Sustainable Waterbird Harvest & Conservation

A Trainers' Manual

Prepared by
Szabolcs Nagy & Niels Kanstrup

Produced under the
LIEF for Safe Flight Project (LIFE16/NAT/BG000847)

Co-funded by
EU LIFE Program
Whitley Nature Fund
BirdLife International Small Grants Fund
Woodland Park Zoo

Bulgarian Society for the Protection of Birds
June 2022
Sofia, Bulgaria

Compiled by: Szabolcs Nagy[1,2] & Niels Kanstrup[3]

[1] Rubicon Foundation, The Netherlands
[2] Wetlands International Europe, The Netherlands,
[3] Aarhus University/Danish Academy of Hunting, Denmark

Acknowledgements
The authors are grateful to Nicky Petkov of BSPB for the opportunity to conduct a series of three workshops in with local hunters and conservationists in Bulgaria, Kazakhstan and Romania during the course of the LIFE For Safe Flight project (LIFE16/NAT/BG000847). Our gratitude also goes to all the participants and organisers of these workshops. This training programme heavily builds on the discussions and materials that contributed to the AEWA Guidelines on Sustainable Harvest of Migratory Waterbirds authored by members of Wetlands International's Waterbird Harvest Specialist Group, the activities the AEWA European Goose Management Platform and research activities carried out by colleagues at the Aarhus University. We are particularly indebted to Jesper Madsen and Fred Johnson.

Recommended citation:
Nagy, S. & Kanstrup, N. (2022) Sustainable waterbird harvest and conservation. A trainers' manual. BSPB, Sofia.

Table of Contents

Introduction

Hunting is a form of enjoying nature whose legitimacy is recognised both in the texts of the EU Birds Directive and the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA). Nevertheless, it is often challenging to practice hunting in a way that is sustainable and that does not jeopardise conservation efforts. However, a considerable body of research and practical experience shows that better harmonisation between hunting and conservation interests is possible if these organisations are willing to respect each other's interests and willing to enter in dialogue to find solutions.

Under the Save Flight Branta LIFE project, a series of training workshop was organised to encourage such dialogue between conservationists and hunters in the project countries. The training workshops aimed to introduce the existing guidelines developed by the European Commission (EC, 2008) and AEWA (Madsen et al., 2015) and to provide also practical examples on how different contentious issues related to hunting, such as sustainability of migratory populations, management of key sites and accidental shooting are addressed.

This training kit contains the core presentations given by the authors at three workshops organised under the project in Burgas, Bulgaria (30.09 – 02.10.2018), Nur-Sultan, Kazakhstan (15 – 17.08.2019) and Bucharest, Romania (08 – 10.06.2022)[1]. As these workshops were part of a project that has focused on the conservation of the Red-breasted Goose, this species features in the presentations, but most of the materials have relevance for a wider range of hunting and conservation related issues and might be used by other conservation teams.

Each of the presentations contain slide notes to assist future trainers' who wish to conduct similar workshops. This trainer's manual complements the Power Point presentations and the slide notes with the description of games and exercises used during the workshops.

Conservationists and hunters have bigger problems than fighting each other. We hope that these and future workshops can encourage more collaboration and finding mutually satisfactory solutions within the limits of the relevant national and international legal frameworks.

Szabolcs Nagy Niels Kanstrup

[1] See Annexes 1-3 for the agenda of the workshops.

About the authors

The workshop programme and the presentations reflect the background of the two trainers who run these workshops.

Szabolcs Nagy is from Hungary. He has studied agriculture, fisheries, wildlife management and nature conservation. He started working as a warden at the Közép-Tisza Landscape Protection Area in Hungary. Later he has worked for the Hungarian Ornithological and Nature Conservation Society, the BirdLife Partner in Hungary, BirdLife International Europe, Wetlands International and the Rubicon Foundation. He has extensive experience with species and site conservation, in particular in the flyway context. He has coordinated Wetlands International's input into the UNEP/GEF Wings Over Wetlands and the Climate Resilient Flyway projects. He has been a member of the AEWA Technical Committee since 2008 and was involved in the development of the AEWA guidelines on sustainable harvest of migratory waterbirds and other related issues. He is also member of the EU Biodiversity Platform and the EU Nature Directives Expert Group (NADEG). At the workshops he has covered the ecological and policy aspects.

Niels Kanstrup is from Denmark. He studied wildlife biology at Aarhus University and started after that to work as an advisor for the Danish hunters' associations and was in that period involved with international hunting organisations. He has been president of the CIC Migratory Birds Commission and thereby member of the AEWA Technical Commitee. During the last 15 years he has run his own consultancy, Danish Academy of Hunting, and since 2017 been affiliated to Aarhus University to conduct research on sustainable hunting including lead in hunting ammunition. He has published and run education programs in the field of wildlife management in particular sustainability of hunting with focus on site management, harvest, wounding and disturbance. He has been in charge of co-management projects in Denmark (e.g. network of sanctuaries and prevention of wounding of wildlife), and in community-based nature and wildlife management in Africa (Tanzania, Malawi).

