UIST WADER RECOVERY – RESTORING INTERNATIONALLY IMPORTANT WADER POPULATIONS IN THE UISTS

Summary

1. This paper presents the Board with a summary of findings from recent predation studies on breeding waders on the Uist machairs, and considers options for future management.

Action

2. The Board is asked to consider the emerging findings from the Uist Wader Research (UWR) programme, and to support in principle a new project to secure the long term restoration of wader populations in the Uists.

Preparation of Paper

3. This paper was prepared by David Maclellan, Johanne Ferguson, Iain MacLeod, Charles Thompson, with input from Roger Burton and the Scientific Advisory Committee (SAC) sub-group (chaired by Des Thompson). It is sponsored by Nick Halfhide.

Background

4. The Uists support some of the most important populations of nesting waders (dunlin, ringed plover, redshank, snipe, lapwing and oystercatcher) in Europe; dunlin and ringed plover nest at the highest densities recorded anywhere in the world. In recognition of this, many of the nesting areas have been notified as Sites of Special Scientific Interest and classified as Special Protection Areas with an area covering around 7000 ha.

5. Since the mid 1980s, numbers of nesting waders have declined severely. The declines were, and continue to be, most dramatic in South Uist and Benbecula.

6. Investigation of these declines in the 1990s showed that high levels of egg predation by introduced hedgehogs was resulting in very poor breeding success and was the most important factor in the decline in breeding wader numbers. The Uist Wader Project was established in 2000 to address the emerging problem.

7. Following careful assessment of options, hedgehog removal (from North Uist) commenced in 2003 – with the work initially proving to be highly contentious.

8. In 2007, the Board supported a change in strategy in response to advice from SSPCA, with all hedgehogs being translocated to the mainland. To date, hedgehog removal work has focused on North Uist and Benbecula – action to prevent the hedgehog population becoming established in North Uist.
9. In parallel, SNH has led on the implementation of the Hebridean Mink Project (HMP) – where action was taken to protect SPAs by eradicating non-native American mink. HMP has demonstrated that landscape scale species management can be delivered successfully – preventing colonisation of SPAs in the Uists, and delivering benefits with recovery of a range of bird species in Lewis and Harris (terns and waterfowl in particular).

Research

10. In February 2011, the Board tasked the Uist Wader Research (UWR) project with undertaking:

   a. Low-level hedgehog control effort. The targeting of the hedgehog populations in North Uist and Benbecula to be maintained, to prevent hedgehogs re-colonising areas already cleared, and

   b. A programme of research in the Western Isles to improve our understanding of the wader populations, factors affecting them, and their relative importance.

11. A sub-group of the SAC (Nicholas Aebischer, Colin Shedden, and Chris Spray) was formed to oversee the scientific aspects of the work, and has advised on this paper.

12. In 2011, a consortium of British Trust for Ornithology (BTO), The James Hutton Institute and Macarthur Green Ltd was commissioned to provide advice to UWR. We have received the draft report covering fieldwork undertaken in 2012-14, and this report has been reviewed by the SAC sub-group.

Wader research

13. Key findings from the research programme are:

   a. High levels (55%) of wader nest failure in South Uist (high hedgehog density) compared to low levels (26%) in North Uist (low hedgehog density)

   b. Hedgehog predation is the most significant cause for wader nest failure in South Uist – for all species. 52% of all recorded predation events were by hedgehog.

   c. Predation by common gull, raven, rat, otter, cat has been recorded at broadly similar levels throughout the Uists

   d. Population models predict that if introduced hedgehogs are removed from the Uists there should be a positive response from wader populations. However, the significance of predation of wader chicks (by hedgehogs and other predators) is not clear, so further research is suggested.
Wader counts – 2014

14. A full wader survey of the Uists was delivered by the Royal Society of the Protection of Birds (RSPB) and BTO in 2014. Numbers showed ongoing declines in South Uist, with dunlin now in unfavourable condition in the South Uist Machair and Lochs Special Protection Area (SPA). Redshank are declining and approaching unfavourable condition.

