

Concept

The Future of the Wadden Sea Flyway Initiative

Assessment of the Plan of Action and
preliminary prioritization of activities

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Summary

1. Priority activities

Five main objectives and areas of Activity were identified in the *Wadden Sea Flyway Initiative Plan of Action 2014-2020*, as follows:

1. Strengthen cooperation, coordination and communication along the East Atlantic Flyway;
2. Establish an integrated flyway monitoring programme for the East Atlantic Flyway;
3. Strengthen capacity along the East Atlantic Flyway in conservation, management of migratory waterbirds and their critical sites;
4. Promote conservation and wise use management of coastal resources and migratory waterbirds of the East Atlantic Flyway;
5. Build awareness of the East Atlantic Flyway, and of the value and connections of migratory waterbirds.

The 38 Activities originally proposed under these headings have been retained, although it is suggested that some be merged, and several additional activities have been proposed and others re-drafted. The geographic scope of each activity, its status (whether an existing activity that needs to continue, or a newly proposed activity) and a preliminary list of the organizations that need to be involved in each activity have been included in a table. The sites, species, countries, Multilateral Environmental Agreements and organizations involved are tabulated in various combinations in five Annexes.

2. Geographic regions

The western coast of Africa is the region of the East Atlantic Flyway where most activity took place in 2012-2014, and this is set to continue. The Arctic is a key region of the Flyway where little was done under WSFI in these first two years. This has to change in future, and coordination of existing activities, and establishment of monitoring and capacity development, especially in Russia, are key elements of this Concept. Western Europe is the centre of activities, both geographically, and in the sense of being the region where most technical and scientific coordination currently takes place. The monitoring, research, species and site conservation and management activities which WSFI seeks to enhance in Africa and the Arctic are all in relatively good shape in Western Europe.

3. Lessons learned by WSFI 2012-2014 and future requirements

The two main strands of work in 2012-2014 were in the areas of Monitoring and Capacity Building. The monitoring project followed a focused programme based on enhancement of the existing IWC and IBA programmes, and a series of outputs will provide a basis for future work. The Capacity Building activities between 2012 and 2014 were also successful, with a number of workshops and training courses, but the shortage of existing programmes means that more attention needs to be given to planning a structured, strategic, continuing programme of training and other capacity development. This is needed to support the monitoring work (technical training in fieldwork, analysis and interpretation methods), and also in the fields of advocacy (for decision makers) and site and species management. The final and most important requirement is for these activities to feed into successful site, habitat and species conservation and management, resulting in a resilient site network indicated by stable waterbird population trends. Projects will need to be well-structured,

and embedded in the activities of a number of organizations, to maximize continuity in changing political and economic circumstances with a high turnover of governmental officers and experts.

4. Future Strategy

This Concept for the future of WSFI follows the five objectives identified in February 2014. These were based on the two existing themes of Monitoring (objective 2) and Capacity Building (objective 3), with, in addition, recognition of a need to promote the conservation of coastal resources (objective 4), and over-arching themes of coordination (objective 1) and communication (objective 5). Objectives 2 (monitoring) and 3 (capacity building) became well established in 2012-2014 and future needs for these objectives are clear. Objective 4 (conservation of coastal resources) is less well established under WSFI and most of the required activities are new or poorly developed, requiring more planning and coordination. Objectives 1 and 5 require an increase in strategic cooperation, communication and awareness-raising activities.

The recommended additional actions concern, under objective 1, the need for a fund-raising strategy and the need for all governments along the EAF to become Contracting Parties to AEWA, and under objective 4, the need to enhance identification, measurement and monitoring of threats to habitat and species conservation throughout the flyway, and the need to use sustainable livelihood approaches in selected communities to address specific issues of unsustainable natural resource management. The Recommendations at the end prioritize the most important activities, according to urgency, whether they provide essential baseline data and information, whether they comprise obvious first steps in a process, or whether they appear relatively easy to fund.