Session 1: The flyway approach

Learning objectives

At the end of this session the trainees will understand

- The flyway approach to the conservation of migratory waterbirds;
- The importance of coordinating conservation and management efforts with other range states along the flyway.

Power point presentations

This session is using two standard presentations:

- 1.1 The flyway approach;
- 1.2 Basic principles of sustainable harvest in the context flyways and migratory bird harvest.

However, it is useful to complement these with other presentations that provide context and vary the speakers. Potential topics of such complementary presentations could be:

- About the project (e.g. the LIFE for Save Flight) or initiative that uses this training kit. This provides the opportunity to introduce the project and highlight the hunting related issues in the context of the project.
- Importance of the country for migratory waterbirds: this can place the contry in the context of flyways (e.g. where most of the staging and wintering birds are coming from, where they are going further), highlight the most numerous and most threatened migratory species, the populations for which the country is particularly important for and the key site network, its protection and gaps in its protected area coverage.

Games

The training programme uses simple games

(1) to encourage more active participation,
(2) to create a more relaxed atmosphere,
(3) to illustrate key concepts in a simple way,
(4) to trigger discussion amongst the participants.

These games use some simple ingredients usually available on the spot or could be easily obtained locally.

The Wild Goose Chase

What will be needed?

(1) Chairs or pieces of papers
(2) Candies

Basic set up:

Create a schematic flyway (Figure 1) including a wintering area, two staging areas and a breeding area using some existing markers in the room (e.g. pieces of furniture, pattern on the floor or just simply using some participants as markers). Place chairs or pieces of paper on the breeding area representing breeding territories. The number of available territories should be less than the number of "geese" playing the game.

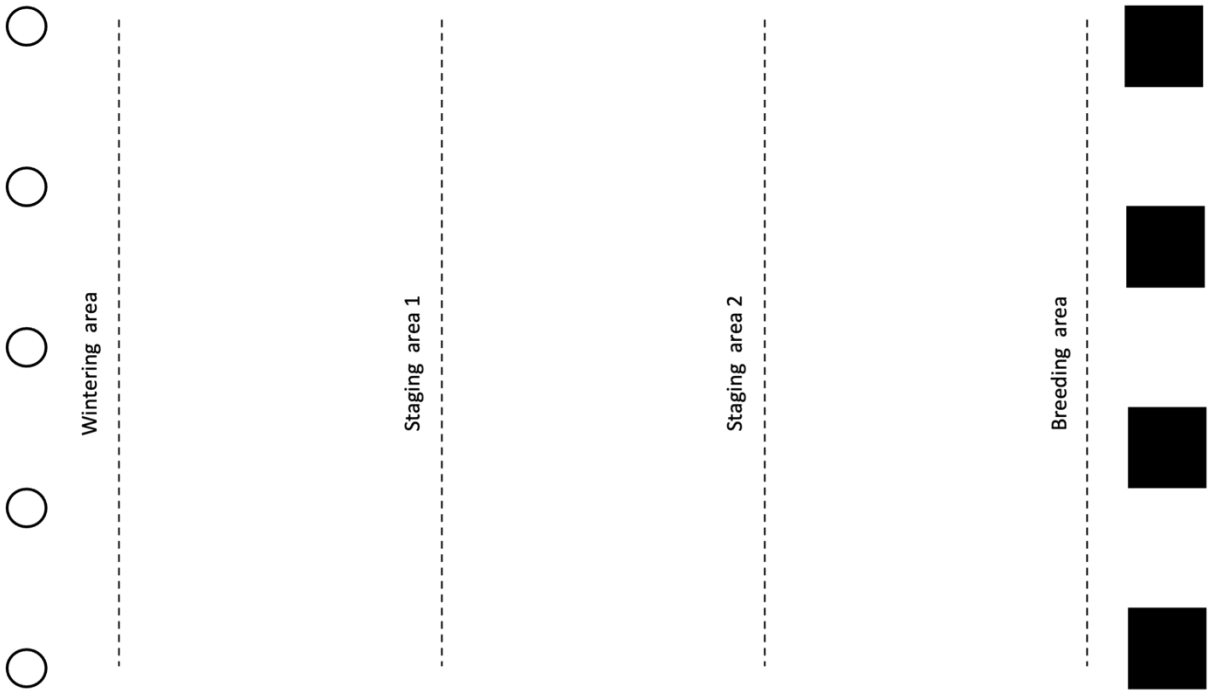


Figure 1. A schematic representation of the flyway in the Wild Goose Chase game.

Depending on the space available for the game and the number of participants, select 2–5 people (P) to act as geese. Place the following number of candies on the floor:

- Wintering area: min. P x 3, e.g. 2 x 3 = 6, if it is played with two participants.
- Staging area 1: min. P x 3
- Staging area 2: min. P x 3

Ask the people to line up at the wintering area. Ask them that on your mark they start picking up candies from the floor. They can move from the wintering area to staging area 1 as soon as they have at least 2 candies in their hand and they can move from staging area 1 to staging area 2 if they have a total 4 candies and from staging area 2 to the breeding area if they have a total of at least 6 candies in their hands. They can occupy a breeding territory if they have at least 7 candies in their hand.

