Module 1: Understanding the Flyway Approach to Conservation

Workshop exercises and case studies

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A field trip is an important part of a workshop, allowing visitors to experience new cultures, landscapes and issues relevant to the workshop, and to relax and enjoy themselves. Here, visitors from sub-Saharan Africa experience the semi-arid landscape of Tunisia during the 11th Pan-African Ornithological Congress in 2004 (photo: Tim Dodman).

Introduction

This document accompanies the Module 1 Session Plan and the power point presentations, and supports the Module 1 technical text. It presents a number of examples and case studies primarily for use in a training workshop setting focused on '*Understanding the Flyway Approach to Conservation'*. However, elements may be used in other workshops, training courses or seminars aimed at building capacity or raising awareness about wetlands and waterbirds.

Exercises and case studies are important parts of any workshop, and provide excellent opportunities for groups to work together, for people to get to know each other better and for overall enjoyment of the workshop. They help significantly to break up lectures and presentations, and help participants to better understand and put in place some of the concepts and issues covered. Exercises should also be enjoyable and should involve participants moving around or using different venues (e.g. alternative rooms or outside).

The exercises presented here were used during a regional workshop focused on the *Flyway Approach to Conservation* held in Amman, Jordan in June 2008. The exercises therefore are mostly of a regional nature, looking at the flyway level. Users of the manual are encouraged to develop their own materials in addition to the ones presented here, in particular to suit the target groups of their particular workshops. Module 3 provides further information about communicating the flyway approach, and will help users to ensure these exercises are as participative as possible.

The training resources presented under the Wings Over Wetlands project aim to serve as 'living resources', which may be amended to suit different settings or developed further according to need. All exercises get better with practice, and users may find alternative ways of getting the main messages across. We therefore welcome feedback on any aspect of the workshop exercises or power points. Please send your ideas and comments to:

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We hope you enjoy your training!

Staff of Mujib Nature Reserve, Jordan wave goodbye to the Amman flyway workshop participants during a field visit, June 2008 (photo: Tim Dodman).

The Exercises

Summary of Exercises

1. **Draw a Flyway: Group work**

   This exercise involves forming groups and asking each group to draw a flyway, after which all resulting maps are displayed and discussed. It aims to improve understanding of flyways.

2. **Migration Strategies: Group discussions**

   This is a facilitated discussion session which aims to encourage participants to think about some of the reasons why and how birds migrate. It is best to form groups of around 5–10 participants, each led by a facilitator.

   A case study of intra-African migration is given, illustrating the different migration strategies of two species of stork.

3. **Migration Strategies: Field visit**

   Field visits are important parts of a training workshop. It is recommended to visit a site (or sites) where participants can appreciate one or more aspect of migration.

4. **The Migration Challenge: Plenary exercise**

   This is an interactive competition in which a number of participants take the role of migratory birds and attempt to reach the 'finishing line'. It is important to immediately follow the game by a plenary discussion.

5. **Ranking knowledge gaps and how to address them: Group work**

   Group work is an important aspect of a training workshop, and identifying and ranking knowledge gaps is a useful exercise that can also yield a list that may be used in the future.

6. **Flyway Threats: Group work**

   'Flyway threats' is an issue that is useful to focus on through group work, both within regional groups and inter-regional groups. The different threats along a flyway can be brought out during a plenary discussion, after the groups have presented their findings.

1. Draw a Flyway: Group work

Introduction

The emphasis of this interactive exercise is on building participants' understanding of a 'flyway'.

Learning Objectives

It is expected that by the end of this session, participants can:

- realise knowledge gaps about the flyways and distribution of birds
- appreciate the diversity of flyways
- appreciate the need to identify areas for different lifecycle/migration stages
- understand the concept of geographically discrete populations.

Methods

Participants work in groups of 3–4, ideally each group with participants from different regions. Each group is given blank maps (e.g. showing Africa and Eurasia), each bearing a photograph of a different migratory bird species. It is useful to choose birds with different flyways and migratory strategies. Using colour crayons, groups must draw as best as they can the flyways of these species. They are encouraged to show different annual lifecycle stages of the birds, such as breeding, staging and destination areas. Resulting maps are then displayed on a wall aside each other and compared, and the trainer leads a discussion about them, when maps of actual distribution/flyways will also be available. The group moves around the room from one set of maps to another.

The species selected in the regional workshop in Amman (June 2008) were four 'black birds': Black Stork *Ciconia nigra*, Black-winged Pratincole *Glareola nordmanni*, Black-tailed Godwit *Limosa limosa* and Black Tern *Chlidonias niger*. The selection of resulting flyway maps (see figures) illustrates some of the difficulties in drawing a flyway. None of the maps are 'accurate', but this is not expected when no reference materials are provided. Plenary discussions helped to clarify some of the information gaps, but there are other important points to note. Map 'a' shows breeding and non-breeding areas, but uses the same colour throughout. Map 'b' shows these areas, joined by routes; this is a good flyway map! Map 'c' shows flyways for different populations, though does not distinguish where birds breed. Map 'd' shows breeding range and a large non-breeding area. Map 'e' shows a migration route only as a discrete line. All these issues merited discussion.

Materials

Lecture room, maps, crayons, blue-tack, wall for displaying maps.

a **b** **c** **d** **e**

Figures: Flyway maps resulting from the Amman, Jordan workshop, June 2008: A. Black Pratincole, B. Black Stork, C. Black-tailed Godwit, D. Black Tern & E. Black Tern (photos: Tim Dodman).

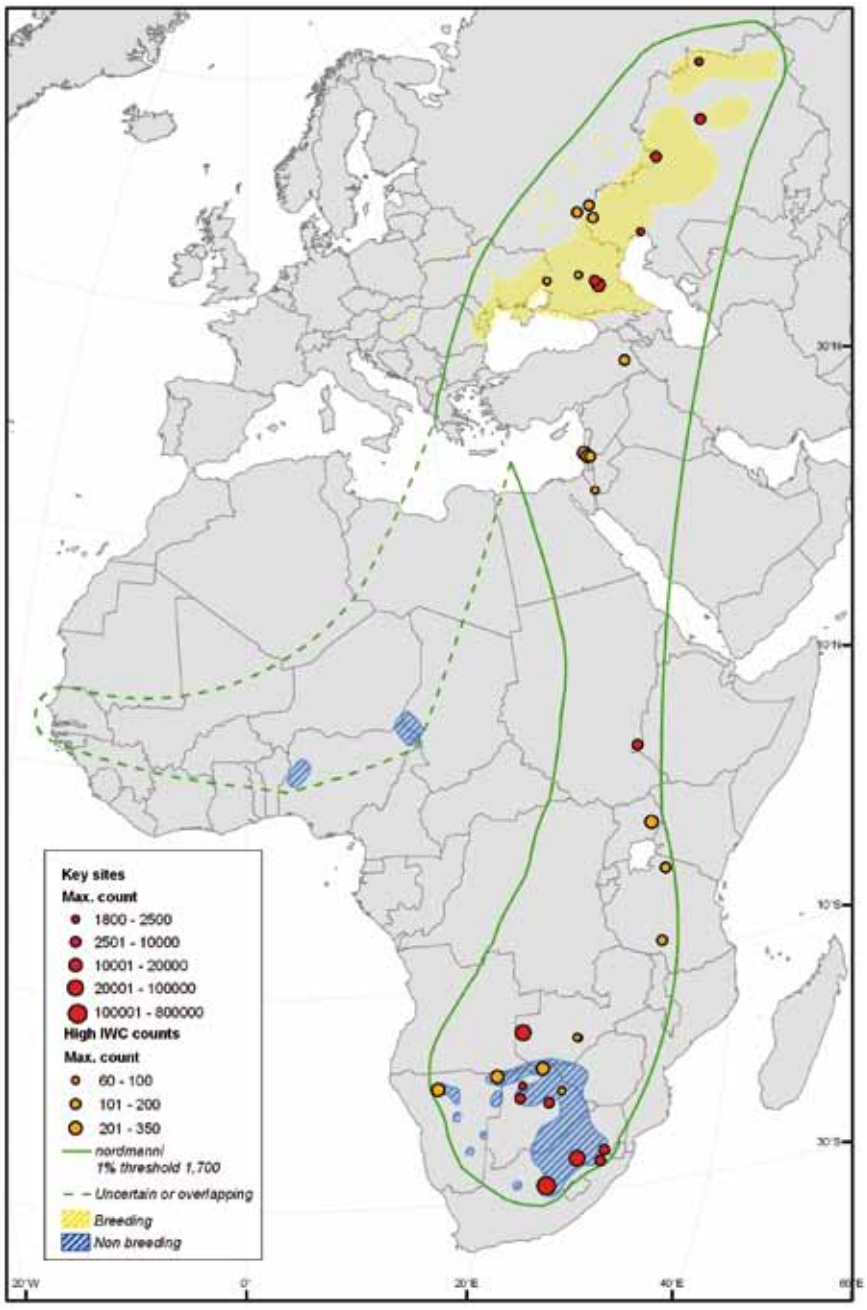
Timing

This exercise should take about 45 minutes to 1 hour, depending on the size and number of groups:

a. Introduction	5 minutes
b. Group work	20 minutes
c. Reporting back and plenary discussions	20 minutes.

Resource materials for 'Drawing a Flyway' for four 'black birds'

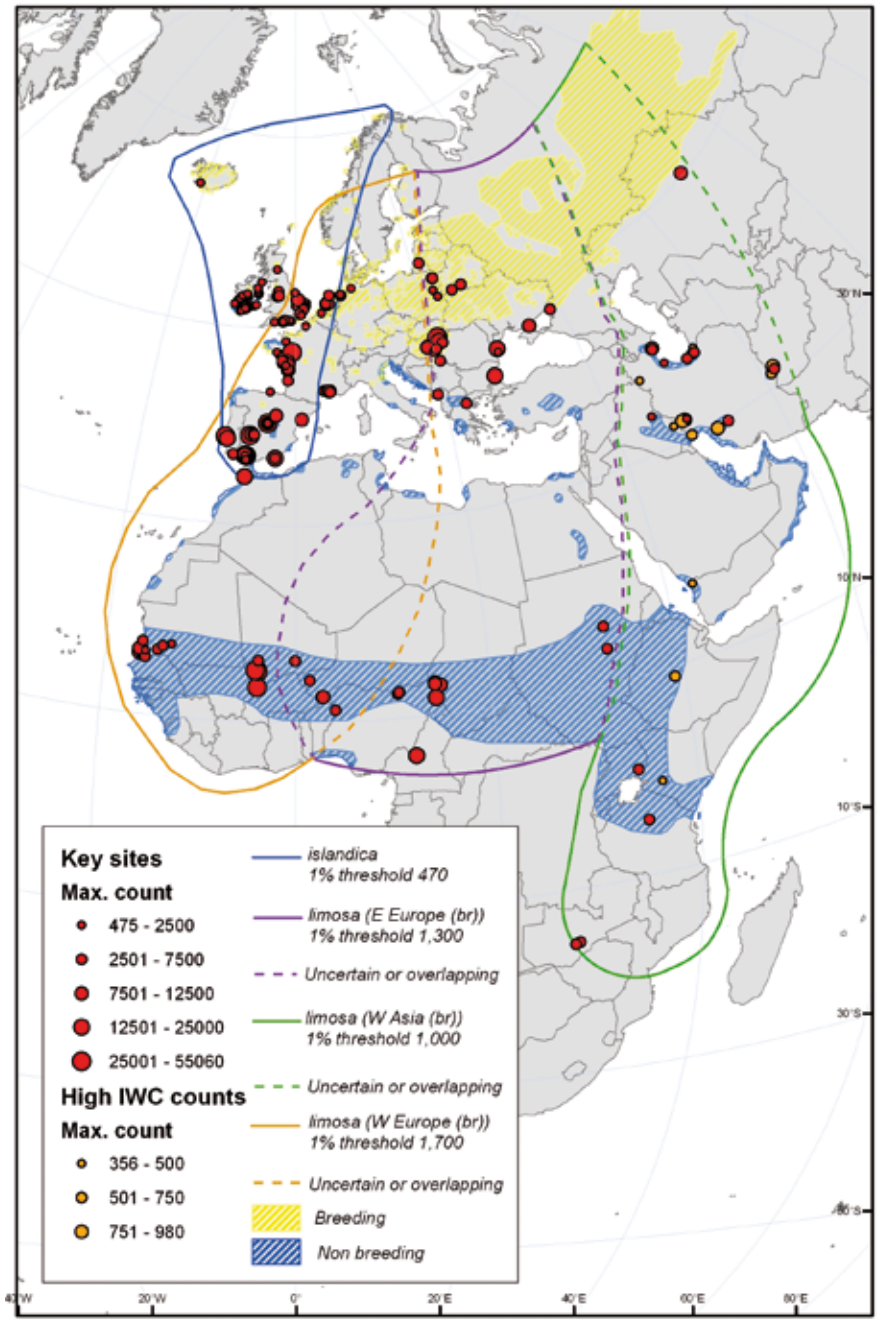
Trainers should provide actual flyway maps for each bird chosen as well as some brief information about each species. It is also helpful to have more detailed information to hand if some participants want to know more.



