# **CONSERVATION OF BREEDING HEN HARRIERS AND SHORT-EARED OWLS**

# *Note that there are separate questionnaires referring to the conservation of breeding hen harriers (questions 3-10) and of breeding short-eared owls (questions 11-18). Please answer the questionnaire corresponding to the species which you are familiar with / study. If this includes both species, please answer both.*

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| *Instructions for answering the questionnaire:****This file may open in “read only” mode. Press “Esc” or click on “View / Edit document” to******Answer the questions.****Boxes:*[ ]  *To mark the corresponding answer, click on the box.**You can mark* ***multiple boxes****.**Drop-down menus (identifiable by red text):*Example drop-down menu. *Click on the text, then on the inverted triangle and* *select your response.* *Fill-in text boxes (identifiable by grey text):*Example text box *Click on the text and type in your answer (unlimited space).**Additional answers (identifiable by the text “\* To add more fields….”):*

|  |  |
| --- | --- |
| Option 1. | yes/no |
| Option 2. | yes/no |
| Other, specify. | yes/no |

*If you wish to add more fields, use the plus icon () that appears when you click**on the last row.* |

***If any of the above examples do not work on your version of Word,***

***please download a format-free version of the questionnaire*** [***here***](https://drive.google.com/open?id=1oLLU9x6oewWhHB0uq6bxWRFrigBcU2le)***.***

*Please send completed questionnaires and any questions to* *dfernandezbellon@ucc.ie* *by March 1st, 2019.*

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| --- | --- | --- | --- |
| 1. Organization you belong to / are a member of (*in relation to hen harriers / short-eared owls*):Choose an option If other, please specify here.Type of work you do:

|  |  |  |
| --- | --- | --- |
| [ ]  Conservation[ ]  Habitat / species management | [ ]  Research[ ]  Surveys / monitoring | [ ]  Consultancy / impact studiesIf other, please specify here. |

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| 2. Contact details (*answering this question is optional; all data will be treated anonymously and details will only be used to contact respondents if clarification on answers is required*).Name: NameE-mail: E-mailOrganization: Organization |

# **BREEDING HEN HARRIERS**

*Fill in this questionnaire if hen harriers are your study species / area of expertise.*

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| 3. Study area.Country: CountryRegion/s (if country-wide, write “all”): Region/s |

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| 4. List habitats used by breeding hen harriers in your area for nesting and foraging.

|  |  |  |
| --- | --- | --- |
| Habitats | Mark if nesting habitat | Mark if foraging habitat |
| Type in habitat | [ ]  | [ ]  |
| Type in habitat | [ ]  | [ ]  |
| Type in habitat | [ ]  | [ ]  |
| Type in habitat | [ ]  | [ ]  |
| Type in habitat | [ ]  | [ ]  |
| Type in habitat | [ ]  | [ ]  |
| Type in habitat | [ ]  | [ ]  |

*\*To add more fields, use the plus icon (**) that appears when you click on the last row.* |

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| 5. Approximate number of breeding pairs in your study area.Number of breeding pairs*(If unknown, please provide a rough estimate using ‘>’ or ‘<’* here*)* |

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| 6. Population trend in your study area.[ ]  Increasing[ ]  Stable[ ]  Decreasing[ ]  UnknownAre population trends (especially declines) a consequence of processes occurring during the breeding season, wintering season or both?[ ]  Breeding season.[ ]  Wintering season.[ ]  Both.Provide any additional information on population trends here (e.g time period for trends, causes for trends, gaps in knowledge of causes) |