Unless some participants collect many more candies than he needs, most participants will have enough candies to occupy a breeding territory, but speed will still matter. The slowest participant will remain without a breeding territory.

Discussion

Ask the participants what they have learned from this game.

The answers should focus on the followings:

- Importance of finding enough food and being able to migrate quickly to successfully occupy a breeding territory.
- Importance of minimal disturbance on the wintering and staging areas.

Limited resource set up

Use the same set up as before but reduce the number of candies to P x 2 at the wintering and each staging areas. (This means that on average, one participant will be able to collect only 6 candies, which is less than the required 7 for occupying a territory).

Under this scenario some participants will struggle to collect enough candies to move on to the next stage of the migration.

Discussion

Ask the participants what they have learned from this game.

The answers should focus on the followings:

- Carrying capacity of the wintering and staging area limits the number of birds that can complete their migration and can start breeding.

Session 2: Harvest management in the flyway context

Learning objectives

At the end of this session the trainees will understand:

- The importance of coordinating harvest management across the flyway;
- The tools and approaches available at the flyway level to coordinate conservation and management actions;
- The tools available to manage waterbird harvest at national level.

Power Point presentations

This session is using two standard presentations:

- 2.1 Flyway management in practice;
- 2.2 Toolkit for national management.

However, it is useful to complement these with other presentations that provide context and vary the speakers. Potential topics of such complementary presentations could be:

- Hunting legislation in the host country with special emphasis on how the interests of migratory waterbirds are considered.

Games

It is the best to start this session with an invigorating game that highlights the possible problems in the management of migratory waterbirds.

Goose Harvest Game

What will be needed?

(1) Paper and pen
(2) Room with enough space for the 3-7 countries and 3-10 goose flocks. (Use smaller numbers if the space is tight).

Basic set up:

(1) Create a schematic flyway of Greater White-fronted Goose with breeding (and staging) grounds in Russia, then some relevant countries along the relevant flyways. For example, these other countries might include all or some of Kazakhstan, Ukraine, Romania, Bulgaria, Greece and Turkey along the flyway of the *albifrons,* Western Siberia/Black Sea & Turkey population depending on the number of participants. Ask the "countries" to line up on one side of the room where the game is played.
(2) Select 3–10 participants (P) to act as adult geese and the same number of participants to represent the juveniles. (Each person would represent 10,000 birds meaning that starting flock would be 2 x P x 10,000 individuals). Ask them to line up across the room at Russia, i.e. the breeding grounds.
(3) Ask the countries to define their national hunting quotas without talking to each other, write it on a piece of paper before the game starts.
(4) Ask the representative of the breeding grounds (Russia) to reveal its quota.
(5) Remove this number from the "autumn flock". (I.e. if the number is 10,000 ask one participant to step out of the flock and stay in Russia.
(6) Ask the flock to move to the next country.
(7) Repeat steps (4) – (6) until the flock reached the last country.
(8) Ask the remaining geese to fly back to their breeding ground.
(9) Count the number of birds left. If the numbers are smaller than the number of adult birds at the start (P), the harvest is clearly unsustainable. (To make sure that this happens, you may ask one participant in advance to set a high harvest quota).

Discussion

Ask the participants what they have learned from the game. Possible questions:

- Was the harvest sustainable?
- Can and if so, how the range states manage the harvest sustainably?
- What are the main challenges for decision-makers?
- How could be the sustainability of the harvest of this migratory population ensured?

Stochastic set up

The previous game has modelled a deterministic situation, but in nature things are changing. There are years with more breeding success and years with poorer breeding success. This means that even if countries agree on harvest quotas that are sustainable in average years, they may overharvest the population in years with poor breeding success.

This can be modelled by a small modification of the game.

(1) Ask the countries to negotiate sustainable quotas.
(2) In Step (2) ask the "adult geese" to throw dice[2] or ask them to pull a card from three card with 0, 1 and 2 juveniles on it. This would randomly vary the breeding success.

[2] 1 or 2 points = 0 juveniles, 3 or 4 points = 1 juvenile, 5 or 6 points = 2 juveniles.

(3) Compare the total quota with the stock and consider whether harvest is sustainable.
(4) You can repeat steps (2) – (3) several times.

Discussion points
Ask the participants what they have learned from the game. Possible questions:

- Why fixed quotas cannot be sustainable?
- What can be done to ensure sustainability?

Session 3: Management of harvest in and around key sites

Learning objectives

At the end of this session the trainees will understand:

- Different types of key sites for migratory waterbirds, their importance and sensitivities;
- The issues related to huntable and protected look-alike species;
- What is disturbance and how to reduce it;
- Various forms of poaching and illegal killing.

Power Point presentations

This session is using four standard presentations:

- 3.1 Key sites and their importance (based on Session 2 Lecture 1: The long and short journey and how to survive: the concept of sites by Gerard Boere, Tim Dodman and Szabolcs Nagy);
- 3.2 Look-alike species;
- 3.3 Disturbance and management options to reduce disturbance;
- 3.4 Poaching/illegal hunting.