Black-winged Pratincole *Glareola nordmanni*

The Black-winged Pratincole is a strongly migratory wader, breeding in steppe lands of Central Asia and spending the northern winter in Africa, especially Southern Africa, where large flocks have been recorded at floodplains. Its migration routes are not well understand, and the bird's status in West Africa not at all certain.

source: Delany *et al.* (2009); photo: Sergey Dereliev/UNEP-AEWA.



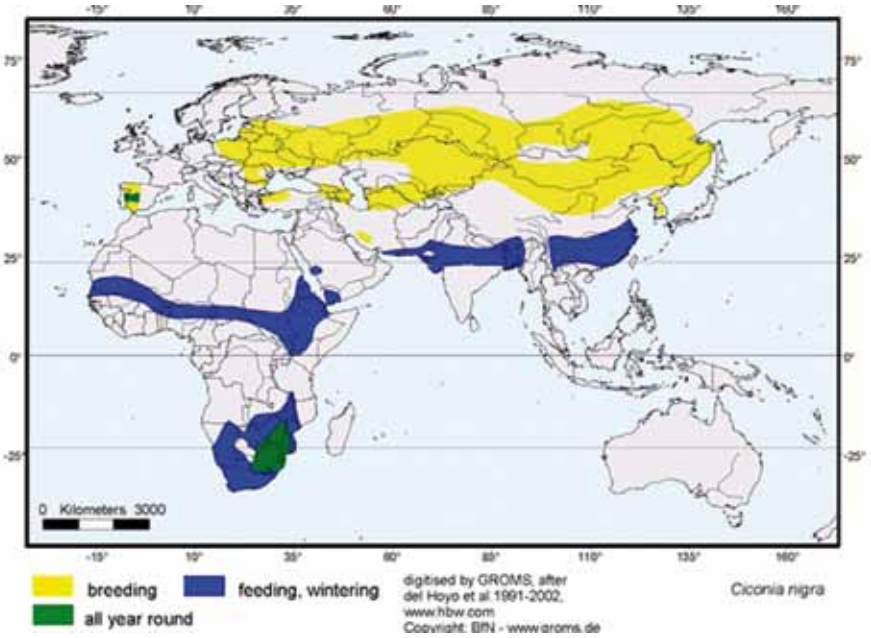
Black-tailed Godwit *Limosa limosa*

There are three populations of the Black-tailed Godwit that breed in Eurasia and spend the northern winter largely in Africa, whilst another population is restricted to North-western Europe. Migration is mainly on a broad front. This wader favours floodplains, freshwater wetlands and grasslands, and may also be found in agricultural areas, such as rice fields.

source: Delany *et al.* (2009); photo: Niels Gilissen MIRATIO.

Black Stork *Ciconia nigra*

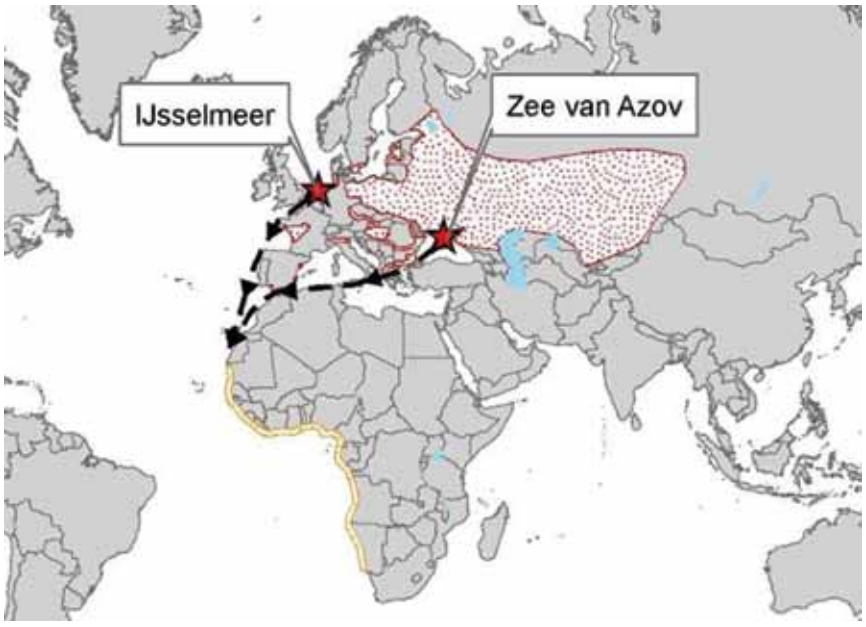
The Black Stork occurs widely in Africa and Asia, mostly breeding in northern latitudes, thence migrating southwards. In Africa, it spends the northern winter across a wide band of the Sahel. Here it is found in a variety of habitats, including wetlands, woodlands and scrublands. There is also a discrete population in Southern Africa, which breeds mainly in rocky areas, dispersing out to a wider catchment after breeding.



source: GROMS (www.groms.de);
photo: Diagana *et al. in prep*.

Black Tern *Chlidonias niger*

The Black Tern breeds in wetlands mainly in eastern Europe and Russia. Birds then move to favoured moult sites, of which two are well known (IJsselmmer in The Netherlands and Zee van Azov on the Black Sea). From here they move down the Atlantic seaboard reaching as far south as South Africa and Namibia.



source: van der Winden (2002);
photo: Augusto Faustino.

2. Migration Strategies: Group discussions

Introduction

This exercise enables participants to consider why and how birds migrate, and some of the implications on the birds themselves and on their conservation management. Each group should be led by a trainer or resource person who has a good understanding about a particular aspect or strategy of migration, and who should let the group think through the migration strategies for themselves.

Learning Objectives

By the end of this session, participants can:

- understand and explain some of the issues causing and affecting migration more deeply
- appreciate the diversity and, in some cases, complexity of migration systems.

Methods

Groups are formed according to a type of migration strategy. A technical facilitator guides each group, encouraging them to think about why birds have adapted their migration strategies, and to consider the resulting conservation implications. Participants will form two or more groups and consider different strategies/flyways for migratory birds, e.g.:

a. intra-African migration: storks
b. long distance migration: waders
c. hop vs jump migration
d. moult migration

Each group will prepare notes and/or annotated maps for display during a plenary.

Materials

Lecture room(s), large papers, marker pens, blue-tack. Notes can be given to participants showing pictures/flyway of birds.

Timing

This exercise should take just over 1 hour, but timing may be adjusted, depending on the level of detail:

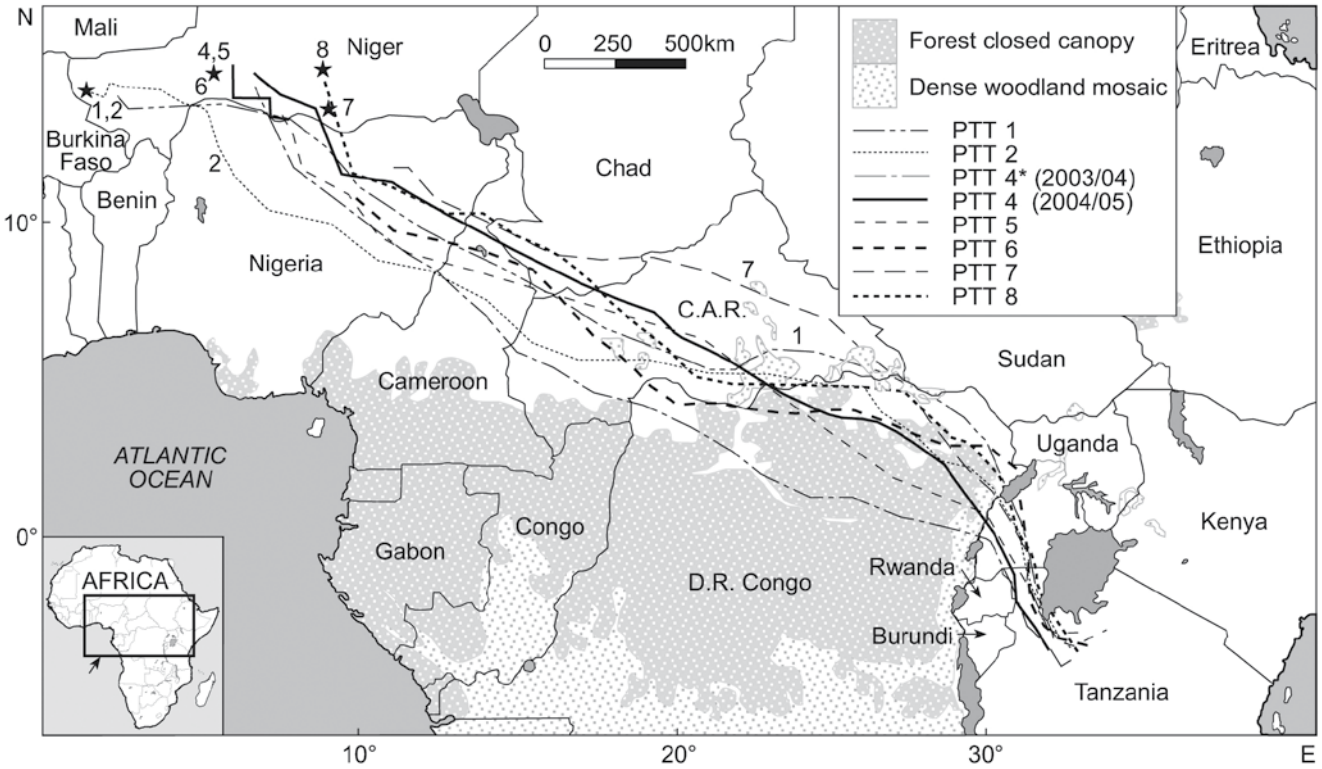
a. Introduction	5 minutes
b. Group work	45 minutes
c. Reporting back and plenary discussions	20 minutes.