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| 7. Direct threats (threats to nesting birds, nest or chick survival). *Note that* ***indirect threats and strategies are discussed in question 8*** *(e.g. habitat loss and habitat management).*Rate the impact of the following threats on breeding success in your area from 1 (lowest or negligible impact) to 5 (highest impact) and indicate if there is documented evidence of that threat. *Use “N/A” if the listed threat does not occur in your area.*

|  |  |  |
| --- | --- | --- |
| Predation (*mark the appropriate option/s*)[ ]  by native species.[ ]  by non-native species.[ ]  by avian predators.[ ]  by mammalian predators. | N/A | Evidence y/n |
| Shooting of adults or fledglings. | N/A | Evidence y/n |
| Intentional poisoning. | N/A | Evidence y/n |
| Secondary poisoning. | N/A | Evidence y/n |
| Intentional nest destruction. | N/A | Evidence y/n |
| Accidental nest destruction, specify (e.g. harvesting). | N/A | Evidence y/n |
| Human disturbance from forest management. | N/A | Evidence y/n |
| Human disturbance from burning activities. | N/A | Evidence y/n |
| Human disturbance from agricultural activities. | N/A | Evidence y/n |
| Human disturbance from recreational activities. | N/A | Evidence y/n |
| Collision with wind turbines. | N/A | Evidence y/n |
| Electrocution / collision with power lines. | N/A | Evidence y/n |
| Road mortality. | N/A | Evidence y/n |
| Extreme weather. | N/A | Evidence y/n |
| Food availability. | N/A | Evidence y/n |
| Other, specify here. | N/A | Evidence y/n |
| Other, specify here. | N/A | Evidence y/n |

*\*To add more fields, use the plus icon (**) that appears when you click on the last row.*Rate the effectiveness of conservation strategies targeting direct threats in your area from 1 (ineffective; breeding success is similar to what would be expected without that strategy) to 5 (very effective; breeding success is optimized under that strategy). *Use “N/A” if the listed strategy is not in place in your area.*

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| Location of active nests and protection on a seasonal basis. | N/A |
|  | Nest protection / guarding. | N/A |
|  | Predator control / fences. | N/A |
|  | Brood management. | N/A |
| Supplementary feeding. | N/A |
| Predator control at landscape scale. | N/A |
| Other, specify here. | N/A |
| Other, specify here. | N/A |
| Other, specify here. | N/A |
| Other, specify here. | N/A |

*\*To add more fields, use the plus icon (**) that appears when you click on the last row.*Provide any additional information on direct threats & conservation strategies here |

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| 8. Indirect threats. *Note that due to the nature of indirect threats and conservation strategies****, some answers in this section may overlap****.*Rate the impact of following threats in your area on breeding populations from 1 (lowest or negligible impact) to 5 (highest impact). *Use “N/A” if the listed threat does not occur in your area.*

|  |  |
| --- | --- |
| Habitat loss and fragmentation (specify cause here). | N/A |
| Grazing and livestock. | N/A |
| Agricultural intensification. | N/A |
| Afforestation. | N/A |
| Wind farm development. | N/A |
| Recreational activities. | N/A |
| Other, specify here. | N/A |
| Other, specify here. | N/A |
| Other, specify here. | N/A |
| Other, specify here. | N/A |

*\*To add more fields, use the plus icon (**) that appears when you click on the last row.*Rate the effectiveness of conservation strategies targeting indirect threats in your study area from 1 (ineffective; the strategy does not benefit breeding populations) to 5 (very effective; breeding populations are optimized under that strategy). *Use “N/A” if the listed strategy is not in place in your area.*

|  |  |
| --- | --- |
| Protected areas |  |
|  | Protected areas not exclusively designed for the species’ protection (reserves, national parks). | N/A |
|  | Protected areas designed for the species (SPAs, red zones) | N/A |
| Habitat management / agri-environmental schemes |  |
|  | Creating / enhancing conditions for nesting (describe briefly). | N/A |
|  | Creating / enhancing conditions for foraging (describe briefly). | N/A |
|  | Improving the value of existing linear features (describe briefly). | N/A |
|  | Reducing / increasing grazing, livestock rates, etc (describe briefly). | N/A |
|  | Other management / scheme: specify & describe briefly. | N/A |
| Other |  |
|  | Regulating forest management activities. | N/A |
|  | Regulating recreational activities. | N/A |
|  | Other, specify here. | N/A |
|  | Other, specify here. | N/A |
|  | Other, specify here. | N/A |
|  | Other, specify here. | N/A |