However, it is useful to complement these with other presentations that provide context and vary the speakers. Potential topics of such complementary presentations could be:

- Management of (one or more) SPAs in the host country or in various countries;
- Local legislative or management arrangements to reduce poaching, illegal killing, killing look-alike species;
- How the issue of look-alike species is addressed in proficiency testing at national level?
- Local research results related to disturbance or look-alike species;
- Local research results related to the magnitude and/or motivations of illegal hunting.

Session 4: From theory to practice

Learning objectives

During this session the participants can use the new knowledge in role play exercises. Two role play exercises were developed. In both cases, the most important learning point is to try to negotiate a mutually satisfactory (or least dissatisfactory) solution to a management problem.

In both role play exercises, participants have assigned roles and they should remain their briefing. It is often useful to assign roles to participants that makes them to look at the problem from a different perspective than they would normally do.

Management of the Great Goose Lake

This role play is based on an imaginary site and described in Annex 4. It is also possible to try to address an existing problem, but sometimes vested interests and overly cautious approach to negotiating might make such cases difficult and may divert from the learning objectives.

International/national Action Plan for Common Pochard

This problem is addressing the recovery of the globally threatened Common Pochard and described in Annex 5.

The example in Annex 5 was developed for an international workshop. If it is played at a national workshop, the briefing should be replaced by national information (what is the local status of the species, how its numbers and distributions have changed, what are the threats to its local breeding and wintering populations). In this case the roles should be primarily national ones: e.g. competent national conservation authority, national authority responsible for hunting, representatives of hunters, conservation NGOs, land users (e.g. fishermen).

Annex 1. Programme of the workshop in Burgas, Bulgaria

SUSTAINABLE WATERBIRDS HARVESTING AND CONSERVATION TRAINING WORKSHOP

(Based on AEWA Conservation Guidelines No. 5 - Guidelines on Sustainable Harvest of Migratory Waterbirds)

1-3 October 2018 / Burgas, Bulgaria

30.09.2018

Arrival of the participants, no special program

01.10.2018

Session I: Introduction

09:00 – 9:05 – Welcome by the Organisers

09:05 – 9:20 – Introduction and background of the LIFE Project and objectives of the workshop (Nikolai Petkov)

09:20 – 9:30 – Introduction of the participants

09:30 – 10:30 – Flyway approach - Migratory birds, flyway biology, flyway approach in management, legal framework (Szabolcs Nagy)

10:30 – 10:45 – Coffee break

10:45 – 11:45 – Basic principles, in context of flyway and migratory birds harvest, including ethics. (Niels Kanstrup)

12:00 – 13 20 – Lunch

Session II. Harvest management in flyway context

13:30 – 15.30 – Flyway management in practice (Szabolcs Nagy) :

- Show cases: Pink-footed Goose and Taiga Bean Goose as example of ongoing flyway
- management cases: Conceptual framework (why regulate hunting)
- Structured decision making, Adaptive management (including the participation of local
- stakeholder)

15:30 – 15:50 – Coffee brake

15:50 – 17:50 – Toolkit for national management: Harvest regulation (seasons, zones, methods, bag limits), monitoring (bag statistics, wing survey (pops and demographic), hunting pressure. (Niels Kanstrup)

17:50 – 18:20 – Wrap up and overview of Session I & II

19:00 – Dinner Reception given by the Organisers

02.10.2018

Session III. Management of harvest in and around key sites

09:00 – 9:30 – Key sites and importance of key sites. (Szabolcs Nagy)

09:30 – 10:00 – Look-alike species (Szabolcs Nagy)

10:00 – 10:30 – Disturbance and management options to reduce disturbance. Cases from Denmark. Benefits of non-hunting zones for hunters. (Niels Kanstrup)

10:30 -11:00 – Coffee brake

11:00 – 11:30 – Poaching/illegal hunting. Law enforcement tools. Local regimes in adaptive management. (Niels Kanstrup)

12:00 – 13:20 – Lunch

Session IV. Implementation in Bulgarian key waterbirds sites

13:20 – 15:30 – Split into 4 groups and select one site per group and discus on main issues and how the flyway approach and sustainable harvesting principles could be applied for them

15:30 – 16:00 – Coffee brake

16:00 – 17:00 – Presentation by the groups

17:00 – 17:30 – Wrap up of the workshop and take away messages

19:00 – Dinner

<u>03.10.2018</u>

Departure of the participants/

Optional for those leaving in the afternoon for a trip to BSPB Poda Conservation Center

Annex 2. Programme of the workshop in Astana, Kazakhstan

SUSTAINABLE WATERBIRDS HARVESTING AND CONSERVATION TRAINING WORKSHOP

(Based on AEWA Conservation Guidelines No. 5 - Guidelines on Sustainable Harvest of Migratory Waterbirds)

15-17 August 2019 / Astana, Kazkahstan

14.08.2019

Arrival of the participants, no special program

15.08.2019

Session I: Introduction

9:00 – 9:05 – Welcome by the Organisers

9:05 – 9:20 – Introduction and background of the LIFE Project and objectives of the workshop (ACBK)

9:20 – 9:30 – Introduction of the participants

9:30 – 10:45 – The Flyway approach - Migratory birds, flyway biology, flyway approach in management, legal framework (Szabolcs Nagy)