Consideration of Research Findings

15. A meeting was convened between the BTO consortium and the SAC sub–group to discuss the findings and to ascertain to what extent the removal of hedgehogs would facilitate the recovery of wader populations in Uist. The meeting concluded that:
   a. due to the high level of predation on nests, wader populations would not recover unless hedgehogs were removed; and
   b. that this may not be sufficient on its own to facilitate a full recovery.

16. The SAC sub-group confirmed their advice that hedgehogs should be removed from the Uists and further research should be carried out during this removal phase to identify any additional management requirements which would help to improve the robustness of the wader populations into the future. The research would examine the impact that predation of chicks has on wader populations.

Management Options

17. In response to the SAC’s recommendations, the Management Team considered a number of options prepared by staff and agreed to seek the approval in principle of the Board to the first.

Option 1 – Complete Removal of hedgehogs from the Uists.

18. This option proposes to remove hedgehogs from the Uists in two 5 year phases. Two research projects looking at chick survival, and the welfare of translocated hedgehogs would be required during the first phase.

19. We have demonstrated that we can remove hedgehogs effectively from an area, with a combination of trapping and dog searching. We have based our calculations of the resources required on the trapping and dog work at Balranald, North Uist over the last two years and the South Uist removal trial in 2014. From that we consider that it is likely that we would be able to achieve eradication in the 10 years proposed.

20. Cost for Phase 1 would be approximately £2.9m over 5 years (employing 9 full time, and 7 seasonal field staff), reducing to approximately £2.1m over 5 years for Phase 2 (employing 8 field staff). Total project cost over 10 years would be approximately £5m, but there would be no ongoing costs into the future. These estimates include the costs of hedgehog eradication, chick predation research, and hedgehog translocation research.
21. A Communications Plan would be required to support the project. The plan would aim to raise public awareness of the research findings, the issue of wader declines, and the wider public value of the work in terms of the local economy and tourism.

22. This option is the most likely to deliver the long term conservation aims of maintaining robust wader populations within the Uist SPAs. In the long term it would represent better value for money than ongoing control with a smaller team.

**Option 2 – On-going Hedgehog control in the Uists**

23. It would be possible to significantly reduce numbers of hedgehogs from SPA areas in the Uists, which would remove the additional predation factor and facilitate the recovery of wader populations. Control of hedgehogs would help to reverse the decline of wader populations into unfavourable condition. Critically though, hedgehogs from surrounding areas will re-colonise areas that have been cleared, so there will be an ongoing requirement to remove hedgehogs from SPAs.

24. Initially, costs would be similar to option 1, as the same number of staff would be required to cover the area. The first five years would cost in the region of £2m, but after that there would be an ongoing annual requirement for approximately £350k.

25. In the long term, this option would help to reverse the decline of wader populations, but will cost more than option 1.

**Option 3 – Stop Hedgehog Removal from the Uists**

26. If we stop work on removal of hedgehogs, there is a high risk that hedgehog populations will expand (particularly in North Uist), and predation on waders will increase, leading to further declines in wader populations in SPAs and more features moving into unfavourable condition. Given our understanding of the scale of the problem caused by introduced hedgehogs, there may be a heightened risk of EU infraction if appropriate steps are not taken to prevent deterioration of the SPA features (Article 6(2) of Habitats Directive).

27. If wader populations continue to decline, there is also a significant risk that the local tourism industry will suffer – as nature based tourism is recognised as a critical element in the Tourism Outer Hebrides Strategy 2020. The internationally important wader populations are one of the key attractions for visitors to the Uists in the spring months – without it people may choose to go elsewhere.

