect at this juncture the significant gaps in data also which need to be addressed - including the levels of forestry unlawfully developed in the SPA network following the effective dates for the Birds Directive. It is noted in that regard that figure 4.2 in the Draft SSCO objective document - only highlights figures of afforestation from 1998. The whole historic agreements and computations around levels of forestry in the SPA network reflected on page 43 of the Draft SSCO document, fail to address the obligation to manage the site for the benefit of the species.

Further the approach to the specification of SSCO's fails to focus as required in the Bijlsma et al 2019 technical report[9] provided with the Commission's guidelines and standards, on the

[7] We rely on the case law in the Judgement of the Court, case c- 374/98 Basse Corbiere

[8] See for example the comments of the court in its judgment of 12 Nov 2019 in case c-261/18, Commission v Ireland

[9] Bijlsma, R.J. ; Agrillo, E. ; Attorre, F. ; Boitani, L. ; Brunner, A. ; Evans, P. ; Foppen, R. ; Gubbay, S. ; Janssen, J.A.M. ; Kleunen, A. van; Langhout, W. ; Pacifici, M. ; Ramirez, I. ; Rondinini, C. ; Roomen, M. van; Siepel, H. ; Swaaij, C.A.M. van; Winter, H.V. (2019b). Defining and applying the concept of Favourable Reference Values for species habitats under the EU

level of restoration and maintenance outside the Natura 2000 network, and the need to consider the historic populations in light of the significant distortions on populations of Hen Harriers consequent on human activity and impacts - as is further outlined below.
Further considerations in respect of distinct requirements of the Birds Directive also need to be considered in the SSCO's and indeed the adequacy of the Data Forms for the sites and the objectives required for the significant habitats and species on the site to provide for ecological coherence - as is set out in more detail above and below.

Wider implications:
It is also noted that the issues with the development of SSCO's for Hen Harrier may have similarly compromised the specification of SSCO's for all site-specific conservation objectives. Ireland therefore needs to:

- Prioritise the evaluation of all site-specific conservation objectives detailed thus far,
- Consider the implications for the appropriate assessments conducted in respect of such deficient SSCO's and the remedies required.

Establishing Favourable Reference Values for Ireland's Hen harrier

According to the NPWS the Site-Specific Conservation Objectives (SSCO) "have been based, to the best extent possible, on the available scientific information on the ecological requirements of the species and the need for its restoration and with due consideration of the precautionary principle." Unfortunately, it is our assessment that the draft SSCO's are not based on the best available guidance and have significant deficiencies which undermine the HHTRP and its ability to deliver Favourable Conservation Status (FCS) for the species and its habitats.

Site Specific Conservation Objectives are a tool to maintain or restore Favourable Conservation Status (FCS) for individual species and habitats listed under Annex I of the Birds Directive and Annex I and Annex II of the Habitats Directive respectively. To define and assess the Favourable Conservation Status (FCS) of a species according to the agreed method used since the reporting period 2001-2006 under Article 17 of the Habitats Directive, it is necessary to determine favourable reference values (FRVs) for the range of habitat types and species (FRR), for area of habitat types (FRA) and for population size of species (FRP).

Specifically, the Commission's "Reporting under Article 17 of the Habitats Directive Explanatory Notes and Guidelines for the period 2013–2018[10]" states:

> "The concept of favourable reference values (FRVs) is derived from definitions in the Directive, particularly the definition of Favourable conservation status that relates to

Birds and Habitats Directives: examples of setting favourable reference values. Wageningen Environmental Research. URL: https://www.researchgate.net/publication/331063602_Defining_and_applying_the_concept_of_Favourable_Reference_Values_for_species_and_habitats_under_the_EU_Birds_and_Habitats_Directives

[10] Reference portal for reporting under Article 17 of the Habitats Directive: https://cdr.eionet.europa.eu/help/habitats_art17

the ‘long-term distribution and abundance’ of the populations of species (Article 1(i)), and for habitats to the ‘long-term natural distribution, structure and functions as well as the long-term survival of its typical species’ (Article 1(e)). in their natural range This requires that the species is maintaining itself on a long-term basis as a viable component of its natural habitats. Similarly, for habitats, the Directive requires that the specific structure and functions necessary for its long-term maintenance exist and will continue to exist and that its typical species are in favourable status, i.e. are maintaining themselves on a long-term basis. If Member States do not maintain or restore such a situation, the objective of the Directive is not met.

Favourable reference values – ‘range’ for species and habitats, ‘population’ for species, and ‘area’ for habitats – are critical in the evaluation of conservation status. The evaluation matrices (Annexes C and E) of the Report format require Member States to identify favourable reference values for range (FRR) and population (FRP) for the species. The conservation status assessment then looks at the difference between current values and reference values. Basically, the range, area, and population must be sufficiently large in relation to favourable reference values (as defined in the evaluation matrix) to conclude, alongside other criteria (e.g. trends), whether the parameter is ‘favourable’ or ‘unfavourable’.

The concept of favourable reference values was endorsed by the Habitats Committee back in the 2004 in the document on - Assessment, monitoring and reporting of conservation status reporting of conservation status – preparing the 2001–2007 Article 17 reporting guidelines under the Habitats Directive which describes the concepts of favourable reference range, population and habitat area as follows:

“Range within which all significant ecological variations of the habitat/species are included for a given biogeographical region and which is sufficiently large to allow the long-term survival of the habitat/species; favourable reference value must be at least the range (in size and configuration) when the Directive came into force; if the range was insufficient to support a favourable status the reference for favourable range should take account of that and should be larger (in such a case information on historic distribution may be found useful when defining the favourable reference range); 'best expert judgement' may be used to define it in absence of other data.

Population in a given biogeographical region considered the minimum necessary to ensure the long-term viability of the species; favourable reference value must be at least the size of the population when the Directive came into force; information on historic distribution/population may be found useful when defining the favourable reference population; 'best expert judgement' may be used to define it in absence of other data.

Total surface area of habitat in a given biogeographical region considered the minimum necessary to ensure the long-term viability of the habitat type; this should include necessary areas for restoration or development for those habitat types for which the present coverage is not sufficient to ensure long-term viability; favourable reference value must be at least the surface area when the Directive came into force;

> information on historic distribution may be found useful when defining the favourable reference area; 'best expert judgement' may be used to define it in absence of other data."

In the recent 2019 technical report[11] for the EU Commission "Defining and applying the concept of Favourable Reference Values for species and habitats under the EU Birds and Habitats Directives" - the distinctions between the objectives and terminology of the Birds and Habitats Directives were acknowledged and addressed, and point to the validity of the FRV based approach for bird species, stating i.a.:

> "In the context of the Habitats Directive, the concept of Conservation Status Applies to species and habitats in a site at the site level the concept of Degree of conservation is used.
>
> The Birds Directive requires that Member States shall take the requisite measures to maintain the population of the species (referred to in the BD Article 2) at a level, which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or to adapt the population of these species to that level. Article 3 also includes the equivalent concept of favourable reference value for range ('area and diversity of habitat'), with diversity understood in the geographical extent. For the purpose of this report when defining and applying FRVs the terms and definitions used under the HD are being used for birds as well."

However, the NPWS draft SSCOs are seriously deficient because they are not directly linked to FRVs for the species at a population level.