Case Study on Intra-African Migration/Rains Migrants: Abdim's Stork *Ciconia abdimi* & African Openbill *Anastomus lamelligerus*

This case study focuses on rains migrants, using as examples two intra-African migrants, the Abdim's Stork and the African Openbill. The facilitator encourages participants to consider the different habitats and diet of these birds, which explain their different migration strategies. The birds' movements are linked to rainfall patterns of Africa. The supporting pictorial information below is provided in hand-outs. Relevance to other regions is considered, especially in drawing up conservation implications focused on rains migrants, not specifically on the main species discussed.

Abdim's Stork

source: a. Large flock of Abdim's Storks near Queen Elizabeth National Park, Uganda (photo: Doug Kelson); b. Abdim's Storks in grassland of the Serengeti, Tanzania, and a pair of Cheetahs (photo: Ida Daleke); c. pair of Abdim's Stork in the Kalahari, Botswana (photo: Brian Ralphs).

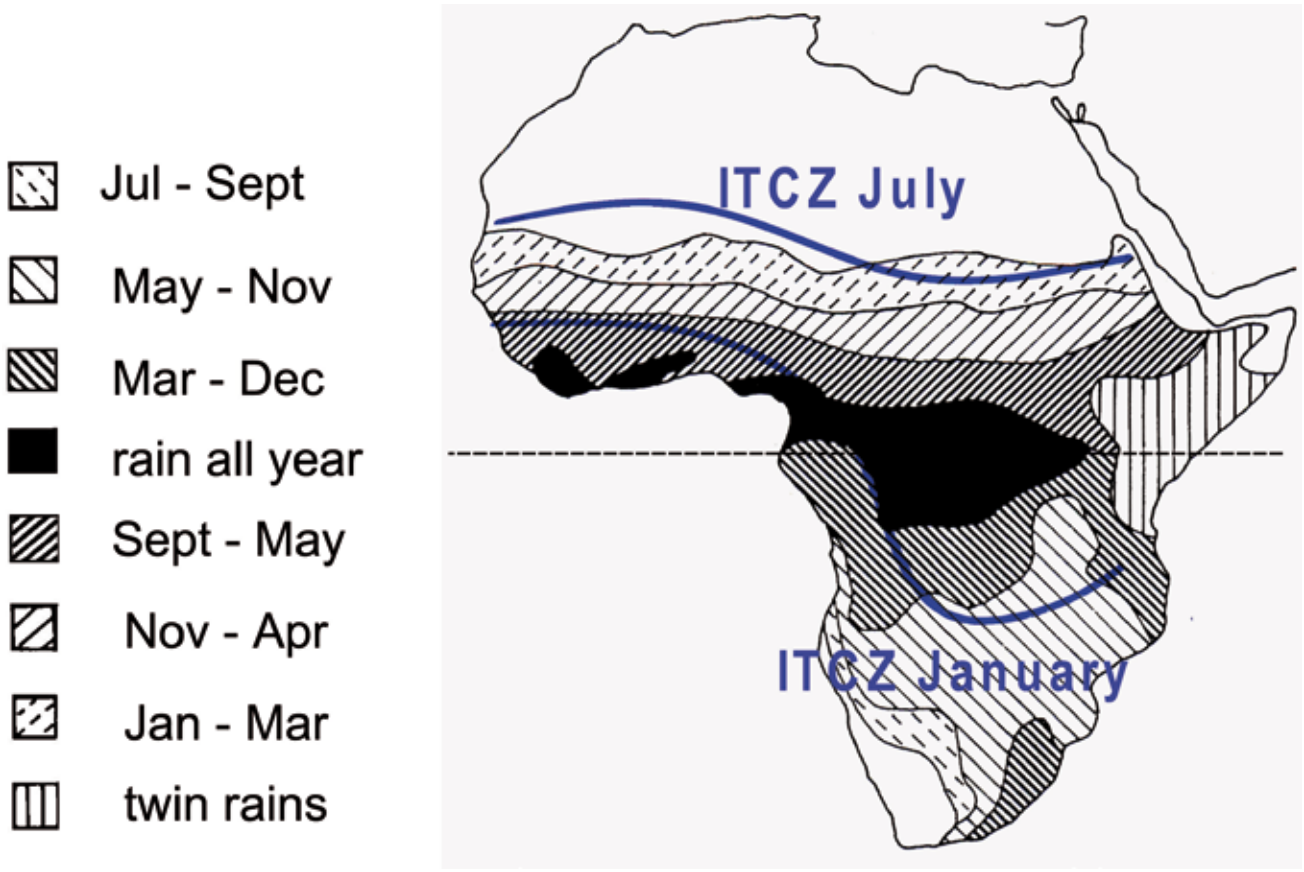


source: Migration routes from West Africa to Tanzania in 2003/04 (broken lines) and in 2004/2005 (solid line); nesting sites are marked with stars, shaded areas are forest and dense woodland (Jensen *et al.* 2006).

African Openbill

source: a. African Openbills feeding at Muanko on the Sanaga River, Cameroon (photo: Jaap van der Waarde); b. Openbill at Chobe, Botswana (photo: Juha Koskinen); c. flock of African Openbill near Shimoni, Kenya (photo: Bernd de Bruijn).

Rainfall in Africa



Jones, P. 1995. Migration strategies of Palearctic passerines in Africa. Israel Journal of Zoology, Vol. 41: pp.393–406.

Facilitating the Discussion

Both Abdim's Stork and African Openbill are trans-equatorial rains migrants, which breed in trees, yet their migratory strategies are completely different. Abdim's Stork breeds in the Sahel belt of Africa mainly during the rainy season. As the rains come to an end, the storks must move on, as their main prey items of grasshoppers, locusts and other large insects are no longer available. Birds breeding in Niger follow the rainfall south, moving especially into north-west Tanzania by November, the start of the rains. This is a period of large-scale hatching of grasshopper nymphs, and the area remains rich in food for a couple of months (Jensen *et al.* 2006).

By contrast, the African Openbill travels in approximately the opposite direction to Abdim's Stork, arriving in Sahelian countries such as Niger towards the end of the rainy season, at a similar time to the departure of Abdim's Storks. Why? Diet is no doubt a key factor. The main food of the African Openbill is snails and freshwater mussels, and it possesses a highly specialised beak for eating them. When it rains in the Sahel after a long dry season, wetlands gradually become recharged, and aquatic life forms begin to flourish. But snails take time to appear, much later than grasshopper nymphs, which emerge at the first flush of rain. Snails and other freshwater molluscs thrive in the tropical, often ephemeral, wetlands, and by the end of the rains they are widely available. As wetlands slowly shrink through the dry season, the molluscs are easy prey items, providing a reliable food source for the storks. This is in contrast to the grasshoppers, which have all but disappeared by the end of the rains.

Other factors also need to be taken into account in looking at the different migration strategies, all of which have important consequences for the conservation of the species. Thus, flyway scale conservation must take account of the ecological seasonal requirements of birds.

source: List of rains migrant conservation implications resulting from the Amman, Jordan workshop, June 2008, and the group at work (photos: Tim Dodman/Edith Mayer).

3. Migration Strategies: Field visit

Introduction

Field visits are useful components of any training course. The more relevant the field trip, the greater the success in building capacity. It is useful to carefully consider location of a training course, so that suitable sites may be visited. A range of sites can provide useful insights into different migration strategies, and these may be discussed in the field and used as references for subsequent training sessions.

Learning Objectives

Field visits enable participants to put their training into perspective, thus heightening the learning experience.

Methods

Field visits should be made during the training course, and at least one site selected that can demonstrate one or more migratory strategies. Examples of such sites are:

a. Bottleneck sites, where birds become concentrated as they migrate. Such sites include rift valleys and short sea crossings.
b. Productive coastal estuaries.
c. Floodplains during the rainy season.
d. Moult sites.

A facilitator, preferably someone who knows the chosen site well, should introduce the site and explain its importance for migratory birds.

During the regional training course in Jordan in 2008, the group visited a part of the rift valley adjacent to the Dead Sea, where the effect of the updraft wind could be easily appreciated.

Materials

Transport to reach sites chosen for the field visit, and other logistical arrangements.

source: Workshop participants 'feeling the uplift' in the rift valley, Jordan, June 2008 (photo: Tunde Ojei).

Timing

Timing depends greatly on distance of the training course venue from suitable field visit sites. Time spent in the field depends largely on weather, how much is to be seen and various practical and logistical issues.

4. The Migration Challenge: Plenary exercise

Introduction

This exercise provides participants with a good opportunity to move around in an interactive game, whilst also enabling them to appreciate some of the difficulties of migration. The exercise described focuses on migration of Garganeys *Anas querquedula* from Mali in West Africa to Russia. However, similar scenarios could be devised for other species or populations. Different cards would then need to be developed.

Learning Objectives

By the end of this session, participants can:

- appreciate the importance and role of different sites for survival
- appreciate the threats to migratory birds
- realise that migration is no easy feat!

Methods

A number (4–8) of participants are Garganeys starting their migration from Mali to Russia in six steps. At each step they choose a card in turn. Cards for each step are held by six participants. The cards give instructions to the 'Garganeys' to either move forward/backwards/remain or 'die', all related to influences on migration (e.g. wetland destroyed, shot by hunter, food good). The exercise is best explained in a stepwise manner:

1. 4–8 volunteers are needed to act as Garganeys, whose aim is to migrate from the Inner Niger Delta in Mali to breeding grounds in northern Russia, where they must breed.
2. A further 6 volunteers are needed to hold cards at each of 6 steps along the migration route.
3. The Garganeys position themselves in a starting line, which represents the Inner Niger Delta.
4. Six steps are marked out if possible, and a volunteer with a set of cards stands adjacent to each step. Steps can be natural features, such as lines in paving stones, or drawn with a chalk, or even imaginary.
5. In turn, each Garganey requests a card. The holder of cards at step 1 picks one at random or offers the Garganey to pick one. The holder reads out the card. Some Garganeys will move forward, others will remain. Those moving forward jump to the next step.
6. Once all Garganeys have had their first go, then they can take their second go, but this should all be done in turn. Those Garganeys who moved forwards will take their cards from the second card-holder; those who remained will take from the first.
7. The Garganeys will progress this way until they either leave the game (e.g. the Garganey is shot) or they reach the end.
8. The first Garganey to successfully complete the migration challenge should receive a prize!
9. The game continues until all Garganeys are done.
10. It is also useful to appoint a 'judge' who will be first to comment on the behaviour of the Garganeys and the card holders and the success of the exercise.
11. The facilitator should then lead a discussion focused on the different aspects of migration that have been realised.

Trainers may wish to modify this game by choosing different birds and/or threats, or by changing other parameters. For instance, different participants may act as different bird species, although this may require development of extra cards.