10:45 – 11:00 – Coffee break

11:00 – 11:45 – Basic principles of sustainable hunting, in context of flyway and migratory birds harvest, including ethics. (Niels Kanstrup)

12:00 – 13 20 – Lunch

Session II. Harvest management in flyway context

13:30 – 15.30 – Flyway management in practice (Szabolcs Nagy)

15:30 – 15:50 – Coffee break

15:50 – 17:50 – Toolkit for national management: Harvest regulation (seasons, zones, methods, bag limits), monitoring (bag statistics, wing survey (pops and demographic), hunting pressure. (Niels Kanstrup)

Introduction of national examples within the session – selected participants from Ukraine, Russia and Kazakhstan

17:50 – 18:20 – Wrap up and overview of Session I & II

19:00 – Dinner Reception given by the Organisers

16.08.2019

Session III. Management of harvest in and around key sites

9:00 – 10:00 – Key sites and importance of key sites. (Szabolcs Nagy)

10:00 – 10:30 – Disturbance and management options to reduce disturbance. Cases from Denmark. Benefits of non-hunting zones for hunters. (Niels Kanstrup)

10:30 – 11:00 – Coffee break

11:00 – 11:30 – Poaching/illegal hunting. Law enforcement tools. Local regimes in adaptive management. (Niels Kanstrup)

12:00 – 13:20 – Lunch

Session IV. Implementation in Bulgarian key waterbirds sites

13:20 – 15:30 – Role play on solving problems related to sustainable management of shared waterbird populations and combining hunting and conservation interest at sites
15:30 – 16:00 – Coffee break
16:00 – 17:00 – Presentation by the groups
17:00 – 17:30 – Wrap up of the workshop and take away messages
19:00 – Dinner

17.08.2019

Excursion/Departure of the participants

Annex 3. Programme of the workshop in Bucharest, Romania

SUSTAINABLE WATERBIRDS HARVESTING AND CONSERVATION TRAINING WORKSHOP

(Based on AEWA Conservation Guidelines No. 5 - Guidelines on Sustainable Harvest of Migratory Waterbirds)

8-11 June 2022 / Bucharest, Romania

08.06.2022

Arrival of the participants, no special program

09.06.2022

Session I: Introduction

09:00 – 09:05 – Welcome by the Organisers
09:05 – 09:20 – Introduction and background of the LIFE Project and objectives of the workshop (BSPB)
09:20 – 09:30 – Introduction of the participants
09:30 – 10:00 – The flyway approach - Migratory birds, flyway biology, flyway approach in management, legal framework (Szabolcs Nagy)
10:00 – 10:45 – The importance of Romania for migratory waterbirds (Ciprian Fântână)
10:45 – 11:00 – Coffee break
11:00 – 11:45 – Basic principles of sustainable hunting, in context of flyway and migratory birds harvest, including ethics. (Niels Kanstrup)
12:00 – 13 20 – Lunch

Session II. Harvest management in flyway context

13:30 – 15.30 – Flyway management in practice (Szabolcs Nagy)
15:30 – 15:50 – Coffee break
15:50 – 16:20 – Hunting regulations in Romania (AGVPS/SOR)
16:20 – 17:50 – Toolkit for national management: Harvest regulation (seasons, zones, methods, bag limits), monitoring (bag statistics, wing survey (pops and demographic), hunting pressure. (Niels Kanstrup)
17:50 – 18:20 – Wrap up and overview of Session I & II
19:00 – Dinner Reception given by the Organisers

10.06.2022

Session III. Management of harvest in and around key sites

09:00 – 10:00 – Key sites and importance of key sites. (Szabolcs Nagy)
10:00 – 10:30 – Disturbance and management options to reduce disturbance. Cases from Denmark. Benefits of non-hunting zones for hunters. (Niels Kanstrup)
10:30 – 11:00 – Coffee break
11:00 – 11:30 – Poaching/illegal hunting. Law enforcement tools. Local regimes in adaptive management. (Niels Kanstrup)

12:00 – 13:20 – Lunch

Session IV. From theory to practice

13:20 – 15:30 – Role play on solving problems related to sustainable management of shared waterbird populations and combining hunting and conservation interest at sites
15:30 – 16:00 – Coffee break
16:00 – 17:00 – Presentation by the groups
17:00 – 17:30 – Wrap up of the workshop and take away messages
19:00 – Dinner

<u>11.06.2022</u>

Departure of the participants

Annex 4. Role play: Management of the Great Goose Lake

Background

Site management is a corner stone in the integrated management of migratory waterbirds. Sites may be breeding areas, staging areas or wintering areas, or various combinations of these depending of species, phenology, habitat preferences etc.

To favor waterbirds site management must ensure habitat quality in terms of structure (optimal vegetation, cover, food, water level etc.), environment (avoid pollution/eutrophication), and human impact (control activity, access, disturbance, infrastructure etc.). Society interests are often very powerful and stakeholder interests may conflict. Even optimal management measures may conflict with each other.

To achieve a long-term sustainable management in favor of both biodiversity and society, managers at all levels must realize these tensions, and understand and appreciate the importance of the involvement of citizens and stakeholders in the site management.

