

Background document for RECAP 2 (Nordens Ark, Sweden; 7-8 Sep 2009)

PRELIMINARY REPORT ON THE WWT FEASIBILITY STUDY FOR RE-INTRODUCING/RESTOCKING THE LESSER WHITE-FRONTED GOOSE IN NORWAY

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Introduction

The Wildfowl & Wetlands Trust (WWT) has undertaken to produce a feasibility study for establishing a re-introduction/restocking programme for the Lesser White-fronted Goose *Anser erythropus* (hereafter LWfG), for the Directorate for Nature Management, Norway.

Re-introduction, restocking and captive breeding techniques have been improving continuously. For some species, such as the California Condor *Gymnogyps californianus*, the Mauritius Kestrel *Falco punctatus*, and the Black-footed Ferret *Mustela nigripes*, these techniques have clearly represented the difference between survival and extinction in the short term (Snyder & Snyder 1989, Jones *et al.* 1995, Miller *et al.* 1996).

As well as the potential benefits, re-introduction programmes carry significant risks and costs. Problems that have been significant include (1) difficulty establishing self-sustaining captive populations, (2) poor success in re-introduction attempts, (3) high costs, (4) introgression of alien DNA, (5) pre-emption of other conservation measures, (6) disease outbreaks, and (7) maintaining administrative continuity.

For these reasons re-introduction and restocking programmes should not be undertaken lightly, and should be considered only in exceptional circumstances as an alternative to the imperative of *in situ* conservation measures; effective integration between *in situ* and *ex situ* approaches should be sought wherever possible. It is vital that the re-introduction programme is clearly justified as a necessary and cost-effective conservation measure and that a comprehensive feasibility study is conducted prior to any planning.

There are six basic steps in a re-introduction/restocking programme:

1. Determine the **aims and objectives** of the programme.
2. Decide whether a programme is **justified** (i.e. is the programme necessary).
3. Assess whether it is **feasible** (i.e. is the programme technically possible).
4. Produce a detailed **work plan** for the programme.
5. **Implement** the work plan and **monitor** its progress.
6. **Assess** outcomes and **report** on successes and failures.

WWT's feasibility study will address the first three steps – determining aims and objectives, and assessing justification and feasibility – for a reintroduction/restocking programme for LWfG in Norway and will be prepared in line with the IUCN *Guidelines for Re-introduction* (IUCN 1998).

Proposed structure of feasibility study

1. Introduction

The introduction will include a summary of the following points:

- The main issues associated with re-introduction/restocking programmes
- The purpose and scope of the feasibility study and how the study will be prepared in line with the IUCN *Guidelines for Re-introduction* (IUCN 1998)
- The rationale for producing a feasibility study for the LWfG Fennoscandian population

2. Aims and objectives

The objectives of a re-introduction programme and the conservation aims to which it contributes need to be explicit from the outset, and should directly contribute to actions outlined in any Action Plans for the species (e.g. the International Single Species Action Plan for the Conservation of the Lesser White-fronted Goose in the Western Palearctic, Norway's National Action Plan for the Lesser White-fronted Goose) and/or other relevant conservation plans and policies.

This section of the feasibility study will assess the aims and objectives proposed for re-introducing/restocking LWfG in Norway and suggest secondary objectives which may provide benefit, such as:

- engaging stakeholders in conservation action
- improving international cooperation
- acting as a 'flagship' project for migratory bird conservation
- encouraging partnerships between organisations and individuals
- generating popular support and publicity for conservation
- serving as an example of positive conservation measures, and helping to counteract the negative 'static' and protective image in which conservation is sometimes portrayed

3. Justification assessment

A justification assessment is a generic and high-level process to determine whether the benefits of a particular programme outweigh the potential detriments, including the allocation of resources away from other conservation measures.

The questions which will be addressed as part of the justification assessment include:

- Is there a need for augmentation in the wild?
- Are the conservation needs well-established?
- Would a re-introduction programme contribute to the conservation needs?
- Could these conservation needs be addressed by a more cost-effective method?

4. Feasibility assessment

This section will provide the relevant available information needed to assess the feasibility of establishing a re-introduction/restocking programme for LWfG in Norway.

Re-introduction literature addressing feasibility studies and the associated success of re-introduction projects has highlighted 13 key criteria which should be addressed as part of a feasibility study and are important to re-introduction success.

The following questions address these criteria and will be included in the feasibility assessment for LWfG:

Condition of the species

- Is stock available for translocation or founding a captive breeding population?
- If birds are to be taken from the wild, does this pose any risk to the wild population?

Condition of the environment

- Have the original causes of decline been eliminated or sufficiently reduced?
- Is there a sufficient amount of suitable habitat to support a restocked/re-introduced population? And is that habitat unsaturated?
- Would a restocked/re-introduced population potentially have any negative impacts on the ecosystem? For example, if another species has moved into the niche of the extirpated species, would a re-introduction negatively affect the newly established species?

Socio-economic and legal requirements

- Would there be any negative impacts on local communities?
- Does community support exist?
- Are relevant governmental and non-governmental organisations (NGOs) supportive?
- Will the programme conform to national/local laws and regulations?

Available resources

- Is there sufficient knowledge of the species' biology?
- Are captive breeding techniques for the species known?
- Are re-introduction techniques for the species known?
- Do sufficient resources exist for the programme?

The feasibility of a restocking/re-introduction programme will also be assessed against the IUCN *Guidelines for Re-introductions* (1998) and the AEWAs Review of Waterbird Re-establishment Projects (AEWA 2008), where these two publications have identified additional criteria important for success.

5. Future work programme (annex to main report)

WWT will identify the key elements essential in planning a re-introduction/restocking programme and associated captive breeding programme, and provide guidelines regarding good practice and potential pitfalls to successful implementation. An outline plan would cover the following elements:

- a. Identification of project plan/team
- b. Design of breeding facility
- c. Key elements of a husbandry manual (population size, genetic management, biosecurity, welfare, resources, training staff, rearing techniques)
- d. Release strategy
- e. Intervention mechanisms and revision/adaptation
- f. Communication, education and public awareness strategy

- g. Indicators of success
- h. Monitoring programme
- i. Indicative programme duration

References

- AEWA. 2008. AEWA Review of Waterbird Re-establishment Projects (produced for AEWA by Lee R & Hughes B, WWF). Doc: AEWA/MOP 4.11. Available from: http://www.unep-aewa.org/meetings/en/mop/mop4_docs/meeting_docs_pdf/mop4_11_re_establishment_review.pdf
- Jones CG, Heck W, Lewis RE, Mungroo Y, Slade G & Cade T. 1995. The restoration of the Mauritius Kestrel *Falco punctatus* population. *Ibis*, 137: 173-180.
- IUCN. 1998. Guidelines for Re-introductions. IUCN, Gland, Switzerland.
- Miller B, Reading RP & Forrest S (eds). 1996. Prairie nights: black-footed ferrets and the recovery of endangered species. Smithsonian Institution Press, Washington DC.
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