Materials

An open area (in room or outside), cards, pre-marked cards, some means of identifying 'steps' (could be lines – drawn or using string - or patterns in carpet/floor). The cards for the Garganey Migration Challenge are given below:

Cards for Migration Challenge of Garganeys, moving from Mali to Russia

Step 1: Inner Niger Delta, Mali

THERE IS A LOT OF DISTURBANCE BY FISHERMEN, AND NO TIME TO EAT. **YOU STAY TO FATTEN UP.**

LIFE IS GOOD AND CONDITIONS ARE FINE! YOU ARE READY TO MIGRATE. **MOVE ONE STEP.**

FEEDING IS PARTICULARLY GOOD, AND NO DISTRUBANCE. **MOVE FORWARD TWO STEPS.**

YOU ARE CAUGHT BY SCIENTISTS AND FITTED WITH A TRANSMITTER, WHICH FEELS HEAVY. **YOU STAY IN THE DELTA.**

source: Garganeys caught in the Inner Niger Delta, Mali for satellite telemetry (photos: CIRAD).

Step 2. Northern part of the Inner Niger Delta, Mali

YOU MEET SOME WHISTLING DUCKS AND MOVE WITH THEM TO A LOCAL SITE. **YOU STAY.**

YOU FIND A GOOD SAFE AREA TO FEED IN THE NORTH OF THE DELTA! **NOW MOVE ONE.**

CONDITIONS ARE GOOD, AND YOU ARE FEEDING WITH MANY OTHER DUCKS. **MOVE ONE.**

YOU ARE CAUGHT IN A NET TRAP, BUT YOU ESCAPE. YOU ARE WEAK. **YOU STAY.**

Step 3. Coastal freshwater wetlands in Tunisia

A WETLAND HAS BEEN RESTORED. YOU FEED WELL. **MOVE ONE.**

YOU FOUND A SMALL PRODUCTIVE WETLAND AND FEED WELL. NO TIME TO WASTE … **MOVE ONE.**

YOU ARE SHOT BY A LOCAL HUNTER. **OUT!**

YOU BECAME DISORIENTED IN THE DESERT. **GO BACK ONE.**

Step 4. Mediterranean wetlands of Southern Europe

YOU FOUND A WELL-MANAGED WETLAND. FEEDING IS EXCELLENT. YOU GET FAT AND **MOVE TWO**.	THERE ARE SO MANY TOURISTS THIS YEAR! YOUR SITE IS DISTURBED OFTEN, AND YOU **STAY** TO FEED.
FLYING OVER THE MEDITERRANEAN SEA WAS TOO MUCH! YOU'RE EXHAUSTED AND COLLAPSE. **OUT!**	YOU MADE IT TO EUROPE AND FOUND A GOOD QUIET WETLAND. **MOVE ONE**.

Step 5. Black Sea, Eastern Europe

THE SITE YOU'VE STOPPED AT IS HEAVILY DISTURBED, BUT YOU'RE NOT STRONG ENOUGH TO MOVE ON. **STAY**.	YOU FLY INTO A POWERLINE. **OUT!**
YOU ARE TIRED AFTER YOUR LAST LONG FLIGHT, AND YOU **STAY** TO GAIN STRENGTH.	YOU FOUND A SAFE PROTECTED WETLAND, WHERE HUNTING IS PROHIBITED. YOU FEED WELL. NOW **MOVE ONE**.

Step 6. Breeding grounds in northern Russia

YOU ARE JUST ARRIVING AT A GREAT BREEDING SITE WHEN A HUNTER SHOOTS YOU OUT OF THE SKY. **OUT!**	YOU ARRIVE AT YOUR BREEDING SITE, BUT YOUR NEST IS PREDATED … **MOVE BACK ONE**.
YOU AND YOUR PARTNER BOTH MADE IT AND BREED. **YOU HAVE COMPLETED THE MIGRATION CHALLENGE!**	YOU MADE IT … BUT YOUR PARTNER DIDN'T. YOU **STAY** TO FIND A NEW PARTNER.

LIFE IS GOOD AND CONDITIONS ARE FINE! YOU ARE READY TO MIGRATE. **MOVE ONE STEP.**

THERE IS A LOT OF DISTURBANCE BY FISHERMEN, AND NO TIME TO EAT. **YOU STAY TO FATTEN UP.**

YOU ARE CAUGHT BY SCIENTISTS AND FITTED WITH A TRANSMITTER, WHICH FEELS HEAVY. **YOU STAY IN THE DELTA.**

FEEDING IS PARTICULARLY GOOD, AND NO DISTRUBANCE. **MOVE FORWARD TWO STEPS.**

CONDITIONS ARE GOOD, AND YOU ARE FEEDING WITH MANY OTHER DUCKS. **MOVE ONE.**

YOU MEET SOME WHISTLING DUCKS AND MOVE WITH THEM TO A LOCAL SITE. **YOU STAY.**

YOU ARE CAUGHT IN A NET TRAP, BUT YOU ESCAPE. YOU ARE WEAK. **YOU STAY.**

YOU FIND A GOOD SAFE AREA TO FEED IN THE NORTH OF THE DELTA! **NOW MOVE ONE.**

A WETLAND HAS BEEN RESTORED. YOU FEED WELL. **MOVE ONE.**

YOU ARE SHOT BY A LOCAL HUNTER. **OUT!**

YOU FOUND A SMALL PRODUCTIVE WETLAND AND FEED WELL. NO TIME TO WASTE… **MOVE ONE.**

YOU BECAME DISORIENTED IN THE DESERT. **GO BACK ONE.**

YOU FOUND A WELL-MANAGED WETLAND. FEEDING IS EXCELLENT. YOU GET FAT AND **MOVE TWO**.

FLYING OVER THE MEDITERRANEAN SEA WAS TOO MUCH! YOU'RE EXHAUSTED AND COLLAPSE. **OUT!**

THERE ARE SO MANY TOURISTS THIS YEAR! YOUR SITE IS DISTURBED OFTEN, AND YOU **STAY** TO FEED.

YOU MADE IT TO EUROPE AND FOUND A GOOD QUIET WETLAND. **MOVE ONE**.

YOU ARE TIRED AFTER YOUR LAST LONG FLIGHT, AND YOU **STAY** TO GAIN STRENGTH.

THE SITE YOU'VE STOPPED AT IS HEAVILY DISTURBED, BUT YOU'RE NOT STRONG ENOUGH TO MOVE ON. **STAY**.

YOU FOUND A SAFE PROTECTED WETLAND, WHERE HUNTING IS PROHIBITED. YOU FEED WELL. NOW **MOVE ONE**.

YOU FLY INTO A POWERLINE. **OUT!**

YOU ARE JUST ARRIVING AT A GREAT BREEDING SITE WHEN A HUNTER SHOOTS YOU OUT OF THE SKY. **OUT!**

YOU ARRIVE AT YOUR BREEDING SITE, BUT YOUR NEST IS PREDATED… **MOVE BACK ONE.**

YOU AND YOUR PARTNER BOTH MADE IT AND BREED. **YOU HAVE COMPLETED THE MIGRATION CHALLENGE!**

YOU MADE IT… BUT YOUR PARTNER DIDN'T. YOU **STAY** TO FIND A NEW PARTNER.

Timing

This exercise should take about 45 minutes to one hour:

a. Introduction	5 minutes
b. Migration challenge	20 minutes
c. Facilitated discussion	20 minutes.

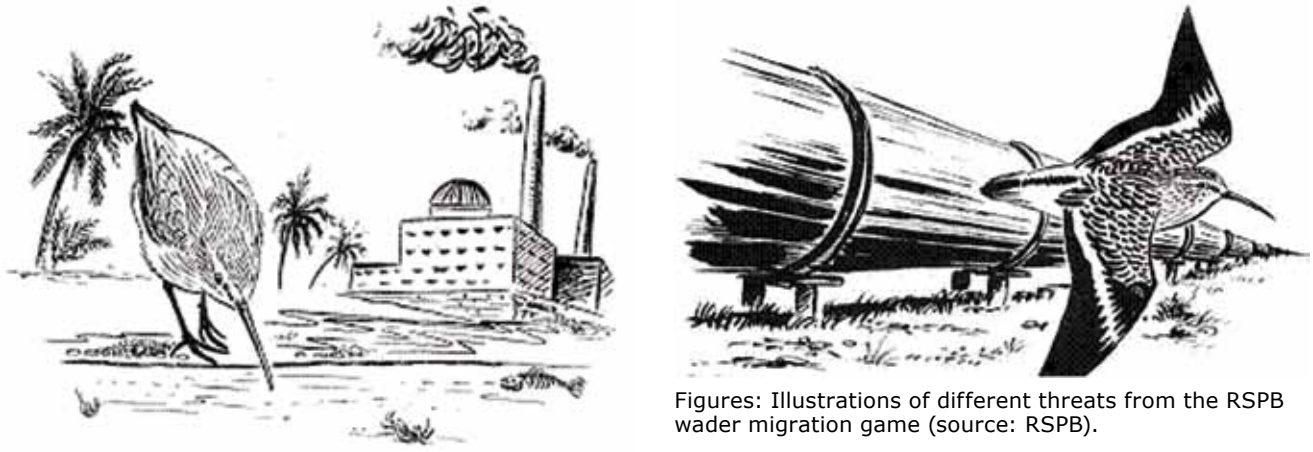
Figures: Spring migration of a Garganey from the Inner Niger Delta in Mali to Sicily in Italy, 2007 (source: http://wildbirds-ai.cirad.fr/); female Garganey fitted with a satellite transmitter in the Hadejia-Nguru wetlands, northern Nigeria (photo: Ward Hagemeijer).

Figure: Six 'Garganeys' line up for the migration challenge at the regional workshop in Amman, Jordan, June 2008. Only two of them survived to make it from Mali to the breeding grounds in Russia and to breed! (photo: Tunde Ojei).

Other Resources

Other games are also available, usually aimed at school level. These may also be modified for different target groups. Here are some options:

- RSPB wader migration game: http://www.rspb.org.uk/Images/wmgeng_tcm9-133387.pdf (game); http://www.rspb.org.uk/Images/wmgnotes_tcm9-133388.pdf (notes). Simulates migration of a wader from the Arctic to Africa and back. The game comprises a series of 36 picture cards, which are laid out on the floor to play the game. Players throw dice to land on different cards and collect 'energy points' at the different stages of migration.
- The similar RSPB White Stork migration game comprises 57 picture cards.
- Migration game with dice: http://www.birdday.org/pdf/migrationgame.pdf
- Online migration game: http://ny.audubon.org/missionmigration.html#
- Seabirds online game: http://www.ladbrokes.com/bigbirdrace/game/longline.html



Figures: Illustrations of different threats from the RSPB wader migration game (source: RSPB).

Figures: Cards from the RSPB Wader Migration Game (colour version) and White Stork Migration Game (source: RSPB).

5. Ranking knowledge gaps and how to address them: Group work

Introduction

There are many gaps in knowledge and understanding about migratory birds and their life cycles. It is useful through group work for participants to consider different knowledge gaps and rank them for their region. A list of proposed actions for filling these gaps provides a practical output. Through this process, participants experience prioritisation and using priorities to plan actions.

Learning Objectives

By the end of this session, participants can:

- explain the key gaps in understanding in different regions
- list the key gaps that require attention at a flyway level
- propose solutions to specific flyway issues.