According to section 1.4 of the draft SSCOs document: "A site-specific conservation objective aims to define the favourable conservation condition of a habitat or species at site level. The maintenance of habitats and species within sites at favourable condition will contribute to the maintenance of favourable conservation status of those habitats and species at a national level" and "The conservation objective for breeding hen harriers is framed by attributes with targets that are necessary for **the restoration of the species within the SPA network**. This, in turn, informs the setting of targets for each of the six SPAs" (our emphasis). There is no evidence within the document that the SSCOs are linked to the Hen harrier population at national, biogeographical or EU level. SSCOs are one of the key tools to restore and maintain favourable conservation status at a population level which in turn will contribute to the favourable status of the species across its range. Achieving favourable status at a population level may include setting targets at a network, national, and site level. This should be determined through the process of defining the Favourable Reference Population. The link between the population and meta-population objectives of the directives are not evident in the NPWS's approach to establishing SSCOs. The SSCOs are therefore in our opinion not fit for purpose. As previously outlined, establishing FRVs for

[11] Bijlsma, R.J. ; Agrillo, E. ; Attorre, F. ; Boitani, L. ; Brunner, A. ; Evans, P. ; Foppen, R. ; Gubbay, S. ; Janssen, J.A.M. ; Kleunen, A. van; Langhout, W. ; Pacifici, M. ; Ramirez, I. ; Rondinini, C. ; Roomen, M. van; Siepel, H. ; Swaaij, C.A.M. van; Winter, H.V. (2019b). Defining and applying the concept of Favourable Reference Values for species habitats under the EU Birds and Habitats Directives: examples of setting favourable reference values. Wageningen Environmental Research. URL: https://www.researchgate.net/publication/331063602_Defining_and_applying_the_concept_of_Favourable_Reference_Values_for_species_and_habitats_under_the_EU_Birds_and_Habitats_Directives

Hen harrier should have been a foundational step underpinning the HHTRP process and finally SSCOs, including management plans and restoration targets. By leaving the needs of the species and its habitats until the end it is the sectoral interests which have shaped the process and this appears evident in the draft SSCOs and in particular their low ambition and the omission of restoration targets.

The following definitions from Bijlsma et la., 2019 are necessary to establish Favourable Reference Values for a species in line with the legal requirements of the European Union.

FRR - Favourable Reference Range is the range within which all significant ecological variations of the habitat/species are included for a given biogeographical region and which is sufficiently large to allow the long-term survival of the habitat/species; favourable reference value must be at least the range (in size and configuration) when the Directive came into force.

FRP - Favourable Reference Population in a given biogeographical region is considered the minimum necessary population to ensure the long-term viability of the species; favourable reference value must be at least the size of the population when the Directive came into force.

FRA – Favourable Reference Area is the total surface area of habitat in a given biogeographical region considered the minimum necessary to ensure the long-term viability of the habitat type; this should include necessary areas for restoration or development for those habitat types for which the present coverage is not sufficient to ensure long-term viability; favourable reference value must be at least the surface

Guidance on the setting of Favourable Reference Values for Hen Harrier

To reiterate, the Bijlsma et al (2019) bespoke guidance for the European Commission provides the framework to define and apply the concept of Favourable Reference Values for protected habitats and species and should be used to define and apply favourable reference values for Hen harriers as part of the Hen Harrier Threat Response Plan and the Site Specific Conservation Objectives. Bijlsma et al (2019) present a common methodology for setting favourable reference values for features under both the Habitats and Birds Directives. The guidance builds upon the Explanatory Notes and Guidelines for reporting under Article 17 of the Habitats Directive for the period 2013–2018[2]. The Commission guidance under Article 17 of the Habitats Directive clarifies core concepts and relationships relevant for the development of a view on Favourable Conservation Status for habitats and species.While the Birds Directive uses far less precise terms than FCS, Commission guidance to

interpreting the directive state that “the principles underpinning [FCS] are equally applicable in relation to the objective of [the Birds Directive]”[12].

This bespoke guidance by Bijlsma et al for the European Commission (here after the 2019 guidance) provides the framework to define and apply the concept of Favourable Reference Values for protected habitats and species and should be used to define and apply favourable reference values for Hen harriers as part of the Hen Harrier Threat Response Plan and the Site-Specific Conservation Objectives. Bijlsma et al[13] have provided multiple examples of how FRVs have been set for EU bird species.

According to an assessment of the approaches taken by Member States in setting reference values[14] Ireland has indicated that best practice is followed when establishing FRVs including considering both current and historical range, potential extent and area required for viability and variability are used in the assessment of FRR. Based on this feedback it would appear that it is government policy that the 2019 guidelines should be followed within the HHTRP process (It falls to the NPWS to clarify why they have not followed their own policies in regard to the Hen harrier SSCOs?).

In it’s introductory remarks Bijlsma et al (2019)[15] states:

> “In order to assess the conservation status under the Habitats Directive (HD) according to the agreed method used since the reporting period 2001-2006 under HD Article 17, it is necessary to determine favourable reference values (FRVs) for the range of habitats and species (FRR), for area of habitat types (FRA) and for population size of species (FRP). FRVs are key reference levels to determine when Favourable Conservation Status (FCS) is being achieved for individual species and habitats. Similar concepts apply to the Birds Directive (BD) even though they are spelled out less clearly and different terms are used.”

The 2019 guidance on the general approach for setting FRVs for both Annexed species and habitat types is presented in a flow chart (Figure 1), which considers the following steps: 1 Gather information and 2 Set favourable reference values. The first step includes the gathering of biological/ecological information, selecting a spatial scale of functioning of the species or habitat type and the presentation of a narrative for the historical perspective. Next, the historical and current distribution and trends are analysed. When negative trends in distribution and/or population size/area are found, FRVs must be set explicitly (step 2).

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[12] European Commission. (2008). Guidance document on hunting under Council Directive 79/409/EEC on the conservation of wild birds “The Birds Directive.”

[13] Bijlsma, R.J. ; Agrillo, E. ; Attorre, F. ; Boitani, L. ; Brunner, A. ; Evans, P. ; Foppen, R. ; Gubbay, S. ; Janssen, J.A.M. ; Kleunen, A. van; Langhout, W. ; Pacifici, M. ; Ramirez, I. ; Rondinini, C. ; Roomen, M. van; Siepel, H. ; Swaaij, C.A.M. van; Winter, H.V. (2019b). Defining and applying the concept of Favourable Reference Values for species habitats under the EU Birds and Habitats Directives: examples of setting favourable reference values. Wageningen Environmental Research. URL: https://library.wur.nl/WebQuery/wurpubs/fulltext/468534

[14] European Commission (2016) Compilation of Member States replies to the questionnaire on setting reference values Original replies available at https://circabc.europa.eu/w/browse/6903abd7-704e-469d-abe7-0b8dd1acae2e

[15] Bijlsma, R.J. ; Agrillo, E. ; Attorre, F. ; Boitani, L. ; Brunner, A. ; Evans, P. ; Foppen, R. ; Gubbay, S. ; Janssen, J.A.M. ; Kleunen, A. van; Langhout, W. ; Pacifici, M. ; Ramirez, I. ; Rondinini, C. ; Roomen, M. van; Siepel, H. ; Swaaij, C.A.M. van; Winter, H.V. (2019a). Defining and applying the concept of Favourable Reference Values for species habitats under the EU Birds and Habitats Directives: examples of setting favourable reference values https://library.wur.nl/WebQuery/wurpubs/fulltext/469035

Otherwise, FRP/FRA and FRR are set at current value and at least the value when the Directive came into force.