*\*To add more fields, use the plus icon (**) that appears when you click on the last row.*Provide any additional information on indirect threats and conservation strategies here |

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| 9. Are there any weaknesses / strengths of particular conservation strategies you would like to highlight?Conservation strategies’ weaknesses / strengthsWould you recommend the implementation of alternative conservation strategies, and if so, please describe briefly.Alternative conservation strategiesDo you consider that these alternative strategies require testing or that there is sufficient evidence in place to implement them immediately? *Please reference any relevant literature.*Evidence for alternative strategies |

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| 10. Please provide any additional comments.Comments |

# Thank you for your time!

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# (S*hort-eared owl survey on next page*)

# **BREEDING SHORT-EARED OWLS**

*Fill in this questionnaire if short-eared owls are your study species / area of expertise.*

*(If you are answering both questionnaires, the “same as for hen harriers” option can be used if the same reply applies to both species)*

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| 11. Study area.Country: CountryRegion/s (if country-wide, write “all”): Region/s [ ]  *Same as for hen harriers.* |

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| 12. List habitats used by breeding short-eared owls in your area for nesting and foraging.

|  |  |  |
| --- | --- | --- |
| Habitats | Mark if nesting habitat | Mark if foraging habitat |
| Type in habitat | [ ]  | [ ]  |
| Type in habitat | [ ]  | [ ]  |
| Type in habitat | [ ]  | [ ]  |
| Type in habitat | [ ]  | [ ]  |
| Type in habitat | [ ]  | [ ]  |
| Type in habitat | [ ]  | [ ]  |
| Type in habitat | [ ]  | [ ]  |

*\*To add more fields, use the plus icon (**) that appears when you click on the last row.*[ ]  *Same as for hen harriers.* |

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| 13. Approximate number of breeding pairs in your study area.Number of breeding pairs*(If unknown, please provide a rough estimate using ‘>’ or ‘<’* here*)* |

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| 14. Population trend in your study area.[ ]  Increasing[ ]  Stable[ ]  Decreasing[ ]  UnknownAre population trends (especially declines) a consequence of processes occurring during the breeding season, wintering season or both?[ ]  Breeding season.[ ]  Wintering season.[ ]  Both.Provide any additional information on population trends here (e.g time period for trends, causes for trends, gaps in knowledge of causes) |

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| 15. Direct threats (threats to nesting birds, nest or chick survival). *Note that* ***indirect threats and strategies are discussed in question 16*** *(e.g. habitat loss and management).*Rate the impact of the following threats on breeding success in your area from 1 (lowest or negligible impact) to 5 (highest impact) and indicate if there is documented evidence of that threat. *Use “N/A” if the listed threat does not occur in your area.*

|  |  |  |
| --- | --- | --- |
| Predation (*mark the appropriate option/s*)[ ]  by native species.[ ]  by non-native species.[ ]  by avian predators.[ ]  by mammalian predators. | N/A | Evidence y/n |
| Shooting of adults or fledglings. | N/A | Evidence y/n |
| Intentional poisoning. | N/A | Evidence y/n |
| Secondary poisoning. | N/A | Evidence y/n |
| Intentional nest destruction. | N/A | Evidence y/n |
| Accidental nest destruction, specify (e.g. harvesting). | N/A | Evidence y/n |
| Human disturbance from forest management. | N/A | Evidence y/n |
| Human disturbance from burning activities. | N/A | Evidence y/n |
| Human disturbance from agricultural activities. | N/A | Evidence y/n |
| Human disturbance from recreational activities. | N/A | Evidence y/n |
| Collision with wind turbines. | N/A | Evidence y/n |
| Electrocution / collision with power lines. | N/A | Evidence y/n |
| Road mortality. | N/A | Evidence y/n |
| Extreme weather. | N/A | Evidence y/n |
| Food availability. | N/A | Evidence y/n |
| Other, specify here. | N/A | Evidence y/n |
| Other, specify here. | N/A | Evidence y/n |