Methods

Participants will work in regional groups (or site-based groups for a national workshop, for instance). Using a list of gaps already developed, they will rank these gaps for their region/site and propose actions to fill these gaps. Results will be discussed in a short plenary, and flyway-level actions captured. Alternatively, groups can develop their own list of gaps, but it is important to allow time for ranking them. Another option is to reform different groups with participants from different regions (or sites), so that participants can debate about the differences between regions/sites.

Materials

Lecture room(s), cards, paper, blue-tack, marker pens.

Timing

This exercise should take about 45 minutes:

a. Introduction	5 minutes
b. Group work	20 minutes
c. Reporting back and plenary discussions	20 minutes.

List of knowledge gaps presented at the regional workshop in Amman, Jordan, June 2008

1. Site networks not known
2. Nomadic species
3. Site networks for partial migrants
4. Effects of site changes on widespread migratory birds
5. Carrying capacity effects
6. Influences of hunting and other disturbances
7. Climate change
8. East-west migration in Eurasia
9. Intra-African migration
10. Central Asia

A list such as this may be used to prompt discussion or group work; further information can also be captured to explain each gap in more detail.

6. Flyway Threats: Group work

Introduction

In flyway conservation, identifying and raking threats to migratory birds and their critical sites is a key process for efficient planning of conservation actions. In this exercise, (regional) groups consider threats to a migratory bird that they know well. In the second part of the exercise, threats are considered at the flyway level. Local threats may be important in one area but may overall be less important than more serious threats elsewhere in the flyway.

Learning Objectives

By the end of this session, participants can:

- explain and rank the range of threats to migratory birds at the regional and flyway level
- appreciate the need for consideration of the flyway approach in minimising threats to migratory birds.

Methods

Working in groups, participants identify and rank flyway threats in their regions. This is best done by considering a particular migratory bird species, and the threats it faces. If the course comprises participants from different regions, then this part of the exercise should be conducted in regional groups. Groups will then present the threats they have identified. If the course comprises regional groups, the threats identified as well as resulting mitigating actions are likely to be rather different between groups.

If time permits, after a break, new groups will be formed with, for regional courses, one participant from each region. These groups will now rank threats at the overall flyway level. Each group will report back, and the key issues discussed.

In the regional workshop held in Amman, Jordan, June 2008, the species chosen for this exercise was the Great White Pelican *Pelecanus onocrotalus*. This species occurs across the AEWA region, with different breeding populations in Africa and Asia.

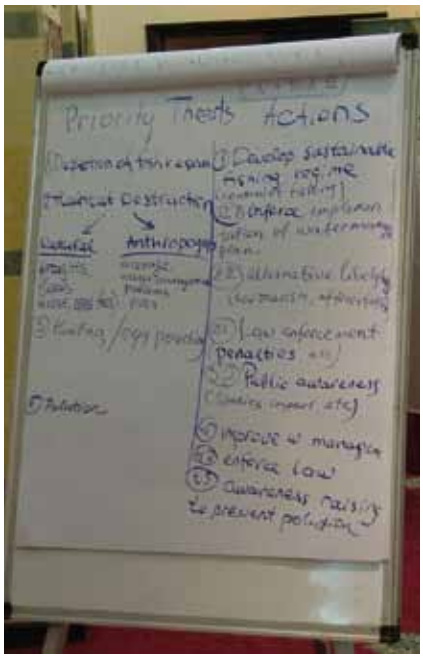
Materials

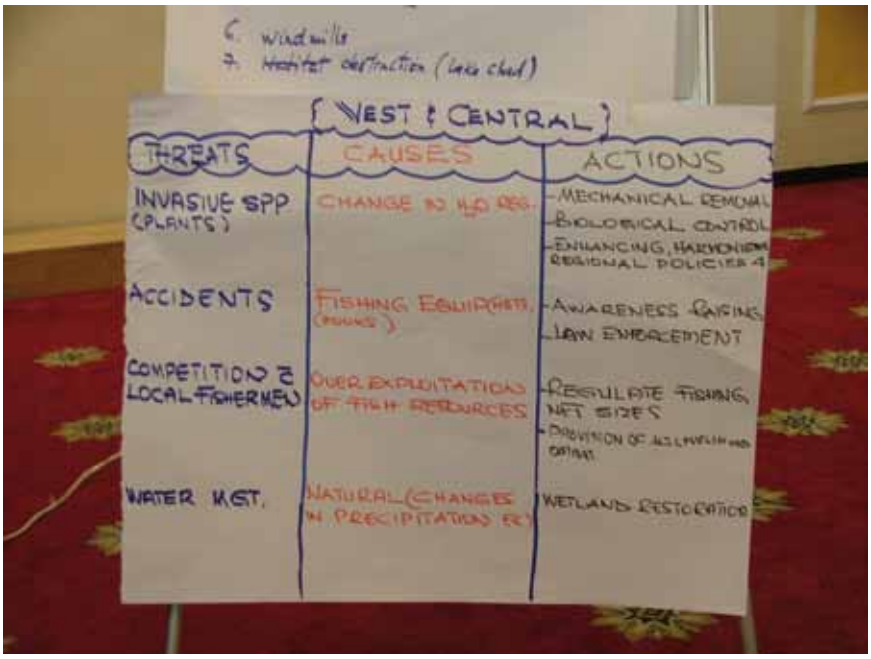
Lecture room, cards, marker pens, large sheets of paper.

Timing

This exercise may take about 1.5 hours altogether:

a.	Introduction	10 minutes
b.	(Regional) group work	30 minutes
c.	Reporting back and plenary discussions	20 minutes
d.	Flyway level group work	20 minutes
e.	Reporting back and plenary discussions	20 minutes





Figures: Threats and actions for White Pelican identified by different groups during the Amman, Jordan workshop, June 2008 (photos: Tim Dodman).

Module 2: Applying the Flyway Approach to Conservation

Exercises and Case studies

Tim Dodman

Working in groups is an important part of a training workshop. At a training course in Khartoum, Sudan, participants were split into groups for field work at a wetland site on the River Nile, with each group filling in their own forms to describe the site visited and the waterbirds recorded there. Results were later discussed in the shade and in more detail in the training room (photo: Tim Dodman).

Introduction

This document accompanies the Module 2 Session Plan and the power point presentations, and supports the Module 2 technical text. It presents a number of examples and case studies primarily for use in a training workshop setting focused on *'Applying the Flyway Approach to Conservation'*. However, elements may be used in other workshops, training courses or seminars aimed at building capacity or raising awareness about wetlands and waterbirds.

Exercises and case studies are important parts of any workshop, and provide excellent opportunities for groups to work together, for people to get to know each other better and for overall enjoyment of the workshop. They help significantly to break up lectures and presentations, and help participants to better understand and put in place some of the concepts and issues covered. Exercises should also be enjoyable and should involve participants moving around or using different venues (e.g. alternative rooms or outside).

The exercises presented here were used during a regional workshop focused on the *Flyway Approach to Conservation*, held in Amman, Jordan in June 2008. The exercises therefore are mostly of a regional nature, looking at the flyway level. Users of the manual are encouraged to develop their own materials in addition to the ones presented here, in particular to suit the target groups of their particular workshops. Module 3 provides further information about communicating the flyway approach, and will help users to ensure these exercises are as participative as possible.

The training resources presented under the Wings Over Wetlands project aim to act as 'living resources', which may be amended to suit different settings or developed further according to need. All exercises get better with practice, and users may find alternative ways of getting the main messages across. We therefore welcome feedback on any aspect of the workshop exercises or power points. Please send your ideas and comments to:

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We hope you enjoy your training!

The Exercises

Summary of exercises

1. Population ecology, conservation management and wise use: Plenary exercises

A number of exercises are presented, based on the general theme of workshop participants acting as birds, for which various parameters are changed, such as food, breeding conditions, conservation management and hunting. The exercises can involve the whole group and also act as energisers.

2. Waterbird monitoring exercise: Group work

In groups, participants answer a series of questions about waterbird monitoring, in order to strengthen their understanding of what monitoring actually is why it is carried out and how the resulting data can be used. In a regional workshop, there will usually be different answers between regions, which may be captured and discussed.

3. Species Action Plans: Case study

A Species Action Plan should be presented in some detail, from inception to implementation, ideally by one of the workshop participants or another resource person. Time should be allowed for a plenary discussion to look at the applicability of this process to other species.

4. Conservation of Critical Site Networks: Group work

In groups, participants identify critical sites along the flyway of a migratory waterbird population and identify actions needed to conserve critical sites along the flyway. Flyway maps and other information is provided. In a regional workshop, groups should contain participants from different regions, so that all participants get to think about actions at the flyway level.

5. Integrating flyway conservation into Critical Site management: Role play

The focus of this role play is on stakeholder involvement in site management. Almost all sites have multiple uses and user groups, and conflict situations are common. A role play helps to highlight some of the conflicts and encourages participants to negotiate with different stakeholders.

6. Flyway conservation and policies: Role play

A role play is used to look at flyway conservation at the policy level. The focus is on debate and negotiation, but in a formal setting where policy is being decided or discussed.

7. Valuation of Flyways: Group work

This exercise involves looking at different valuation techniques and applying them to migratory waterbirds. Some time is reserved for looking at non-economic values.

8. Capacity-building and networking: Group work

In groups, participants design a capacity-building programme, identifying their priorities and key actions, ideally at the flyway level.

1. Population ecology, conservation management and wise use: Plenary exercises

Introduction

Population ecology is sometimes seen as a rather 'difficult' subject, with terminology that many people involved in nature management are not familiar with. But population ecology is an important subject to cover, especially its links to conservation management and wise use. These exercises provide an opportunity to get across various population ecology issues in a simple and enjoyable way and it should help to break down any mental blocks that participants may have about the subject. In particular, attention can be given to the conservation management and wise use exercises, after running through some of the ecology exercises. There is plenty of scope for adaptation and further development; all exercises centre round a general theme of people acting as birds, for which various parameters are changed, such as space, food, breeding conditions, conservation management and hunting.

Learning Objectives

By the end of this session, participants can:

- understand and explain some of the main concepts of population ecology, especially in relation to migration
- understand the distinction between density dependent and density independent factors influencing a population, and provide examples of each
- understand the relevance of population dynamics to conservation management, and explain how management can influence populations
- understand the wise use principle and explain sustainability.

Methods

Mark out an area of a reasonable size (we'll call it a circle, but it can be any shape), either with lines or chairs or a ring of participants. Scatter a fixed number of counters in the circle, say 20, then ask for 5 volunteers, who will act as birds. These volunteers come into the circle; other participants will be gathered round. The counters represent food, and when indicated the 'birds' must eat as much as they can (i.e. collect all the counters until they're finished). Each bird needs 3 counters in order to be fit enough to migrate onwards and breed. Some birds will be more successful than others. Discuss their different feeding strategies! (Some participants will grab as many as they can, others will not be so 'aggressive').

Now add 5 more birds to the circle and repeat the exercise using the same number of counters. Clearly there will be less food to go round due to the competition. See how many counters the birds now have, and what proportion will be able to migrate successfully. Discuss this in relation to ***carrying capacity and density dependence***. More birds can be added if desired.