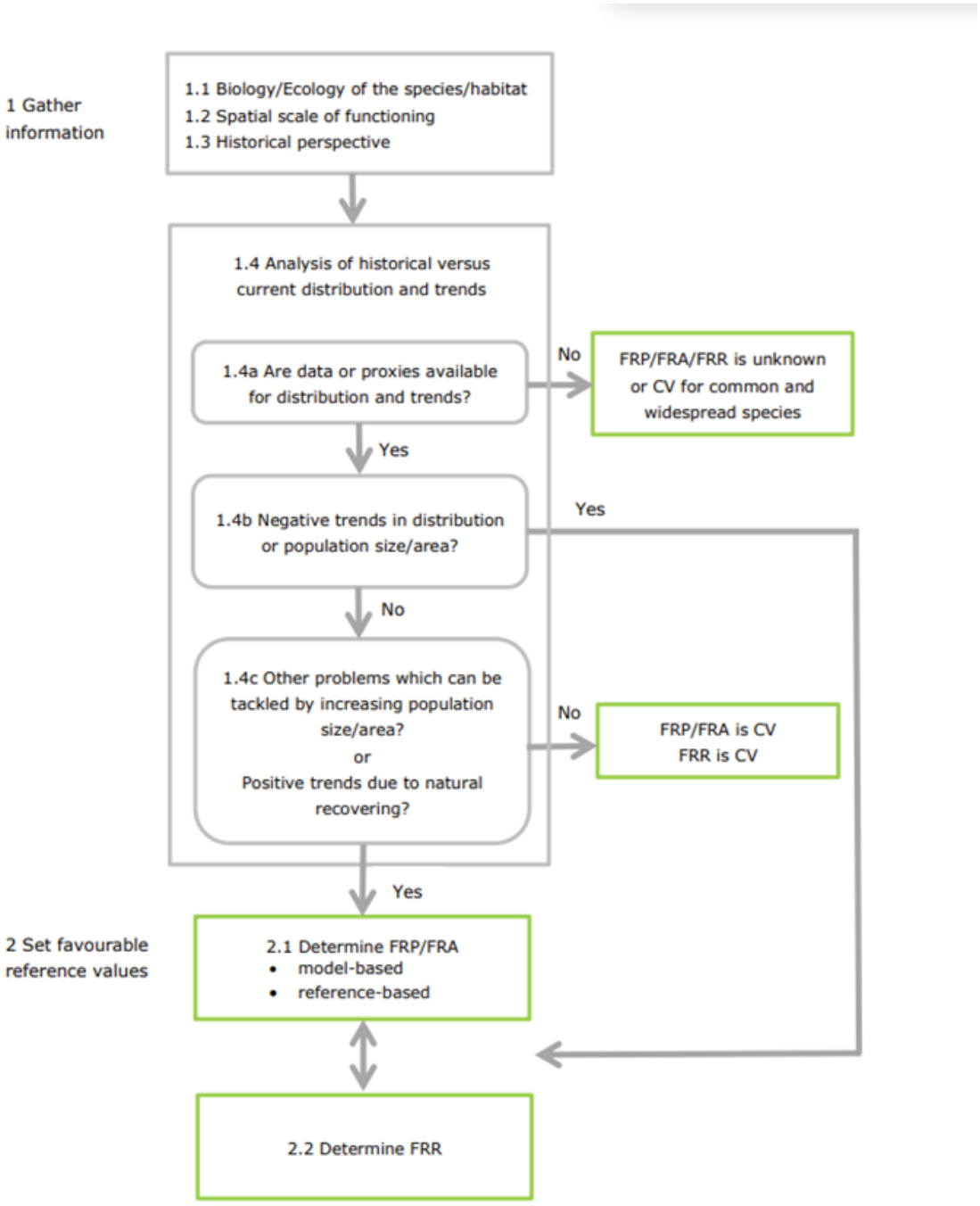

Figure 1: Flowchart for the stepwise process of setting FRVs for species and habitat types (Bijlsma et al., 2019).

Step 1.1 Biology of the species / Ecology of the Species

According to the 2019 guidance, differences in species attributes and requirements will result in different population processes and different methods for setting FRVs. Therefore, specific aspects of the species biology and ecology need to be considered as a first step in establishing FRVs for the species. For example:

- Life history strategies; body size; dispersal capacity
- Genetic structure of the population: subpopulations, meta-populations, management units
- Geographical variation (differentiation) in habitat requirements, migration routes
- Habitat requirements for reproduction, foraging, resting, migration, wintering
- Potential range (based on species requirements and attributes)
- Unit for defining population size including proxies (e.g. occupancy)

Aspects of Irish Hen harrier biology and ecology which will inform the setting of FRVs should be clearly outlined by the NPWS. Some of this detail is already provided in the draft document and sectoral reports.

Step 1.2a - Spatial scale of functioning

To achieve FCS at a population and EU level the Commission requires that Member States seek to achieve FCS within their borders as the most effective way to contribute to FCS at the biogeographic level. This is reflected in existing case law and in Member States reporting obligations under the Habitats and Birds Directives. As outlined by Epstein et al (2016)[16]:

> "clearly, each Member State has an individual obligation to contribute to a species FCS of those populations within or partially within their borders. The Commission has thus required the assessment and reporting of whether a species conservation status is favorable for each biogeographical region within a Member State. FCS at the European level requires thriving populations within and across the Member States. By requiring Member States to contribute to the achievement and maintenance of FCS for species within their borders and within each biogeographical region they contain, the Commission promotes consistent protection across the variety of habitat types. While for species with large ranges, it may not be possible for a Member State to be host to a population that reaches FCS entirely within its borders, each Member State has an obligation to promote FCS of the populations that exist either wholly or partly within its territory, as well as in each of its biogeographical regions, thus contributing to FCS of the species at the European level[17]."

The requirement for Member States to deliver FCS within their own borders as a logical contribution to FCS at community level does not mean that the achievement of FCS at a population level should not be considered. While emphasizing a population approach, some

[16] Epstein, Y., López-Bao, J. V., & Chapron, G. (2016). A legal-ecological understanding of favorable conservation status for species in Europe. Conservation Letters, 9(2), 81-88. URL: https://conbio.onlinelibrary.wiley.com/doi/pdf/10.1111/conl.12200

[17] Epstein, Y., López-Bao, J. V., & Chapron, G. (2016). A legal-ecological understanding of favorable conservation status for species in Europe. Conservation Letters, 9(2), 81-88. URL: https://conbio.onlinelibrary.wiley.com/doi/pdf/10.1111/conl.12200

authors such as Trouwborst (2014)[18] have recommended that Member States thus pursue FCS at both the national and population level. Even within the scope of the six SPAs it is clear that a national approach alone is inappropriate given the cross-border nature of the Slieve Beagh SPA (ROI) and Slieve Beagh - Mullaghfad – Lisnaskea SPA (NI) and the known cross-border movements of the species in general between the republic of Ireland and Northern Ireland. The need to consider the HHTRP in the context of an all island Hen Harrier population has been highlighted numerous times by NGO stakeholders within the HHTRP Consultative Committee and has yet to be addressed.

An appropriate spatial scale for setting FRVs should be determined for the species based on a population assessment. According to the 2019 guidance the population of a given species must be defined as part of the process of establishing FRVs. This must be done before the viability of each population can be assessed at an appropriate spatial scale (step 1.2b). This step determines an appropriate spatial scale for setting FRVs by considering different population categories related to the behaviour of individuals and features of species groups. This step is essential in determining how FRVs relate to the species at different scales, such as biogeographic, European Community and Member State level. This important step has not been outlined in the draft SSCOs document. Given the known cross-border movements of Irish Hen harriers there is a clear need to determine FRVs at an appropriate scale based on a population assessment. This is further supported by the 2019 guidance which states that for small countries, species with populations showing substantial transboundary dynamics should be assessed at a supranational level.