**Resource Implications**

28. The costs of the recommended options are not affordable to SNH alone – to develop and deliver a project of this scale will depend on securing resources from other sources. We have submitted a concept note to the EU LIFE + programme – and would aim to develop a LIFE + bid for submission in 2015 if this option is supported in principle. As part of this process we would be required to submit a
detailed Business Case to Scottish Government for approval. At present, SNH spends approximately £200,000 per annum on the project, and it is envisaged that our contribution would remain at around that level.

29. We have held initial discussions with RSPB, Storas Uibhist (the community landowner) and the local authority - Comhairle nan Eilean Siar (CnES). All parties have expressed support for the proposed project, and wish to be involved in project development. Managing invasive non-native species is a high priority in the islands – this is recognised in the Single Outcome Agreement (SOA) for the Outer Hebrides.

30. We have also recently updated project stakeholders (Uist Hedgehog Rescue (UHR) and Scottish Society for the Prevention of Cruelty to Animals (SSPCA)) on research findings and the options in this paper. UHR are willing to play a key role in supporting translocation work in the future, and SSPCA have indicated that they are content for the work to proceed as proposed.

31. LIFE + can support large projects of up to 5 years duration, so we need to plan this project in two distinct 5 year phases. LIFE + covers 60% of eligible costs, the remaining 40% being sourced by the project partners. There would be a need to review success at the end of Phase 1 – which would inform a decision to proceed with a second phase, or to close the project. LIFE + can provide support for a second phase of a project, but partners will also need to consider other potential sources of external funding.

Risk Management Implications

32. SNH and partners have invested considerable resources in the Uist Wader Project / Uist Wader Research since its inception in 2000. Our research has shown that introduced hedgehogs are having a significant impact on wader nest success in South Uist. There is an opportunity here to deliver a landscape scale ecological restoration project which will make a significant contribution to the delivery of the 2020 Challenge for Scotland’s Biodiversity and be of benefit to the local economy in the Outer Hebrides. There is a risk that if we do not take action to address the problem, the investment to date will be lost.

33. The Outer Hebrides is one of the most deprived rural areas in Scotland (Scottish Index of Multiple Deprivation 2009 data). Tourism is a key industry in the Outer Hebrides, with Nature Based Tourism being a key driver in the Tourism Outer Hebrides Strategy 2020. The spectacle of nesting waders on the machairs takes place in the spring – making it an important attraction early in the tourist season. If wader populations continue to decline, there is a risk that the wider tourism product in the Outer Hebrides will be damaged – which could have a significant adverse impact on the local economy.

34. If we do not take action, there is a high risk that hedgehog populations will expand, and predation on waders will increase, leading to further declines in wader populations in SPAs and more features moving into unfavourable condition. There may be a risk of EU infraction if appropriate steps are not taken to prevent deterioration of the SPA features (Article 6(2) of Habitats Directive) –
with the potential for significant fines being levied to the UK Government, and consequential reputation damage to Scottish Ministers.

35. The proposed project is not affordable to SNH alone, and will require financial support from other parties. There is a risk that it will not be possible to secure the resources required to deliver – in which case we will consider our options and bring further recommendations to the Board.

36. Management Team has considered these risks and agreed that the option that minimises these risks and offers best value for money is option 1 – complete removal of hedgehogs from the Uists.

Conclusions and Recommendations

37. Research during 2012 – 2014 has clearly demonstrated that hedgehog predation is having a major impact on hatching success on waders in SPAs in South Uist. Wader species continue to show declines in South Uist.

38. Removing hedgehogs from the Uists would facilitate the recovery of wader populations in SPAs, contribute to the development of the local tourism industry and meet the UK Government’s obligations under Article 6(2) of the Habitats Directive.

39. The Board is asked to commit to this and offer support in principle for Option 1 – complete removal of hedgehogs from the Uists. With support, we will investigate partnership development and available funding with a view to starting a new project – “Uist Wader Recovery – Restoring internationally important wader populations in the Uists” in 2016-17.

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