Now add 2 predators. They must try to catch the birds, e.g. by touching them. Now see how many birds have counters and how many have been predated. Discuss ***predation*** as a population-limiting factor.

Other different scenarios should also be tried by bringing in new variables or changing the set-up. For instance:

- Make the circle very small to demonstrate a site that's been partly converted to another land-use. Discuss density issues and impacts of ***site degradation***.

- In order to look further into ***migration***, establish two or more circles so that birds can move from one to another after collecting enough counters. It is possible to portray the whole migratory annual cycle.

- Establish two circles, each with birds of different populations. Birds from one population could wear a scarf or armband or some other means to differentiate them. There are only a few birds in one circle, so competition here is high and some birds are forced to move (emigrate) to the other circle. Discuss ***emigration and immigration***.

- Remove all counters from one circle to represent a catastrophe (e.g. a drought or severe frost). All birds will be forced to move out of the circle, though they don't have energy to migrate. Counters could be hidden (e.g. held by some participants outside of the circle) to simulate low availability of food that's also hard to find. Only birds that find 3 counters can move out of the catastrophe zone. Discuss ***density independent factors***.

- Establish a circle as a ***breeding*** area; provide strips of paper for nesting material. This can become a limited resource; i.e. competition for breeding areas. Allow new volunteers to come in as chicks, and some birds to fail in their breeding attempt.

- Look at ***vital rates and population vulnerability*** by comparing sites with different population sizes. Have 4 participants in one circle and 12 in another. Now ask 25% to leave each circle and die, so 1 person leaves the circle of 4, whilst 3 leave the circle of 12. Remaining birds must pair up and breed, so there will be 1 pair in one circle and 4 in the other. If breeding is successful, allow 2 chicks per pair, so there will now be 22 birds altogether (12 adults and 10 chicks). The scenario can be varied by assigning male and female birds, varying fecundity (young produced per female or pair), mortality (survival rate) and other parameters.

- Repeat the exercise, only this time the birds that died leave for a third site instead. As there are 4 of them, they can form 2 pairs and produce 4 chicks, so the total resulting population is now 26. Discuss the ***metapopulation approach*** (i.e. connection between sites). Break up sites into smaller units, and see the impact on the resulting population; the impact will be higher if participants are labelled as male and female. Now join all sites together and see the difference. Discuss ***fragmentation and connectivity***.

- To demonstrate ***conservation management*** of migratory species, establish 3 circles, representing breeding, staging and non-breeding areas. Birds must gain 3 counters to move onwards and 4 to breed successfully, when chicks are now recruited into the population. Vary conditions over a period of, say, 3 years. So one year very few counters are available, and poor breeding conditions (not enough paper for nests), so recruitment is low. Observe the impact on the population by active conservation management (e.g. improving the food supply in the staging area or the breeding conditions). This can be repeated several times, and assistants will be needed to replace counters etc. after birds have moved on. Observe the impact on the population of 3 consecutive bad years and compare with 3 consecutive good years. Change the variables in different annual cycle stages.

- To demonstrate ***wise use***, keep feeding and breeding conditions the same (so no need to use counters etc), but vary hunting at different stages of the annual cycle. Involve about half the participants to begin with as birds, and designate a hunter. Ideally assign different participants as males and females. Start off by having no hunting and run for 3–5 cycles, during which some chicks will mature, so gradually other participants will join the exercise. Now hunt, say, 20% of the population at the pre-breeding area and see the outcome on the population; maintain this level of hunting over 3–5 cycles again. Now introduce hunting in the non-breeding area as well at the same level and repeat for the same number of cycles. Vary the scenario and, if time allows, try to work out a sustainable hunting rate. This exercise can be made even more realistic by now bringing in other factors such as food availability, catastrophes, predation etc as discussed above.

There are many opportunities for this to be an action-packed exercise with plenty of entertainment! But make sure the population ecology lessons come across, e.g. through discussion at the end of each scenario. The exercise can be repeated in different sessions, i.e. to break up a series of lectures and serve as an energiser, each time introducing a different issue.

Materials

Lecture room or (preferably) space outdoors, notebook to record results, counters or other items to represent food, strips of paper as nesting materials, other items as other resources, poster tube as a gun etc … Improvise! Notes can be given to participants, if desired, illustrating the particular birds/ situation being presented.

Timing

This exercise can take anything from 15 minutes to all day! It is probably best to run through a few scenarios over about 45 minutes, but timing may be adjusted, depending on the level of detail and how many exercises/variations are carried out. For demonstrating 2–3 variables:

- Introduction 5 minutes
- Plenary exercises and discussion after each scenario 30 minutes
- Reporting back and plenary discussions 10 minutes

Figure: Collared Pratincoles *Glareola pratincola* in Iraq. This species breeds in Iraq, but also passes through on migration. Important habitat has been lost through drainage of the Iraqi marshlands (photo: Omar Fadhil/Nature Iraq).

2. Waterbird monitoring exercise: Group work

Introduction

Waterbird monitoring is carried out across the world, but often the reasons for monitoring are not well appreciated, and results are often not used. Sometimes, the most useful kinds of information are not collected. This exercise aims to focus attention on setting up and sustaining monitoring programmes. Particular attention should be given to the use of monitoring data, with the understanding that monitoring can involve significant investments, so the data generated should be useful and used.

Learning Objectives

It is expected that after the session, all participants will be able to:

- define the meaning of monitoring
- explain the need for monitoring of migratory waterbirds and sites
- explain requirements for monitoring schemes in different regions
- explain different uses of monitoring data for flyway conservation

Methods

This exercise focuses on forming groups to answer a set of questions, then comparing answers together in a plenary. The trainer first presents the session in a plenary, and may start off with posing the question:

"What is (waterbird) monitoring?"

The facilitated discussion that follows will ensure that all participants have a basic understanding of (waterbird) monitoring. Answers may be written on a flipchart by one of the participants. An appropriate answer could be:

"Waterbird monitoring is recording changes in waterbird populations over time through repeatable standardised surveys."

However, during a workshop, much shorter answers will usually be offered, such as 'counting birds every year'. Before moving on, the trainer should be comfortable that all members of the group understand what monitoring is. After this short plenary discussion, the trainer will provide a series of simple concise monitoring questions, either on a PowerPoint, flipchart, blackboard or whatever else is available. Examples of suitable monitoring questions are:

- Why should we carry out waterbird monitoring?
- What do we need to monitor?
- How should we do it?
- Who can do it? (capacity)
- How often?
- How to sustain? (finance)
- How can we use and present the results at different levels (site/national/international)?

These may be varied, depending on the target group. More technical questions could be set for people already actively involved in waterbird monitoring programmes.

After the introduction, the participants should form groups. For a regional course, the groups should be regional groups, so that participants from the same region answer these questions together. Within their groups, participants will assess monitoring requirements and data uses (in their region) through facilitated discussion, and write key bullet points on cards; each group (or region) with different colour cards. This should take about one hour, and should ideally end with a coffee/tea break. During this break, the facilitators/trainers will collect all the cards and group them by question or subject matter, with the assistance/involvement of participants from each group. Cards from all regions will therefore appear under each question.

When this has been done, the facilitator will call all participants together and lead them through the questions. Participants will group around each question in turn and compare the different answers given on the cards. A different participant should read out the responses to each question. Answers, especially from different regions, will be quite variable, and this will naturally lead to wider discussion.

The trainer should facilitate the discussion, so that important issues and common threads stand out, and so that most participants are able to answer the main questions themselves, bearing in mind there is no particular right or wring answer.

Materials

Lecture room, data projector and computer with PowerPoint (or flipchart), colour cards, marker pens, blue-tack, wall or large board for sticking cards.

Timing

In order to allow for productive discussion and feedback, this exercise should take about 1.5–2 hours:

- Introduction and plenary discussion 15 minutes
- Group work 45 – 60 minutes
- Reporting back and plenary discussions 30 – 45 minutes

Figures: Waterbird monitoring exercise carried out in Amman, Jordan, June 2008 (photo: Tim Dodman).

3. Species Action Plans: Case study

Introduction

Species Action Plans are practical conservation tools focused on individual species, or families. A number of plans have been developed, although they vary in nature, and in how they are implemented. It is useful to illustrate a Species Action Plan through a case study. If possible, the trainer should identify a participant who has been involved in developing or implementing a Species Action Plan and asking them in advance to prepare a presentation for the course. This provides participants with a change of person 'standing at the front', whilst it is also a good exercise for the participant making the presentation.

Learning Objectives

By the end of this session, participants can:

- explain the purpose of a Species Action Plan and the steps for development
- provide an example of a Species Action Plan
- list obstacles to implementation
- explain the practical issues relating to implementing Species Action Plan

Methods

A Species Action Plan (SAP) will be introduced in some detail, ideally through a PowerPoint presentation. However, enough time should be reserved for a question and answer session, which should become broader than the actual SAP presented. The plenary discussion should also look at the applicability of the process of developing and implementing a SAP to other species, and potentially a list of priority species could be drawn up. It is also possible to form groups, e.g. for different species or regions, and consider some of the actions that should be included in SAPs for different species or regions.

Materials

Lecture room, data projector, computer with PowerPoint, copies of the Species Action Plan.

Timing

- Presentation 15 minutes
- Plenary discussion 15 minutes
- Group work (optional) 30 minutes

Figure: Marina Koshkina presenting the Species Action Plan for Sociable Lapwing *Vanellus gregarius* during the Amman workshop 2008 (photo: Tim Dodman); Sociable Lapwing in Kazakhstan with colour rings (photo: Maxim Koshkin).

4. Conservation of Critical Site Networks: Group work

Introduction

A new concept such as that of Critical Site Networks (CSNs) may be hard to grasp from a lecture alone, and participants need to think about it for themselves. This is best achieved in a workshop setting through group work.

Learning Objectives

By the end of this session, participants can:

- explain the importance of CSNs and site conservation needs at a flyway level
- identify key steps to take for conservation of CSNs.

Methods

The facilitator/trainer will introduce the session, and help in assigning groups and choice of focal species for each group. Three or four groups may be formed; each group will focus their work on one migratory waterbird species, from a selection chosen by the trainer. The trainer will also have provided some background information and a distribution map showing some identified key sites for each species. In a regional course, each group should contain at least one person from each region. The groups will list on cards recommended steps to take and actions to conserve CSNs for these species. Tea/coffee could be available during the group work. Facilitators should move regularly from group to group, offering guidance and support if requested. Each group will produce a 'poster' of their results, and present these during plenary.

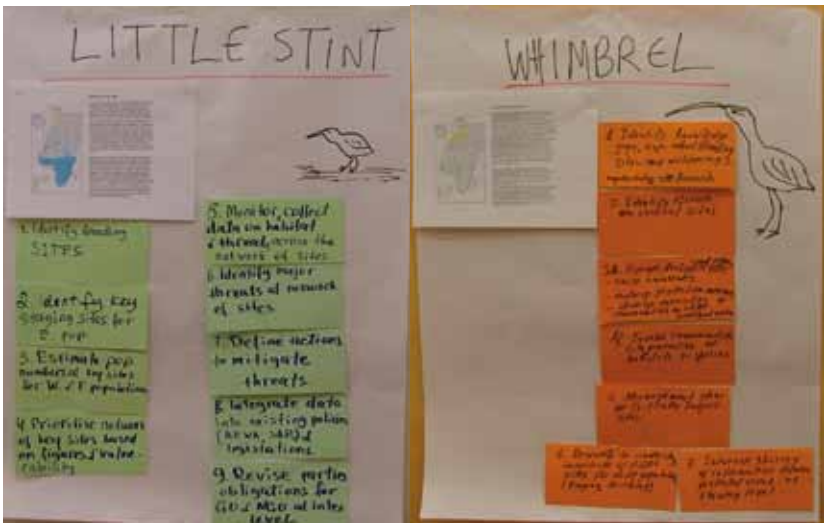
Materials

Lecture room, colour cards, marker pens, blue-tack, wall or large board for sticking cards. Resource materials including maps with flyways of selected waterbirds, lists of sites and some brief information about each species/population.