Step 1.3 - Historical perspective

A broad historical perspective on FCS is necessary to provide the appropriate context on a species current conservation status, its distribution and the prospects for the restoration of the species and to its historical range. According to the 2019 guidance, assessment should consider:

- Recent and historical distribution and population size
- Distribution and population size when the relevant Directive came into force
- Major impacts on overall distribution and population size; when did they occur?
- Changes in configuration of the range (connectivity, fragmentation)
- Loss of ecological variations in habitat of the species, e.g. in particular regions
- Main causes of trends – pressures & threats Restoration potential; (ir)reversibility of major impacts and measures

A historical perspective is also critically important in the assessment of historical, current and the future threats and pressures likely to impact on the species ability to achieve FCS as well as the conservation status and range of its habitats and the future prospects for restoration. Of particular relevance are trends such as habitat loss or degradation which have come into effect in recent history and in particular since the time the Birds and Habitats Directives came into effect. According to the 2019 guidelines in using historical information for setting FRVs, a broad historical perspective is needed by considering the recent past, including

[18] Trouwborst, A. (2014). Living with success—and with wolves: addressing the legal issues raised by the unexpected homecoming of a controversial carnivore. Eur. Energy Environ. Law Rev., 23, 89-101.

about 50 years before the relevant Directive came into force, and the historical past, up to the last two or three centuries, depending on occurrences of major impacts on distribution, population size or area. While the draft SSCOs do outline some historical perspective, it is presented more as a way of providing context as opposed to an essential step taken in defining FRVs. This step in the process should be clearly outlined in any future iterations of the SSCOs.

Step 1.4 - Analysis of historical versus current distribution and trends

Step 1.4 proceeds with the analysis of distribution (and therefore range) and trends based on historical and recent data. According to the 2019 guidance, if current population numbers are below or just reach Minimum Viable Population (MVP) size and/**or negative trends in numbers are found or can be inferred from the historical perspective, subsequent analyses must reveal the causes of low viability or decline, e.g. decreased connectivity, land use change or overexploitation** (our emphasis). Only in the case of a total lack of data or proxies on current distribution or any indications of historical distribution and trends, FRVs are considered as data deficient. This is not the case for Hen harrier and therefore analysis must move to Step 1.4b.

If current population numbers are below or just reach MVP size and/or when negative trends in numbers are found or can be inferred from the historical perspective, the onus is on NPWS to carry out subsequent analyses to reveal the causes of low viability or decline. According to the 2019 guidance, a declining population should result in setting FRVs greater than Current Value (CV). In the context of Ireland's Hen Harrier population, historical declines in population and range, including since the directives came into effect are pivotal in determining the degree to which FRVs must be upscaled relative to CV or the Directive Value. Based on the available evidence it is clear that there has been a decline in the national Hen harrier population over the longer-term and over the more recent historic period and this has been clearly linked to the key sectoral pressures of forestry, wind energy and agriculture.

Step 1.4 b is extremely important in the context of the HHTRP. Defining the objective population size requires consideration of the species historical range and spatial configuration. The historical analysis should consider the species historic distribution within the island based on available historic references (e.g. loss from the Wicklow Mountains) and available suitable habitat. According to the 2019 guidance on FRVs “the relevant time scales depends on historical impacts specific to the particular environment.” Trends should be assessed from the recent (including since the directives came into effect) and historical past. The trends presented by the NPWS consider only the recent past and fail to consider the potential for the restoration of the species to historic strongholds.

By defining FRV within the min and max population range between 2000 to 2005 the NPWS are practically defining FRV = CV. According to the 2019 guidelines this can only be done when 1) the historical distribution is smaller than or similar to the actual distribution in size

and configuration, and 2) trends in distribution and in size **are not negative in the recent and historical past** (our emphasis)[19].

We would argue that 1) the historical distribution of the species was much greater than it currently is. An analysis of historical perspectives should consider the natural potential range of the species based on available suitable habitat and potentially restorable habitat. The need for a precautionary approach when analysing trends in habitat and population loss are particularly important given the negative outlook for the species based on the ongoing closed canopy forestry bottle neck within the six SPAs and taking into account future projections for habitat loss at a national level[20] [21].

Step 2 - Set Favourable Reference Values

Step 2.1 - FRP assessment

According to the 2019 guidelines setting the FRP (favourable reference population) and FRR (favourable reference range) is an iterative process, but since the FRR must at least contain the FRP, step 2 starts with the FRP assessment. The FRP is assessed in two cases detected in step 1.4:

1. Negative trends in current and/or historical distribution and/or population numbers;
2. Positive trends in current distribution and/or population numbers for species recovering from a deep low, e.g. after cessation of hunting or whaling or as a result of legislation, land use change or improvement of air or water quality. Although in this case current population size can be (much) higher than when the Directive came into force, it needs to be determined what values for population size and range are sufficient for long-term viability.

The FRP assessment can be carried out using a reference-based, model-based or combined approach. The NPWS should be transparent about which approach they have taken and why and how they have calculated figures for suitable habitat and restorable suitable habitat.

The Commission's own Article 17 2007-2012 Guidelines[22] promote the concept of favorable reference population (FRP) to define the prerequisite population size at which FCS is considered reached, but through a more qualitative approach by including the consideration of ecological data such as historic distribution and abundances, potential range, biogeographical and ecological conditions, gene flow or genetic variation, and add that a population should be sufficiently large to accommodate natural fluctuations and allow a

[19] There is another third scenario which isn't applicable to Hen harrier i.e 3) after evaluating the two special, apparently favourable cases

[20] NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neil

[21] Forest Service (2016) Land Types for Afforestation; Forest Service, Department of Agriculture, Food & the Marine, Ireland, Johnstown Castle Estate, Co. Wexford

[22] Evans, D. & Arvela, M. (2011). Assessment and reporting under article 17 of the Habitats Directive–explanatory notes & guidelines for the period 2007–2012. European Topic Centre on Biological Diversity, Paris, France.

healthy population structure. Therefore the following factors which should be considered in setting a FRP:

1) Population should be sufficiently large to accommodate natural fluctuations and allow a healthy population structure;
2) Potential range;
3) Historic distribution and abundances;
4) Biological and ecological conditions;
5) Migration routes and dispersal ways;
6) Gene flow or genetic variation including clines (slightly re-ordered to show correspondence with factors mentioned under FRR).

According to the 2019 guidelines FRR must not only encompass the FRP but often requires **additional distribution to restore significant ecological variations of the species in areas of the former range** (our emphasis). In this case the FRP should include additional population size/habitat area to represent this additional distribution. This is also in line with the requirements of Regulation 39 of S.I. No. 477/20111; Section 2(b) relating to the need to "maintain or re-establish a sufficient diversity and area of habitats" for Hen Harriers (Circus cyaneus) "including the creation of protected areas, as appropriate, the upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones, the re-establishment of destroyed biotopes and the creation of biotopes."

There is therefore a restoration dimension to the calculation of favourable reference population and favourable reference range which needs to be factored into the HHTRP and the SSCOs. It needs to be clarified whether the NPWS factored in the need to consider additional distribution to restore significant ecological variations of the species in areas of its former range?

According to the 2019 guidelines setting FRVs for range, area and population should be independent from the assessment of the other CS parameters such as 'habitat for the species' for species, 'structure and functions (incl. typical species)' for habitats and 'future prospects' for species and habitats. However, requirements e.g. on spatial configuration, connectivity, (meta)population structure and population density used for setting FRVs, will probably be assessed as aspects of habitat quality as well. Therefore, a clear separation of the assessment of the different parameters will not always be possible nor meaningful.

Step 2.2 - FRR assessment

The iterative FRP/FRR assessment outlined in the 2019 guidance includes considerations to restore ecological variations and configuration within the natural range of the species. Therefore, the FRR can be derived by considering CV, additional range to include the FRP in the case FRP > CV and additional range to restore ecological variations within the range.