A role-play based on concrete site examples is an efficient way to train participants in the understanding of these mechanisms. The role-play aspect is to make participants act as stakeholders with interests clearly different and perhaps opposite to their own. By the end of such a role-play, participants can explain the importance of stakeholder involvement in site management planning and appreciate the power of dialogue and negotiation.

This role-play

The play illustrates a “public meeting” concerning the future planning and management of Great Goose Lake. The state government plans to extend the existing wildlife reserve to cover the whole area. This implies:

- No free access to the water surface.
- Access to the surrounding bank areas only on designed paths.
- All utilization (commercial and recreational) on special permit from state.

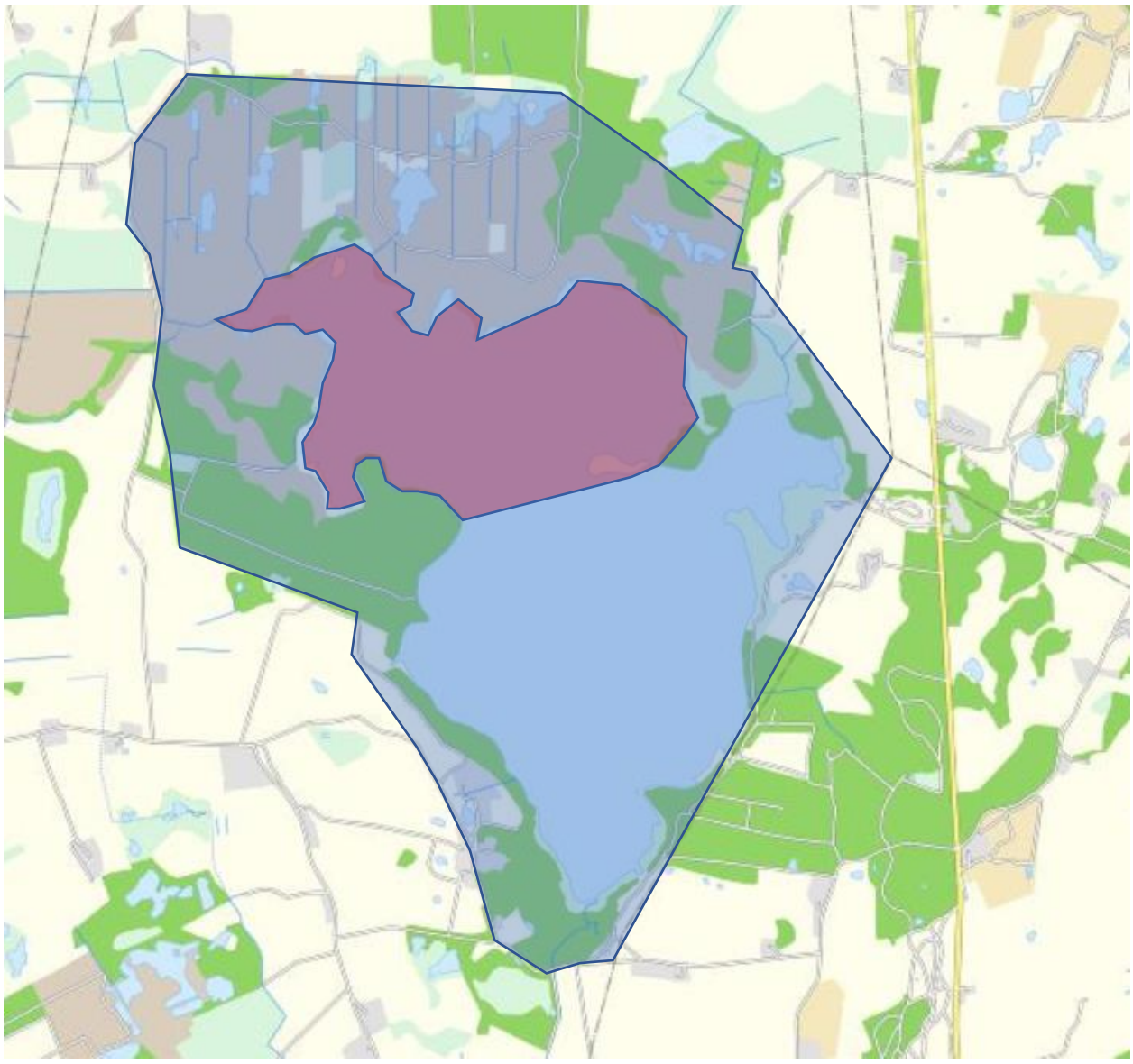
Participants get 15 min. to prepare meaning – talking to others, identifying allies etc. The meeting is chaired by the facilitator/instructor, or better, by a participant volunteer. A rapporteur is appointed, too. After the meeting groups report to plenary and the planning and management proposals for the sites are discussed and evaluated.