Timing

To permit productive discussion and feedback, this exercise should take about 1.5 hours:

- Introduction 10 minutes
- Group work 45–60 minutes
- Reporting back and plenary discussions 30 minutes.



Figures: CSN posters produced at the workshop in Amman, Jordan, June 2008 (photos: Tim Dodman).

5. Integrating flyway conservation into Critical Site management: Role play

Introduction

Integrating flyway conservation into site management invariably will involve some special management measures in favour of migratory waterbirds, measures that are often in conflict with other (existing or potential) uses. A role play is a very effective means for participants to appreciate the importance of stakeholder involvement in the management of (critical) sites. It can help participants appreciate alternative viewpoints, especially if they act as a stakeholder with interests clearly different to their own. If successful, participants really 'get into' their roles, and the debate can become quite heated!

Learning Objectives

By the end of this session, participants can:

- explain the importance of stakeholder involvement in site management planning
- appreciate the power of negotiation.

Methods

Interactive role play using, if possible, a realistic or real-life scenario focused on a chosen site. The trainer/facilitator first introduces the exercise and describes the scenario selected. This may be done through a PowerPoint presentation, especially to show some images of the wetland or site selected and its various uses. Ideally, the same site may be visited during a field visit, and this exercise could even be carried out at the site, potentially involving local staff or stakeholders from the site. Next, roles are assigned for the role play, which may take the form of a public meeting. This will allow everyone to take part in the role play and contribute to it. Once roles are assigned, participants must then adopt their roles, and should be actively encouraged to 'get into them' and use improvised props if they wish. Simple badges can be made for participants to wear so that others know 'who they are'.

Before the role play meeting, stakeholders should have an opportunity to discuss with each other and prepare for the meeting. This provides an opportunity for stakeholders to identify allies, who may be able to support each other during the meeting. The meeting is then called by the participant acting as the chairperson (which could be a senior government official for instance). This person should then make a decision to follow a management course for the selected site, based on the strength of the arguments presented.

The scenario used in the 2008 regional workshop in Amman focused on Azraq marshes, and was set in 1982. In the role play, the government plans to resume pumping water from Azraq (after a period of curtailed water abstraction). Local communities and other stakeholders object, but others support the plans. The Prime Minister calls a meeting to hear the different opinions and to make a decision based on the arguments presented.

After the meeting, reflect on the lessons learned from the exercise and how it could be improved, also how participants may have behaved were they assigned a different role.

Materials

Room or area outside, data projector and computer with PowerPoint (optional), stickers, marker pens. Other props can be supplied/used depending on the role play.

Timing

The total time for the role play should be about 1.5 hour:

- Introduction to management scenario and questions 15 minutes
- Assigning roles 5 minutes
- Participants prepare for the 'meeting' in their roles 15 minutes
- Meeting 30 minutes
- Reflection/discussion 20 minutes

The role play can last longer for a more in-depth debate.

Case Study

Water buffalos at Azraq (photo: Tim Dodman).

It is important for the trainer/facilitator to prepare a suitable realistic case study, although the role play does not need to be factually accurate. It is best to select a case study scenario from the region/country of the workshop. Refer to the Azraq role play used in Amman for guidance; the introduction to the Azraq management scenario is available as a PowerPoint presentation, and is also provided below:

Azraq Role Play

Azraq 1982: the situation

- Azraq was declared a Ramsar site in 1977; the first site management plan was produced in 1979.
- Water pumping to Amman had reached 15 million cubic metres during 1980.
- In 1982 the Royal Society for the Conservation of Nature (RSCN) managed to convince the government to stop pumping to Amman. However, illegal wells continue to operate.
- There are conflicts between RSCN (who manage the site) and other stakeholders in relation to the use of the site.
- The wetland is extensive and productive, and a critical site for migratory waterbirds.
- Areas of Azraq are used for fishing, grazing buffalos and collection of other natural resources.

Azraq 1982: the challenge

- There is strong pressure on the Government to increase water availability in Amman.
- The easiest option for the government is to resume pumping water from Azraq.
- However, not all stakeholders agree with this.
- A stakeholder meeting has been convened at Azraq Lodge to discuss the future management of the Azraq oasis.
- The Prime Minister is attending the meeting to make a final decision …

Aims of the stakeholders (no. in brackets)

Stakeholder	**Your Aim**
Amman Municipality (3)	Resume water pumping
RSCN/Azraq Nature Reserve (2)	Conserve Azraq biodiversity; maintain water table
Fishing communities (2)	Productive fisheries
Commercial farmers (2)	Good yields through irrigation
Chechen community (2)	Graze buffalos
Hunters (2)	Hunt birds and other wildlife
Salt producers (1)	Produce salt at Azraq
Azraq women's group (1)	Access to natural resources
Researchers (2)	Study the ecology & biodiversity of Azraq
Azraq Lodge manager (1)	Attract regular flow of visitors
Finnish ringing station (1)	Maintain migratory greenshank population

Images of Azraq

a. Map illustrating movements of long-distance migrants that stop off at Azraq
b. Salt pans
c. Endemic fish at Azraq
d. Hunting
e. Fisherman
f. Migrant settlers from Chechnya




Figures: All figures are images on display at the Azraq Wetland Reserve centre, Jordan (photos: Tim Dodman).

6. Flyway conservation and policies: Role play

Introduction

A role play lends itself well to looking at policies, which can be a complex issue, but which invariably involves debate and negotiation.

Learning Objectives

By the end of this session, participants can:

- explain the role of policy in flyway-level decision making and influencing flyway conservation
- appreciate the importance of flyway-level debate and negotiation.

Methods

In the role play, an appropriate policy-level meeting should be selected. An international meeting is most suitable, such as a meeting within the Ramsar Convention or AEWA, as this will highlight flyway level aspects, and look at international policy adoption through negotiation between countries along a flyway. Alternatively, the role play can focus on a national or local level, although it is important in the flyway approach to ensure that an international aspect is included, for instance by designating someone as a representative of Ramsar or AEWA. The trainer should prepare the role play in advance and hand out position statements to the actors, or brief them. This helps to structure the role play and ensure different points of view are considered.

The scenario selected in the 2008 regional workshop in Amman was a meeting at an AEWA MOP (African Eurasian Migratory Waterbird Agreement Member of Parties) meeting in relation to a proposed hunting ban for the western population of the Garganey Anas querquedula. Participants chosen to act as the government representatives of selected countries were given brief position statements. There were also roles for other key people attending the meeting, including some observer NGOs and representatives of AEWA and Ramsar. The meeting was chaired by the Minister of Environment of the host country, who briefly introduced the session before inviting contributions from the floor. Government representatives then each stated their case to the Chairman, before the floor was given to the Secretary General of AEWA, who requested the Chair of the AEWA Technical Committee to summarise the various opinions. The Deputy Director of the Ramsar Convention also contributed. The Chairman then put the proposal to a vote. This gave all other participants an opportunity to get involved.

Ensure time is allocated to rearranging the room for the role play (e.g. to a formal meeting setting, with chairs facing in rows towards a 'head table'). Participants acting in the role play should be identified in the plenary. If the role play follows on from a coffee break, they may use the break to get into their roles, and discuss with others.

The facilitator needs to brief especially the Chair of the meeting, who will also be responsible for time-keeping and seeking opinions from the floor.

Materials

Lecture room, colour cards, marker pens, tables/chairs could be set in a 'formal meeting setting' (if appropriate).

Timing

The total time for the role play should be at least 1 hour:

- Introduction to role play, questions, assign roles — 10 minutes
- Participants prepare for the 'meeting' in their roles — 10 minutes
- Meeting — 30 minutes
- Reflection/discussion — 20 minutes

Case Study

An appropriate case study should be chosen, one which most participants can relate to. Refer to the Garganey AEWA role play used in Amman, described below:

Policies Role Play: Adopting an International Species Action Plan for Garganey

Background

The Garganey Anas querquedula is a migratory duck, breeding widely at temperate latitudes across Europe and Asia, then migrating south to spend the northern winter in Africa and south-west, south and south-east Asia. Birds breeding in western Eurasia spend the northern winter almost exclusively in sub-Saharan Africa, especially in Sahelian wetlands from Mauritania and Senegal to Chad (Scott & Rose 1996). This is the population being considered for this exercise. The main breeding countries are Russia, Belarus and Ukraine. Breeding numbers are much lower in other European countries, but there are important stop-over sites along the flyway.

The Garganey is a common quarry species across the entire range although its level of exploitation is variable, being relatively low in western Europe but utilised more by subsistence hunters in Russia and in several West African non-breeding destinations (Inner Niger Delta, Lake Chad, Senegal Delta).

Figure: Range map of Garganey *Anas querquedula* in Africa and Eurasia (source: Scott & Rose 1996); male and female Garganey (photo: Albert Winkelman).

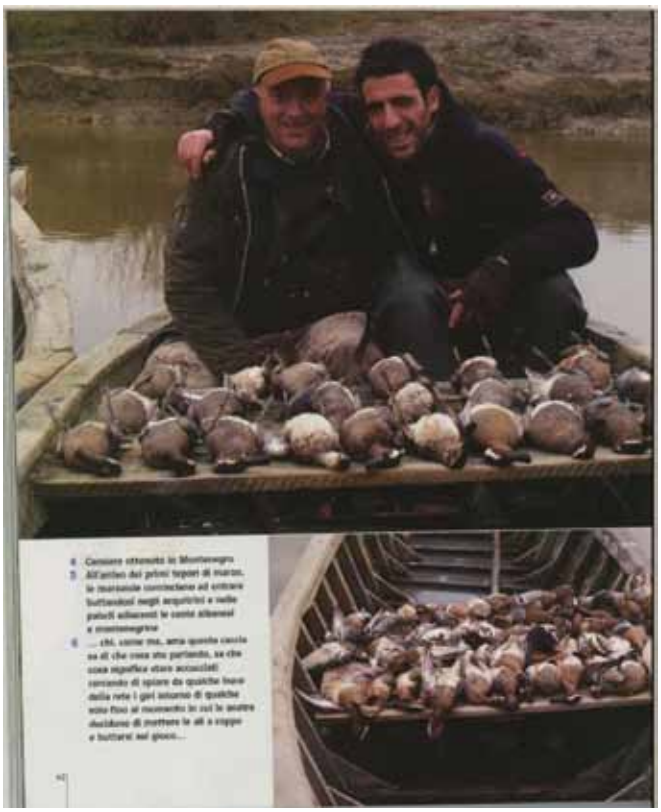


Figure: Garganeys hunted in Montenegro.