An analysis of the Habitats Directive indicates that the Directive does not emphasize that the species is just demographically viable as an isolated entity (at Minimum Viable Population (MVP)), but instead that it is functioning within its ecosystem and capable of fulfilling the ecological role. Being present and having a viable role naturally requires being first a viable entity. For a species to remain a "component" of its habitat implies ecological functionality in

addition to demographic viability. The language of the Directive indicates rather that ecological viability, which considers interactions among species and between a species and its habitat is the more appropriate interpretation for this particular clause. Given the role of hen harrier as an important predator within its ecosystem there should be a requirement for the species to achieve healthy levels of abundance in order for it to fulfil its ecological role as a "viable component of its natural habitat." There is also a temporal element to FCS as the Habitats Directive outlines that a species should fulfil its ecological functions on a "long-term basis" across the species "natural range", which is further qualified by the range of the species "natural habitats." This implies that in the case of Hen harrier, consideration must be given to the potential restoration of the species population across its natural range as qualified by the range of its natural habitats, through active conservation and habitat restoration. The Commission guidance documents consistently emphasize that FCS must be assessed as "distance from some favourable state" rather than distance from extinction[23]. This further underlines that FCS should be measured against the carrying capacity of a species' habitats across its natural range (based on an assessment of historical distribution) when those habitats are at FCS. The use of historical distribution and potential range in determining FCS is recommended by both the 2006 and 2011 Article 17 Reporting Guidelines. The language of the Directive suggests ecological viability in addition to demographic viability for species, while encouraging Member States to restore populations toward historical levels or carrying capacity. It should also be noted that this emphasis on restoration as opposed to viability is where EU Biodiversity Policy is moving towards in an effort to tackle the biodiversity crisis and currently the European Commission are working on a proposal for legally binding EU nature restoration targets[24] as a key element of the EU Biodiversity Strategy for 2030. As previously stated the emphasis on restoration is also supported by Regulation 39 of S.I. No. 477/20111; Section 2(b).

As outlined in scenario 2 these considerations would imply FRP > CV (or FRP >> CV) and generally FRR > CV (or FRR >> CV). According to the 2019 guidance "Note that the FRP possibly has to include additional population size to restore ecological variations within the range as well (see Step 2.2 FRR assessment)."…"The iterative FRP/FRR-assessment includes considerations to restore ecological variations and configuration within the natural range of the species. Therefore, the FRR can be derived by considering CV, additional range to include the FRP in the case FRP > CV and additional range to restore ecological variations within the range."

The 2007-2012 Guidelines for reporting under Article 17 mention the following factors which should be considered in setting a FRR:

1. Current range;
2. Potential extent of range;
3. Historic range and causes of change;
4. Area required for viability of habitat type/species including consideration of
5. connectivity and migration issues;

[23] Evans, D. & Arvela, M. (2011). Assessment and reporting under article 17 of the Habitats Directive–explanatory notes & guidelines for the period 2007–2012. European Topic Centre on Biological Diversity, Paris, France.

[24] EU nature restoration targets Nature restoration targets https://ec.europa.eu/environment/strategy/biodiversity-strategy-2030/eu-nature-restoration-targets_en

6. Variability including genetics.

According to an assessment of the approaches taken by Member States[25] Ireland has indicated that both current and historical range, potential extent and area required for viability and variability are used in the assessment of FRR. Based on the feedback provided to the European Commission the NPWS are not only aware of what the best practice is in regard to setting FRVs but it is government policy that these steps are followed. Therefore the question needs to be asked: **Why has this process not been followed in either the broader HHTRP or the draft SSCOs?**

Section 4.3 of the 2019 guidance document also provides additional guidance on the setting of FRVs for reproductive and migratory bird populations. Two methods are generally available for setting FRVs for reproductive populations:

- the combined population-based and reference-based method which starts by identifying the proper minimum viable population (MVP) size and by identifying the historical trend in numbers;
- the potential-range method which uses information on habitat requirements and suitability.

Both methods require that the FRP must exceed a properly scaled MVP-value. Furthermore, the FRVs should not be smaller than the population size (for FRP) and range size (for FRR) at the time the Birds Directive came into effect. The Birds Directive requires that population numbers should not be lower than at the start of the Directive (DV, 'directive value'). However even this bench mark does not in itself mean that these numbers represent favourable conditions. A species' population size might have declined before the BD came into force. If the DV exceeds the MVP, the FRP should be at least equal to DV. According to the 2019 guidance **a higher FRP value should be set if the species is known to have declined as a result of unnatural conditions that are reversible**. This is clearly the case for Ireland's Hen harriers.

Based on the draft SSCOs document alone there appears to be consensus that there is ample evidence to support the ongoing decline in the species population and distribution. This is further supported by evidence on the status of the population at the time the Birds Directive came into effect in 1979. For example, according to the most recent Birds Directive Article 12 assessment, a national population decline of 28.6% has taken place since 1972[26]. According to Watson (1977)[27] a purported 200 - 300 pairs were on the island of Ireland by the early to mid-1970s and a distribution map for the species dating from 1968-71, via the Breeding Bird Atlas was also published by Sharrock in 1976[28]. This data along with the large body of more recent evidence on the species and its biological and ecological requirements

[25] European Commission (2016) Compilation of Member States replies to the questionnaire on setting reference values Original replies available at https://circabc.europa.eu/w/browse/6903abd7-704e-469d-abe7-0b8dd1acae2e

[26] NPWS (2019) Annex B – Bird species' status and trends report format (Article 12) for the period 2013 – 2018. Report to European Commission. Available at www.eionet.europa.eu

[27] Watson, D. (1977) The Hen Harrier, Berkhamsted: Poyser

[28] Sharrock, J.T.R. (1976) The Atlas of Breeding Birds in Britain and Ireland. T and A.D. Poyser, London.

provides an excellent basis on which to establish FRVs without having to resort to the 2000 and 2005 national survey data.

In the context of the HHTRP the FRP for the Hen Harrier cannot be lower than at the start of the Directive (DV, 'directive value') but this minimum standard does not necessarily mean that these numbers represent favourable conditions. If a species' population size might have declined before the BD came into force, then a higher FRP value should be set. Going further the Commission advises that if the species is known to have declined as a result of unnatural conditions that are reversible. In this case a more historical reference could be selected reflecting more natural conditions before the decline of the species. We would argue that the key sectoral pressures of afforestation, agricultural intensification and wind energy development are an example of unnatural anthropogenic pressures that are reversible and that the Hen harrier population could be returned to a FRP and FRR through active conservation measures. The FRP for the species therefore needs to be upscaled considerably relative to the DV considering the ongoing decline in the species population and the reversibility of that decline through active conservation measures. The upscaled FRP value should relate to targets for the all-island and national population. These targets in turn should be translated into targets for the six SPAs which in turn should inform the SSCOs. Given that the breeding population within the SPAs are a tool to maintain and restore the population and range of the Irish population as a whole it would be necessary to ensure that the SPA network as a whole is a net source of birds as opposed to a sink which is not exceeding identified breeding thresholds[29]. There is also a need to address the lack of protection afforded to wintering Hen harrier. This has been a major gap throughout the HHTRP process which needs to be addressed. The failure of the state to protect the Hen harrier since the Birds Directive came into effect cannot now be used as an excuse to downgrade the level of ambition of the species FCS. To do so would be in contravention of previously cited EU case law which clearly outlines that a Member State cannot derive an advantage from its failure to comply with its Community obligations. [It is also noted that the Commission's "Reporting under Article 17 of the Habitats Directive Explanatory Notes and Guidelines for the period 2013-2018" - indicates that

> "FRVs should not, in principle[91], be lower than the values when the Habitats Directive came into force, as most habitats have been listed in the Annexes because of their unfavourable status; the distribution (range) and size (area) at the date of entry into force of the Directive does now necessarily equal the FRVs; (For example, '7120 Degraded-raised bogs' that would ideally all be restored to '7110 Active raised bogs')."