Program:

- Introduction in plenary.
- Assigning groups and split up in groups (each get a facilitator).
- Assigning roles.
- Planning of the meeting
- Meeting
- Report/reflections/discussion in plenary

Site: Great Goose Lake

- 300 ha, partly state owned (water surface), partly private (some forests South-West).
- Ramsar Site
- Species: Staging area for Anatidae sp. including increasing goose populations. Breeding area for cranes, grebes, eagles, graylag geese, tufted duck etc. Endemic trout species present. Increasing population of invasive raccoon dog, American mink and ruddy duck.
- Habitat: Freshwater, oligotroph, lake surrounded by forest and bog/grassland.



Keys:

Red: Existing wildlife reserve (established 1972)

Blue: Proposed new reserve.

Stakeholders:

Stakeholder	**Aim**
Municipality	Resume water supply for community Ensure high water quality (no nitrification, pollution)
State reserve	Conserve biodiversity Ensure international protection standards (Ramsar)
Fishing community	Sustain small commercial fishery tradition Local sport anglers club wish to increase recreational fishing
Farmers	Irrigation of fields in dry summers. Possibility for year round cattle grazing on bogs and grassland.
Hunters	Hunt birds (geese and ducks) and other wildlife (deer) Control pest species
Village community club	Sustain attractive access opportunities around the lake and to hot spots for recreational swimming/sailing
Tourist operator	Attract visitors and generate good outdoor experiences
Researchers	Study and monitor ecology and species: Research program on eutrophication from staging geese

Annex 5. Role play: Developing an international action plan for Common Pochard

Background

Common Pochard (*Aythya ferina*) is an important quarry species distributed across Eurasia. It is essentially a bird of steppes but has extended its breeding range westwards in the 20th century. Three flyway populations are recognised by Scott & Rose (1996) and consequently by the relevant international treaties such as the Ramsar Convention on Wetlands and the African-Eurasian Migratory Waterbird Agreement (Figure 1). West and central Russian breeders move W to west Europe and Britain and birds breeding in southwest Siberia and Kazakhstan migrate to the Caspian Sea, Black Sea and west to Italy. Pochards breeding further east in Siberia and Central Asia winter in southwest Asia (Delany et al., 2006). However, there is a considerable overlap in the breeding ranges of these populations.

The species has been listed as Vulnerable on the IUCN global Red List based on large declines reported both from the breeding areas and observed also in the IWC trend analyses (BirdLife International 2015, Wetlands International 2017).

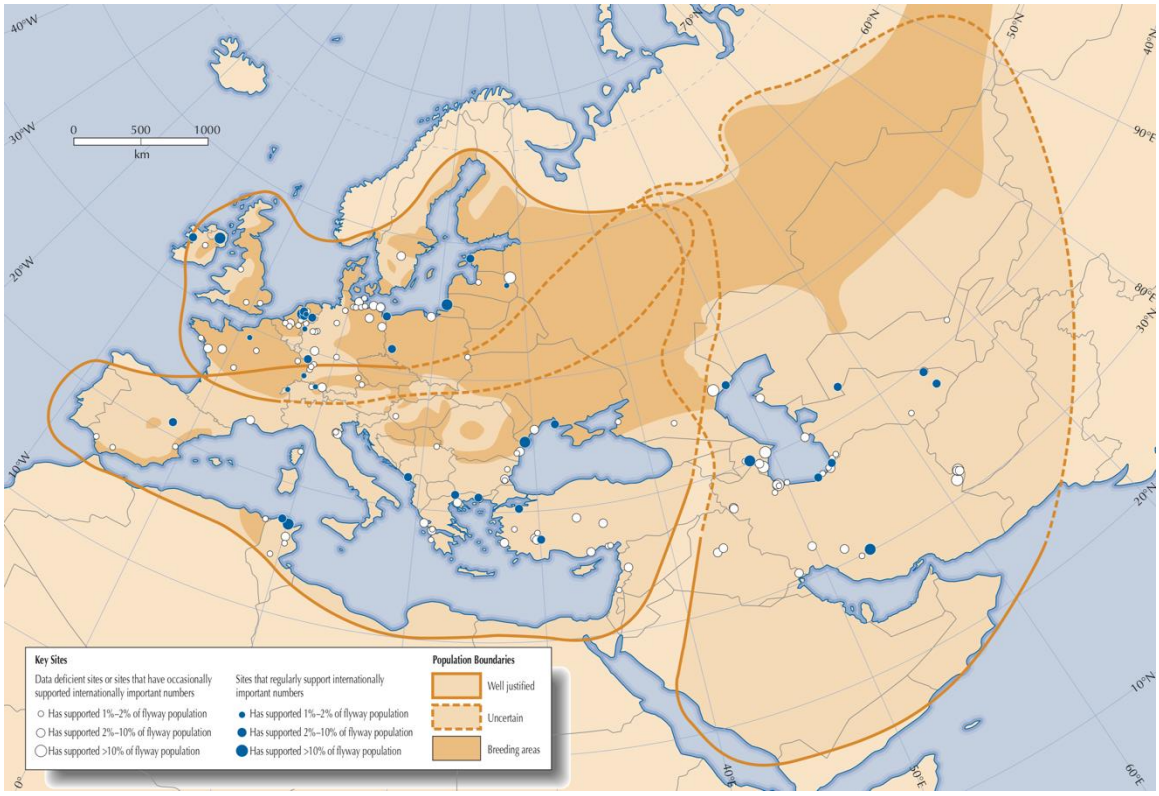


Figure 1. Range map and recognised flyway populations of Common Pochard (source: Scott & Rose, 1996).