*\*To add more fields, use the plus icon (**) that appears when you click on the last row.*Rate the effectiveness of conservation strategies targeting direct threats in your area from 1 (ineffective; breeding success is similar to what would be expected without that strategy) to 5 (very effective; breeding success is optimized under that strategy). *Use “N/A” if the listed strategy is not in place in your study area.*

|  |  |
| --- | --- |
| Location of active nests and protection on a seasonal basis. | N/A |
|  | Nest protection / guarding. | N/A |
|  | Predator control / fences. | N/A |
|  | Brood management. | N/A |
| Supplementary feeding. | N/A |
| Predator control at landscape scale. | N/A |
| Other, specify here. | N/A |
| Other, specify here. | N/A |
| Other, specify here. | N/A |
| Other, specify here. | N/A |

*\*To add more fields, use the plus icon (**) that appears when you click on the last row.*Provide any additional information on direct threats & conservation strategies here |

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| 16. Indirect threats. *Note that due to the nature of indirect threats and conservation strategies,* ***some answers in this section may overlap****.*Rate the impact of following threats in your area on breeding populations from 1 (lowest or negligible impact) to 5 (highest impact). *Use “N/A” if the listed threat does not occur in your study area.*

|  |  |
| --- | --- |
| Habitat loss and fragmentation (specify cause). | N/A |
| Grazing and livestock. | N/A |
| Agricultural intensification. | N/A |
| Afforestation. | N/A |
| Wind farm development. | N/A |
| Recreational activities. | N/A |
| Other, specify here. | N/A |
| Other, specify here. | N/A |
| Other, specify here. | N/A |
| Other, specify here. | N/A |

*\*To add more fields, use the plus icon (**) that appears when you click on the last row.*Rate the effectiveness of conservation strategies targeting indirect threats in your study area from 1 (ineffective; the strategy does not benefit breeding populations) to 5 (very effective; breeding populations are optimized under that strategy). *Use “N/A” if the listed strategy is not in place in your study area.*

|  |  |
| --- | --- |
| Protected areas |  |
|  | Protected areas not exclusively designed for the species’ protection (reserves, national parks). | N/A |
|  | Protected areas designed for the species (SPAs, red zones) | N/A |
| Habitat management / agri-environmental schemes |  |
|  | Creating / enhancing conditions for nesting (describe briefly). | N/A |
|  | Creating / enhancing conditions for foraging (describe briefly). | N/A |
|  | Improving the value of existing linear features (describe briefly). | N/A |
|  | Reducing / increasing grazing, livestock rates, etc (describe briefly). | N/A |
|  | Other management / scheme: specify & describe briefly. | N/A |
| Other |  |
|  | Regulating forest management activities. | N/A |
|  | Regulating recreational activities. | N/A |
|  | Other, specify here. | N/A |
|  | Other, specify here. | N/A |
|  | Other, specify here. | N/A |
|  | Other, specify here. | N/A |

*\*To add more fields, use the plus icon (**) that appears when you click on the last row.*Provide any additional information on indirect threats and conservation strategies here |

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| 17. Are there any weaknesses / strengths of particular conservation strategies you would like to highlight?Conservation strategies’ weaknesses / strengthsWould you recommend the implementation of alternative conservation strategies, and if so, please describe briefly.Alternative conservation strategies[ ]  *Same as for hen harriers.*Do you consider that these alternative strategies require testing or that there is sufficient evidence in place to implement them immediately? *Please reference any relevant literature.*Evidence for alternative strategies[ ]  *Same as for hen harriers.* |

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| 18. Please provide any additional comments.Comments |

# Thank you for your time!

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