Similar logic could therefore be taken to apply to values at the timelines relevant for the Birds Directive. Further in the 2019 guidance it also states: (our emphasis)

> "Definitions and concepts for setting FRVs
>
> Given the definition of FRVs by the European Commission, setting FRp/FRA and FRR is interdependent and asks for an iterative process such that the FRR includes

[29] Hen Harrier Programme (2021) Hen Harrier Monitoring 2021, November 2021 http://www.henharrierproject.ie/HHP_HH_Monitoring_2021.pdf

the extra distribution required for restoring the FRP/FRA in the natural range of the species/habitat **as well as additional distribution in areas of the former range where the species/habitat has disappeared.** The FRR acts as a geographical envelope for FRP and FRA.

In using historical information for setting FRVs a broad historical perspective is needed by considering the recent past, **including about 50 years before the relevant Directive came into force, and the historical past, up to the last two or three centuries, depending on occurrences of major impacts on distribution, population size or area."**

Another approach to defining FRVs is highlighted by the 2018 guidelines is the LIPU (Lega Italiana Protezione Uccelli)/BirdLife Cyprus-method. This is a model-based approach for setting FRVs for common, widespread breeding bird species (more than 2500 pairs). The method works by identifying favourable reference densities in 'optimal' and 'average' habitats within a potential range. Whenever possible, the availability and relative suitability of a species' habitat is modelled. A FRP is derived by applying habitat-density relationships. When feasible a future vision is then developed, which results in estimates of future habitat extent and suitability including restoration opportunities, which in turn can contribute to defining the favourable reference value for population. The resulting FRP value should be definitely higher than the (upscaled) MVP. In summary the method includes the following steps:

1. Define a favourable density

    a. Assess what constitutes 'optimal' and 'average' habitats or mosaics of these for the species at relevant spatial levels (local to landscape level).

    b. Identify favourable reference densities in 'optimal' and 'average' habitats or mosaics.

2. Assess the FRP based on current habitat

    a. Whenever possible, assess the potential and current spatial distribution of habitat extent and suitability (e.g. by species distribution or habitat suitability modelling).

Given the current and historical decline in the species population and range due to a range of unnatural pressures it is important that the favourable reference value for the population considers habitat restoration opportunities.

As previously outlined, FCS must be set at a population level and must be farmed by considerations such as MVP and DV, while upscaling FRVs based on an assessment of historical trends in range and population. This should also include an assessment of both available suitable habitat and restorable suitable habitat. To fulfil the requirements of the Habitats Directive (article 1i), consideration should also be given to the future prospects for the species habitat. This is because the loss and degradation of a species will impact on the favourable conservation status of the species through 1) the capacity of the species to "maintain itself on a long-term basis **as a viable component of its natural habitats"**, and

2) through the interaction between the habitat and the species “natural range” which is “**neither being reduced nor is likely to be reduced for the foreseeable future**.”

The ability of a species to achieve and maintain favourable conservation status is therefore strongly linked to the availability and quality of its habitats across its natural range into the foreseeable future. This therefore implies that the HHTRP and SSCOs in combination must address the need to protect and restore Hen Harrier habitat at a national level. Currently the prospects for Hen harrier habitat at a national level are quite negative. This is supported by the forward-looking assessment of the future prospects of relevant Annex I habitats within the most recent Article 17 assessment.

For example, according to the NPWS the assessment for Wet Heath (4010) and Dry Heath (4030) indicate that the current status and future prospects for both habitats has been assessed as Unfavourable-Bad. Given national trends in agricultural intensification, afforestation and wind energy development it is likely that the future prospects for other important Hen harrier habitats such as peatlands and grasslands are similarly Unfavourable-Bad. This will negatively impact on the species ability to maintain itself on a long-term basis as a viable component of its natural habitats, or maintain its natural range into the foreseeable future. The HHTRP and SSCOs must clearly outline measures to protect and restore suitable hen harrier habitat at a national level. Currently the HHTRP and the SSCOs do not even have habitat restoration targets for the six SPAs or other nationally important areas. Therefore we must conclude that the SSCOs are not compatible with the objectives of the directives.

Specific Observations on the Draft SSCOs

Notwithstanding the deficiencies in the daft SSCOs we wish to provide feedback on the draft text with a view to informing the development of fit for purpose SSCOs in the future. The daft text highlights important research which must be used to inform the development of the HHTRP and SSCOs. In particular the draft text highlights a number of scientific studies which clearly identify the negative role that the key sectoral pressures of forestry, agriculture and wind energy have played in the ongoing decline in Ireland's Hen harrier population. It is essential that all aspects of the HHTRP are based on the best available scientific advice. However, it is of concern to us that some aspects of the draft SSCO’s are not based on the best available scientific advice (e.g. productivity thresholds). In addition, numerous actions outlined in the draft text are not linked to FRVs for the species or the achievement of FCS of the species at a national or population level. While key sectoral pressures are acknowledged (e.g. the negative impacts associated with second rotation pre-thicket and closed canopy forestry) they are not subsequently addressed by targeted, measurable and time bound conservation actions. The level of ambition throughout the document is extremely low. The draft attributes in many instances appear tailored towards maintaining the status quo in regard to ongoing activities within Natura sites, instead of being tailored towards the objectives of the HHTRP and the State’s legal obligations under domestic and international law.

According to the draft SSCOs document “the Hen Harrier Threat Response Plan is designed to address the primary threats that have been identified as contributing to the decline of the species and will set out the requisite conservation measures, based on the best available scientific information.” It is our view that while the best available scientific evidence has clearly identified the key primary threats that have and are contributing to the decline of the species draft HHTP and SSCOs have clearly failed to outline the requisite conservation measures to address the threats and restore the species population and distribution in line with the requirements of the relevant directives. According to the NPWS “the pressures that are currently considered to be of most relevance to the conservation of Hen harrier in Ireland are linked to forestry, agriculture and wind energy developments.” It should therefore follow that the SSCOs contain clear actions and targets to linked to these pressures as well as habitat restoration and management.

Issue with description of habitat cover within the SPAs:

The daft SSCOs document states that the six SPAs “are largely made up of mosaics of blanket bog, heath, semi-improved pasture (including rushy fields, scattered gorse and scrub and hedgerows) and conifer plantations.” The way that the habitat cover within the SPAs is reported is misleading. It gives the impression that the majority of SPAs are covered in optimal Hen harrier habitat. This should be revised with reference to Moran & Wilson Parr (2015), highlighting that the majority of the SPAs are covered in commercial forestry i.e. “The habitat map showed that strictly within the SPA network for breeding Hen harrier, land managed for conifer plantation forest was the predominant habitat type, comprising c.52.3% of the total SPA area. Open peatland habitats formed c.20.2%; low intensity managed grasslands c.12.2%; medium to intensively managed grassland c.9%; non-habitat (built surfaces etc.) c.3.3%; scrub c.1.7%; broadleaved woodland and other natural and semi-natural open habitats comprised the remaining c.1%.”