It is thought that the primary factors that have led to the decline in this species are most likely to be a combination of: (i) loss of breeding habitat in eastern Europe, and (ii) changes in water chemistry (especially from hyper-eutrophication caused by agricultural runoff). The

loss of habitat is thought to primarily result from changes in land management; either the abandonment or intensification of management of lowland marshes and fish ponds. The abandonment of traditional lowland grazing marshes results in succession to scrub and other unsuitable habitats, whilst greater agricultural intensification leads to marshes being drained. Negative changes to fish pond management also arise from either a reduction in fish production or an intensification that leads to greater use of fish food and medication treatments, and an increase in nutrient inputs. The species suffers from predation and nest predation by several introduced and native mammals including American Mink (Neovison vison) , Raccoon Dog (Nyctereutes procyonoides), Raccoon (Procyon lotor), Red Fox (Vulpes vulpes) and Wild Boar (Sus scrofa). Increased predation levels may be partly related to declines in Black-headed Gull (Chroicocephalus ridibundus) colonies, with which Pochard often associate for the benefits of predator deterrence. Invasive carp production may also provide competition for resources with this species. Adults are poisoned by ingesting lead shot and drowned in freshwater fishing nets. The species is also susceptible to avian influenza, so may be threatened by future outbreaks of the disease. It is also hunted in numerous countries across its range and the population level impact of hunting is not yet quantified (BirdLife International 2019).

References

BirdLife International (2015) European *Red List of Birds*. Luxembourg: Office for Official Publications of the European Communities. (URL: http://datazone.birdlife.org/userfiles/file/Species/erlob/supplementarypdfs/22680358_aythya_ferina.pdf)

BirdLife International (2019) Species factsheet: Aythya ferina. (URL: http://datazone.birdlife.org/species/factsheet/common-pochard-aythya-ferina/text)

Delany, S., Veen, J. & Clark, J.A. (eds) 2006.Urgent preliminary assessment of ornithological data relevant to the spread of Avian Influenza in Europe. Report to the European Commission. Study contract: 07010401/2005/425926/MAR/B4. (URL: http://ec.europa.eu/environment/nature/nature_conservation/focus_wild_birds/avian_influenza/index_en.htm)

Scott, D. A., & Rose, P. M. (1996). *Atlas of Anatidae populations in Africa and western Eurasia*. Wetlands International, Wageningen.

Wetlands International (2017) *Flyway trend analyses based on data from the African-Eurasian Waterbird Census from the period of 1967-2015*. Online publication. Wetlands International, Wageningen, The Netherlands. (URL: http://iwc.wetlands.org/index.php/aewatrends)

Roles

The following role cards should be distributed to participants individually without knowing before the role play starts what are the positions of other stakeholders[3].

Facilitator

Your role is to assist stakeholders in agreeing on a course of action that is acceptable to all of them and will result in halting the decline of the population. You want to build an alliance through this process. Therefore, it is very important to recognise the fundamental objectives of each stakeholder and find a solution that motivates them to work together in the long-term.

Representative of national hunting associations

They want to maintain sustainable hunting opportunities in the long-term.

NGO representatives

They want to stop the decline and recover the species to a better conservation status.

Representative of the Russian Government

Main breeding areas. Increasing numbers wintering in the SW part of the country (Azov Sea). It wants to continue hunting opportunities for the species.

Representative of the Government of Kazakhstan

An important breeding area and an increasingly important wintering area in the Caspian Sea region. It wants to continue to provide hunting at the hunting estates but worried about the impact of further population decline on the long-term viability of the hunting estates.

Representative of the Government of Ukraine

It is an important breeding area. Traditionally, it was also an important wintering area, but its importance is declining possibly due to a shift of the population to Russia. It is an AEWA Contracting Party and it wants to recover its national population to its status in 2000. However, it wants to maintain hunting opportunities in the long-term although it may accept a short-term moratorium.

Representative of the Government of Bulgaria

A wintering area of moderate importance, where the population is stable. It is an EU Member State and they can represent a common position. The species is protected in the country mainly because of the small breeding population. There is no major hunting interest in the species in the country.

Representative of the Government of Romania

Once, this country hosted one of the most important wintering numbers of the species in the European Union. It is still an important breeding area, particularly the Danube Delta. Although hunting tourism is a big business in the country (and Common Pochard is a prized quarry species), the country shall also respect the provisions of the Birds Directive and restore the species into a favourable conservation status in order to continue hunting it.

[3] These positions are only imaginary ones for the sake of the role play and do not represent in any way the actual positions of stakeholders

References

EC. (2008). *Guidance document on hunting under Council Directive 79/409/EEC on the conservation of wild birds "The Birds Directive"*.

Madsen, J., Bunnefeld, N., Nagy, S., Griffin, C., du Rau, P. D., Mondain-Monval, J., . . . Czajkowski, A. (2015). Guidelines on sustainable harvest of migratory waterbirds. *AEWA conservation guidelines*(5).