Role Play

In response to the long-term moderate decline, the European Commission and the AEWA Secretariat has commissioned the preparation of an international species action plan for the West African non-breeding population of the Garganey. A review of the available data indicates that, besides historical habitat loss in Western and Central Europe, the population decline is driven by low survival rates. Therefore, the draft action plan includes a total ban on the hunting of the Garganey in the AEWA region until recovery of the population to numbers of the 1970s.

It is known from their previous comments on the draft action plan that the total ban is unacceptable for a group of countries (France, Russia, Senegal, Niger and Mali), where hunting of the species is important for social or cultural reasons. In the meantime, most EU Member States accept the necessity of the hunting ban. Indeed some of them (The Netherlands, Finland, Hungary) actively support this idea to become a common position of the EU Member States.

Despite the disputes, all Range States agree that coordinated actions are necessary along the flyway to improve survival rates. Therefore, there are intensive negotiations between the different countries to agree on alternative conservation measures prior to the AEWA MOP, where the action plan shall be put forward for voting.

Roles

Participants will take on roles of the government representatives of the countries below at the AEWA MOP; their respective interest in the issue is also summarised. The Minister of Environment of the host country presides the meeting. Also at the high table are the Ramsar Deputy Secretary General, the AEWA Executive Secretary and the Chair of the AEWA Technical Committee. Other participants are other government/NGO representatives, who may also contribute to the debate. The Minister will listen to the debates and invite a vote at the end of the meeting…

a. ***France***
You are an EU Member State. Your hunters are very influential and exert a strong pressure to maintain the hunting of Garganey during autumn migration through France. Your national conservation and hunting agency is also carrying out regular surveys in the West African countries and in the former Soviet Union and provides technical assistance to monitoring the species. In order to avoid the total ban, you are prepared to invest some development aid into improving the management of the existing protected areas in West Africa and into setting up a network of Ramsar sites with alternative livelihood programmes. You would like to gain some political recognition for this at the next Ramsar COP. You are also prepared to support habitat conservation measures in Russia.

b. ***Senegal***
You would like to avoid the hunting ban because hunting contributes to the livelihoods of the local population, although the habitat for Garganey is degrading in the Senegal Delta. You would prefer to improve the species conservation status through increasing the carrying capacity of the area through habitat restoration. You would also be ready to regulate hunting in some way.

c. ***Mali***
You would like to avoid a total hunting ban because hunting contributes significantly to livelihoods, whilst the Garganey is widely appreciated as a seasonal food source, and thus carries cultural significance. You would prefer to improve the species conservation status through alternative means, such as protection of Garganey in designated refuge areas within the Inner Niger Delta. You would be prepared to regulate hunting in some way.

d. ***Chad***
Lake Chad is a key non-breeding destination area, but it is unprotected. Lake Fitri, further east, is also an important site for Garganey, which is protected as a national park. You would like to avoid the hunting ban, but do not have any special plans for the conservation of the species or the habitat yet. Nevertheless, you would be interested to explore the opportunities.

e. ***Russia***
A hunting ban would not be acceptable for you due to the significant hunting interest, which has economic and cultural importance. You have the largest breeding population for the population, also supporting other populations of the species. Therefore you consider Garganey as a common species, which does not warrant a total hunting ban.

f. ***The Netherlands***
Waterbird hunting is very limited in your country as a result of strong lobbying by the conservation NGOs. You consider hunting as an important threat for your small Garganey population and you believe that hunting in southern countries is undermining your investments in agri-environmental programmes and into restoring habitats and buying new reserves. However, you also recognise that the species habitats should be better managed both in Russia and in West Africa. As an EU Member State you would like to achieve that this becomes the common EU position.

g. ***Hungary***
The Garganey has a small breeding and passage population in your country. Therefore, it is not an important quarry species. Your national breeding population is protected by seasonal restrictions, and you believe that a threatened species should be not hunted. As an EU Member State you would support The Netherlands in a joint EU position in favour of the hunting ban.

h. ***Finland***
Your country is situated on the northern edge of the species breeding range. Therefore, you have a small breeding population and some limited habitats, on which you spend substantial amounts annually to maintain. Your main concern is to stop the decline of the population, but you are not sure that a hunting ban alone would be sufficient to stop the decline. Therefore, you are ready to consider alternative solutions and to support identification and conservation of key moulting sites, which are also amongst the actions recommended by the action plan. Nevertheless, you would prefer to have an agreed EU position at the AEWA MOP, which would give more influence to your position.

Reference

Scott, D.A. & Rose, P.M. 1996. Atlas of Anatidae Populations in Africa and Western Eurasia. Wetlands International Publication No. 41, Wetlands International, Wageningen, The Netherlands.

Figures: Policy role play at the workshop in Amman, Jordan, June 2008, showing the 'high table', country delegates seated and one delegate standing to present his country's position (photos: Tunde Ojei).

7. Valuation of Flyways: Group work

Introduction

There are various studies on valuations of wetlands (refer to Module 2 chapter 8) but rather limited information on performing valuations of migratory waterbirds and flyways. This exercise involves looking at different valuation techniques and applying them to migratory waterbirds.

Learning Objectives

By the end of this session, participants can:

- understand and use to a basic level a variety of economic valuation techniques
- appreciate that valuations are not straightforward, especially for migratory waterbirds, and that it may be necessary to use a combination of techniques
- appreciate the need for valuation, but realise that not all values are economic in nature.

Methods

Split the participants into groups and assign each a valuation exercise. In an inter-regional course, form groups with participants from different regions. The same exercise can be given to each group or, preferably, a different exercise to each group. The exercises should focus on the methods used rather than on mathematics! One or more facilitators will need to circulate among the groups. The groups should put down their findings on flipchart paper and/or cards.

The exercises should be topical and relevant to the flyway, region or site (depending on level and target group of the workshop). Ideally, different valuation methods should be covered. Examples are given below:

- Use the Market Price Method to work out the economic value of birds for direct use, e.g. hunting or harvesting. The group may be given figures to work with (real or made-up) of costs and numbers of birds, or they can invent their own figures. Below are some examples:

    - The value of Common Eiders Somateria mollissima in Iceland for their feathers for the production of eider down;
    - The value of ducks and waders to subsistence hunters in Africa, e.g. at Lake Chilwa, Malawi or the Inner Niger Delta, Mali (information about both sites is provided in the Modules);
    - The value of ducks to sports hunters in the Middle East or Russia.

- Use the Travel Cost Method to work out the value of migratory birds to birdwatchers at 3 sites along a flyway, e.g. in Russia, the Middle East and Africa. Within the group, one person can act as an interviewer and others as birdwatchers (for the different sites). Figures can be estimated for costs spent on getting to the site, accommodation etc, whilst the interviewer should also ask about the birdwatchers' willingness to pay to visit the different sites. It would be good (through role play) for some birdwatchers to come from afar, others local.

- Use the Contingent Valuation Method (CVM) to estimate the values of migratory birds to different stakeholders at a site. One person will act as the interviewer whilst others in the group will act as different stakeholders. The interviewer should work out willingness to pay for each stakeholder group.

- Use the CVM to estimate the value of migratory birds at different sites along the flyway, choosing key stakeholders for each site.

- Consider the non-economic values of waterbirds, e.g. for cultural or aesthetic reasons. The group should think of some examples from their region(s) and try to express these values in a convincing way.

All groups should report back in the plenary and time allowed for discussion after each group has

presented. The trainer should facilitate the discussion, and in a plenary draw up a list of the advantages and disadvantages of the different methods. Time should also be reserved for a plenary discussion on the non-economic values of wetlands and waterbirds.

Materials

Lecture room(s) or other areas with space for individual groups, flipchart paper, colour cards, marker pens, blue-tac, wall or large board for sticking posters and/or cards.

Timing

To permit productive discussion and feedback, this exercise should take about 1.5 hours, though time can be shortened by focusing on less valuation techniques:

a.	Introduction	10 minutes
b.	Group work	45 minutes
c.	Reporting back and plenary discussions	30 minutes.

Figure: Waterbirds in a traditional hunter's house in northern Iran, including two globally endangered Lesser White-fronted Geese *Anser erythropus* (photo: Sasan Fereidouni). Commercial and recreational hunting is an established part of the culture of northern Iran, and migratory waterbirds have an important role in the economic and social development of this area (Balmaki & Barati 2006). There are thus direct use and non use values associated with hunting in the region, which would require the use of a combination of valuation techniques. The migratory waterbirds of Iran are also of value to other countries along the flyway to hunters, birdwatchers and others. All wildlife has a biodiversity value, which is heightened for endangered species (such as the Lesser White-fronted Goose) due to the real risk that they may be lost as a 'biodiversity component', whilst flyways further have intrinsic values. Clearly a successful valuation would need to take account of all these values, some of which may not be expressed in monetary terms. [Refer to Module 2 chapter 8 for further information on these different values and methods of valuation].

8. Capacity-building and networking: Group work

Introduction

Developing and implementing conservation plans depends on the interest and abilities of people. These interests and capacity are boosted through communication with others. Thus, capacity-building and networking are important elements for effective conservation. This exercise puts the onus on the participants to design a capacity-building programme, identifying their priorities and key actions.

Learning Objectives

By the end of this session, participants can:

- visualise and explain the relevance of enhanced capacity at different levels of a flyway network
- list different techniques for identifying capacity needs
- prioritise capacity needs at the flyway level.

Methods

Using results from Session 3 and Exercise 4 (Conservation of Critical Site Networks), each group has an imaginary $50,000 to implement a capacity-building programme for their species across its flyway. There will be a need to prioritise actions and for negotiation/division of resources between regions. The groups should indicate how they will use these funds.

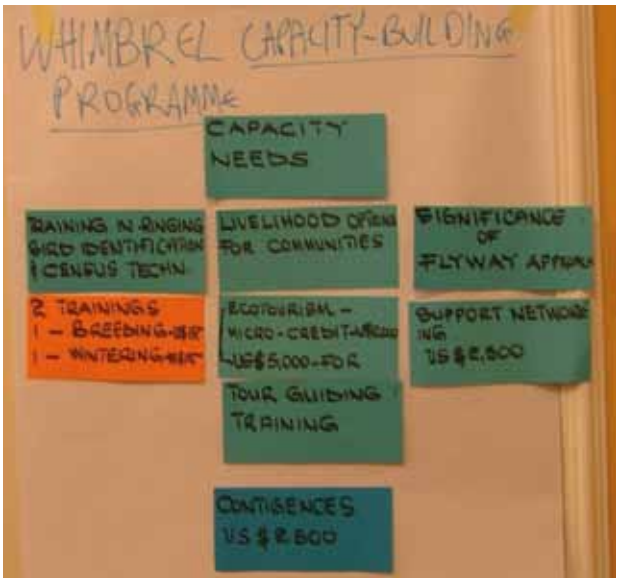
Materials

Lecture room, colour cards, flip-chart paper, marker pens, blue-tac, wall or large board for sticking cards.

Timing

The exercise should take about 1 hour:

a.	Introduction to role play, questions, form groups	5 minutes
b.	Group work: developing a capacity-building strategy	35 minutes
c.	Groups each present their strategies	20 minutes.



Figures: Capacity-building and networking posters produced at the workshop in Amman, Jordan, June 2008 (photos: Tim Dodman).