Observations on outlined target attributes

Population Size Attribute

Section 2.1 of the draft SSCOs identify a target for the attribute of ‘population size’ with a view to restoring the numbers of confirmed pairs of Hen harrier within the SPA network. This is based on a review of national survey data for 2000 and 2005. This attribute includes both site level and network level targets. While we have no issue per se with the use of ‘numbers of confirmed pairs’ as an attribute underpinning either population, national or site level conservation objectives there are a number of issues with the approach taken. As previously outlined the use of recent data, in this case 2000 and 2005, in the absence of additional assessment linked to the establishment of FRVs for the species at a population level is not in line with the relevant Commission guidance. There is a clear need to establish the Hen harrier population at the time of the Birds Directive and upscale FRVs in response to a negative historical assessment.

The approach taken by NPWS is to base the targets for the attribute population size on the estimated population size prior to the time of SPA designation and informed by the first two national surveys. This is an arbitrary point in time and does not reflect the carrying capacity of the SPA network or individual sites or demonstrate an ecological and demographic understanding of the species. As stated in the document, the Hen harrier population was in decline at this point (2000 – 2005) and therefore targets should be informed by the status of the population prior to this point and the conditions which supported more robust populations. It is accepted that comprehensive data on Hen harrier populations and size is lacking from the period before the first national survey, however this should not be sufficient reason to inform the targets at this point. As outlined in the 2019 guidance on FRVs there are many approaches that can be taken including modelling which can be used to establish target values for confirmed pairs at a site and population level. Population modelling and Population Viability Analysis is widely used to inform FRV's and should be employed to determine the carry capacity and population size under a series of different scenarios to inform target attributes (such as population size, productivity, range, and for example the consequences of forest removal at different scales etc.). The demographic data and environmental variables are available to inform population modelling and this in combination with knowledge of baseline population size, range and habitat factors would be more appropriate and robust means of identifying targets.

The use of lower and upper banded target values for 'total numbers of confirmed pairs,' assumes that the observed breeding population within the six SPAs between 2000 and 2005 was sufficient to achieve favourable conservation status for the species at both a population and site level. It is not clear how the NPWS have concluded that maintaining this population size range will deliver 'favourable-adequate' conservation status. This is even more confusing given that draft SSCOs clearly identify the ongoing decline in the national population over this same period.

According to the 2010 national Hen harrier breeding survey[30] there was an 18.1% decline in the number of confirmed and possible Hen harrier pairs within the SPA network between 2000 and 2010. The SPAs held between 44% and 47% of the national population (51 – 69 pairs) between 2005 and 2015 and overall the population of Hen harriers within the SPA network has declined by 26.6% since 2005[31]. Given the decline in the observed pairs before during and after the 2000 and 2010 reference period and taking into account that the SPAs only support around 45.5% of the national population it is not credible to conclude that maintaining the number of confirmed pairs observed within the SPA network between 2000 and 2005 would be consistent with protecting and restoring a FRP in line with the requirements of the directives.

Productivity Rate Attribute

[30] Ruddock, M. & Dunlop, B.J., O'Toole, L., Mee, A., Nagle, T. (2012) Republic of Ireland National Hen Harrier Survey 2010. Irish Wildlife Manual, No. 59. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.

[31] Ruddock, M., Mee, A., Lusby, J., Nagle, A., O'Neill, S. & O'Toole, L. (2016). The 2015 National Survey of Breeding Hen Harrier in Ireland. Irish Wildlife Manuals, No. 93. National Parks and Wildlife Service, Department of the Arts, Heritage and the Gaeltacht, Ireland.

In section 2.2 on Productivity rate the NPWS have derived a breeding productivity banded threshold of 1.0 - 1.4 young per confirmed breeding pair for the SPA network based on data on the estimated Hen harrier productivity rates 2017 - 2020 of the individual SPAs and for the overall SPA network. It is not clear why the 1.0 - 1.4 banded threshold was chosen? This should be clarified by the NPWS. According to the draft SSCOs "numbers of 'fledged young per confirmed breeding pair' is being used to inform the assessment of the network's conservation status and a site's conservation condition" but again no connection has been made between the FCS of the population as a whole. Therefore, it appears that again the objective of this target is to maintain the status quo based on the current values of productivity as opposed to setting productivity targets that are consistent with the SPA network contributing to the achievement of FCS of the Irish population as a whole. What's more the 1.0 - 1.4 figure is below the productivity threshold reported in the most recent Hen Harrier Monitoring Report 2021[32] published by the Hen Harrier Programme. The report cites O'Donoghue 2010 which shows a population viability analysis calculation of an overall productivity threshold for favourable conservation status of the four populations studied set at 1.45 fledglings per breeding attempt and "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 (our emphasis)" (our emphasis). It is a concern that the SSCOs have been devised without consideration of the PVA calculations in O'Donoghue (2010) and Ruddock et al. (2016). Given the known differences in Hen harrier ecology between Ireland and Britain it is of concern that Welsh research appears to have been favoured over the best available Irish research when identifying productivity thresholds.

Based on this data a productivity threshold of 1.0 -1.4 young per confirmed breeding pair would not be sufficient to maintain a stable or expanding population. Productivity thresholds clearly need to be set which consider the need to achieve FCS at a population level; considering an assessment of historical trends and future projections of suitable habitat availability. These productivity targets in turn would need to be supported by clear conservation objectives and management actions linked to improved productivity and survivability. In this regard it is also important that wintering Hen harrier are also catered for.

Extent & Condition of Habitat Attributes

In principle the target attributes of 'extent and condition of heath and bog' and 'extent and condition of low-intensity managed grasslands' within the SPA network are positive. However in order to deliver for the species as a whole the scope of HHTRP must look to protect and restore these important habitats both within and outside the Natura 2000

[32] Hen Harrier Programme (2021) Hen Harrier Monitoring 2021, November 2021 http://www.henharrierproject.ie/HHP_HH_Monitoring_2021.pdf

network, including known important non-designated breeding and wintering habitats and former strongholds.

In regard to delivering on these target attributes within the SPA network we note that some SPAs have an objective of maintaining the extent and quality of habitats to support targets relating to population size, productivity rate and spatial utilization; while some have an objective of restoring extent and quality. The current extent is highlighted but not the target extent? What will this mean in practice? For the sites where there is a target of maintaining the extent and quality of habitat does this mean that the extent and quality is already optimal and if so how does this fit in with the status of the population within the site and its role in the broader national and all-island population? Given the well-established need to remove forestry and restore habitat in order to improve Hen harrier breeding productivity we would assume that all SPAs should have conservation objectives targeting ambitious habitat restoration and enhanced connectivity. Again, maintaining the status quo is not consistent with the best available scientific advice or the stated objectives of the Hen Harrier Threat Response Plan or the States legal obligations.

Age Structure of the Forest Estate Attribute

The NPWS have identified the age structure of forest estate as an attribute of the SSCOs, measured as a percentage (%). The target of this attribute is to achieve an even and consistent distribution of age classes across the forest estate. Achieving an even and consistent distribution of forest age classes across the forest estate in the SPAs is the only SSCO attribute relating to the known negative interactions of forestry and Hen harrier breeding ecology. The premise of the “even and consistent” forest demographic alluded to in PLANFORBIO Optimum scenarios for Hen harrier conservation in Ireland (Irwin et al. 2012) is based on an ideal and does not reflect the actual real forest demography existing at a site level. The NPWS have to be specific on what threshold of forestry within the landscape is considered an acceptable level of impact and use that evidence based quantitative measure to set a % percentage-based attribute on the extent and demography of forestry.

The target attribute age structure of the forest estate in section 4.2 is a red herring. The best available science has clearly identified the negative impacts on Hen harrier associated with both closed canopy and second rotation pre-thicket forestry. Therefore an attribute should be adopted which targets forestry removal and habitat restoration. If forest cover is at sustainable levels within the SPA network then age-class becomes much less relevant. Forestry removal and habitat restoration would obviously also support the target attributes relating to peatland and grassland restoration. It is important that the extent of forest cover which is deemed to be sustainable is based on the best available scientific advice, while also taking into account the extent of forest cover within sites when the Birds Directive came into effect. In regard to the question regarding “how much forest cover is optimal for the Hen harrier within each SPA”, the 10% second rotation threshold identified by Irwin et al. (2012) is noted. We would highlight that Irwin found that “hen harrier breeding success decreases noticeably when the percentage of second rotation pre-thicket forest in the surrounding landscape is greater than 10%” and that this then resulted in the author proposing that “*in a forest landscape with a well-balanced age structure, approximately one quarter of the forest*

estate will be in pre-thicket stage at any one time. A maximum threshold of 40% for total forest cover in the landscape would therefore ensure that the percentage of pre-thicket forest did not regularly exceed 10%". We would highlight that a 10% threshold implies a significant negative impact on the breeding success of Hen harriers and therefore in the context of the requirements of the Birds and Habitats Directives and in particular Art 6(3) and 6(4) of the Habitats Directive a maximum forest threshold that would result in the level of second rotation forestry exceeding 10% should be considered a significant negative impact. Therefore, within the SPA network the target cannot be to "not regularly" allow significant negative impacts, instead the target should be to prevent significant negative impacts at all by reducing forest cover and managing the remaining forestry sustainably. This is a point that NGOs have raised previously within the Consultative Committee and we are yet to receive a satisfactory response from the NPWS.

We also raise concern that the attribute on forestry is not informed by the negative edge effects of forestry on Hen harrier demonstrated in Sheridan et al. 2020, which is co-authored by NPWS staff. It states negative aspects attributed to forestry are where high edge to area ratio is linked to lower breeding success and productivity (Sheridan et al. 2020). Sheridan et al. (2020) shows that in their study area, the Slieve Bloom Mountains SPA, the only nesting habitat available to breeding pairs is in high forest edge/ area sites suggesting a possible 'ecological trap', the habitat configuration of a site is likely to play an important role in determining breeding outcomes for Hen harrier. Edge effects therefore should be factored into metrics informing attributes of SSCOs pertaining to forestry and also the performance of forest removal actions subsequently committed to in the Hen Harrier Threat Response Plan.

Given the well-established negative relationship between Hen harrier conservation and closed canopy and pre-thicket forestry it goes without saying that **the moratorium on afforestation within Hen harrier SPAs must be maintained.** The moratorium on planting should also be expanded to other national important breeding and wintering sites around the country. The identification of non-designated sites requiring protection should be part of a broader process which incorporate the conservation needs of High Nature Value Farmland, semi-natural habitats and threatened species such as threatened farmland birds, upland raptors, pollinators and rare plant species.

Paragraph on predicted decline in HH:

Throughout the draft SSCOs and the draft HHTRP there is very low ambition when it comes to the restoration of species and its habitats either within or outside the Natura 2000 network. Given the numerous policy and legal obligations highlighting the need for habitat restoration in line with the achievement of FCS it is important that the State recognises the failure to heed the best available scientific advice and in particular since the Birds Directive came into effect. As highlighted in the draft SSCOs document there are numerous examples of researchers predicting a decline in Ireland's Hen harrier population - "Wilson et al. (2006) predicted that the carrying capacity of nine Important Areas (IAs) for Hen harrier would likely decrease, in the order of 30% by 2015, with maturation of the forest estate. Wilson et al. (2006) also predicted that the impact of forest maturation on the Hen harrier population could be more severe, as second rotation habitat is of lower quality than first rotation". O'Flynn (1983) "considered the maturation of the forest estate, along with the clearance of marginal

land for agricultural intensification, to be the primary driver of the Hen harrier population decline of the late 1970s (NPWS, 2015a).” When it comes to the discussion around the feasibility of habitat restoration it is important that the States’ failure to prevent these negative impacts from occurring in the first place.

Additional requirements for SCCO’s.

Standards for SCCO’s

The Commission’s guidance note here: https://ec.europa.eu/environment/nature/natura2000/management/docs/commission_note/commission_note2_EN.pdf provides important and useful standards for SCCO’s stating:

“The following standards for conservation objectives may be relevant [8] :

- be specific - relate to a particular interest feature (species or habitat type) and define the condition(s) required to satisfy the conservation objective;
- be measurable and reportable - enabling monitoring to be undertaken to determine whether the conservation objectives are being met and for the purposes of Article 17 of the Habitats Directive;
- be realistic - given a reasonable time-frame and application of resources; be consistent in approach - the structure of conservation objectives should, as far as is possible,
- be the same across all sites, and at sites supporting the same interest feature, use similar attributes and targets to describe favourable condition; and
- be comprehensive - the attributes and targets should cover the properties of the interest feature necessary to describe its condition as either favourable or unfavourable”

Scope of Habitats and Species to be covered by SCCOs

In this context it is also important to reflect on the scope of habitats and species which must be covered by the SCCO’s and it is not merely the habitats and species for which the site has been designated as clarified in the same guidance note - which clarifies the breath of species and habitats within the site which need to be covered - reflecting a focus on ecological coherence and integrity, stating also:

> “***Species and habitat types for which conservation objectives should be formulated***
>
> In principle site level conservation objectives should be set for all species and habitat types of Community interest of the Habitats Directive and bird species of the Annex I of the Birds Directive that are significantly present on a Natura 2000 site, as well as for regularly occurring migratory species. Site level conservation objectives should be based on the ecological requirements of the natural habitat types and species. They should reflect the importance of the site for the maintenance or restoration, at a favourable conservation status of the habitat types and species present on the site and for the coherence of Natura 2000 and address the threats of degradation or destruction to which the habitats and species on the site are exposed. Thus the

information in the Natura 2000 standard data form provides the starting point for the setting of conservation objectives. It also allows for the identification of those species and habitat types for which it has already been determined that their presence in a site is non-significant (code D for representativeness or population) and for which the Habitats Directive does not require conservation efforts. Article 6.1 of the Habitats Directive refers to the need for establishing the necessary conservation measures "[…] which correspond to the ecological requirements of the natural habitat types in Annex I and species in Annex II present on the sites". When establishing conservation objectives, consideration should therefore be given to each of the interest features present on the site. However, it is not necessary to establish specific conservation objectives or conservation measures for species or habitat types whose presence on the site is non-significant according to the Natura 2000"

Concern on the adequacy of specification in the Standard Data Forms

The above scope of what habitats and species needs to be included in the SSCOs, highlights a further concern on the adequacy of the standard data forms completed for the HH SPA's - which for example in a number of instances fail to reflect even the heath habitat in such sites, or prey species which clearly must be present.

In that context, it is important to reflect the definition of FCS in HD Article 1(e) in the last indent reflects consideration of the status of the species which would naturally inhabit such a habitat. This broad approach to SCCO's is essential to provide for an ecologically coherent approach to the specification of conservation objectives for the sites. For example - it is essential to consider the habitats for prey species for Hen Harriers, as the Hen Harriers conservation objectives cannot simply exist in a vacuum. Such an approach is essential to SCCO is essential in order to inform the core purposes of SCCOs which are to:

a) Inform the conservation measure necessary to either maintain or restore favourable conservation status
b) To determine in accordance with Art 6(3) and 6(4) as appropriate the appropriate assessment procedure and what activities can or cannot be permitted without incurring an adverse impact on the integrity of the site in accordance with Article 6(3) of such further derogation in accordance with Article 6(4).

ANNEX

Cover photo by Shay Connolly