1. Introduction

This report summarizes the development of WSFI, takes stock of the situation in 2014, and proposes steps that should be taken to ensure a coherent, strategic framework for its future development.

1.1 The flyway approach and the East Atlantic Flyway

The Biogeographic Flyway concept was first proposed for Anatidae in Western Eurasia in the 1960s (Isakov 1967). The East Atlantic Flyway (EAF) has been used as a basis of research and conservation for migratory waterbirds and their wetland sites since the 1980s (e.g. Smit & Piersma 1989, Scott & Rose 1996, Delany *et al.* 2009). The approach became a cornerstone of international conservation policy with the establishment of the African-Eurasian Migratory Waterbird Agreement (AEWA), an Agreement under the Convention on Migratory Species (CMS), in 1998 (AEWA 1998; Boere 2010). In 2004, a major international conference, *Waterbirds around the World*, in the first instance funded by the Dutch and UK governments, and involving 456 participants from 90 countries, resulted in The Edinburgh Declaration (Boere *et al.* 2007):

<http://www.wetlands.org/Portals/0/publications/Position%20Statement/Edinburgh%20declaration.pdf>.

This document, produced during the biggest and most influential meeting of waterbird scientists and conservationists in history, highlights the threats facing many of the world's waterbirds, identifies

many of the causes, and sets an agenda for urgent and collaborative national and international action for waterbirds and their flyways. The growing recognition of the flyway approach (Boere and Stroud 2007) for waterbird and wetland conservation was further exemplified by Resolution 9.2 of the Convention on Migratory Species (CMS Secretariat 2008), outlining (*inter alia*) the conservation activities needed in global flyways and establishing a Working Group on Global Flyways. Ramsar resolution X.22, 'Promoting international cooperation for the conservation of waterbird flyways' (Ramsar Secretariat 2009) followed, and endorsement of the flyway approach under the UNESCO World Heritage Convention came soon after.

1.2 The World Heritage Convention and the development of WSFI

With the inscription of the Dutch-German Wadden Sea as a World Heritage Site in 2009 (and the addition of the Danish portion of the Wadden Sea in June 2014), the UNESCO World Heritage Convention (WHC) embraced the importance of the flyway approach. The activities of the governments of Germany and The Netherlands under this Convention already provide a strong impetus for maintaining and enhancing the conservation of migratory birds and their habitats along the EAF. Many of these activities have taken place under the Wadden Sea Flyway Initiative (WSFI) coordinated by the Common Wadden Sea Secretariat (CWSS) based in Wilhelmshaven, Germany.

WSFI is funded by the German Ministry of the Environment, Nature Conservation, Building and Nuclear Safety (BMU), and the Dutch Ministry of Economic Affairs (EZ) through the programme Rich Wadden Sea (PRW). The commitment of these ministries is a recognition of their responsibilities following inscription of the Dutch and German Wadden Sea as a World Heritage Site, and similar commitment can be expected from the government of Denmark in the coming years. These commitments complement and amplify existing commitments under other conventions such as AEWA, the Convention on Migratory Species, and the Ramsar Convention on Wetlands.

The formal request of the WHC to The Netherlands and Germany 'to strengthen activities in the fields of cooperation, research and management along the African-Eurasian Flyway' has been the main guiding statement for activities to date. Other natural World Heritage Sites vital for migratory waterbirds along the East Atlantic Flyway include the Banc d'Arguin (Mauritania), Djoudj (Senegal), and Coto Doñana (Spain), whilst some cultural World Heritage Sites are also important for migratory birds, e.g. Saloum (Senegal). The process of designating another vital site for East Atlantic Flyway waterbirds, the Bijagos Archipelago (Guinea-Bissau) was deferred in 2013, and there is an urgent need to renew the proposal for this site. Further extension of WHC sites within the flyway should be considered although no possible candidates are under consideration at present.

1.3 Vision and Objectives of WSFI

WSFI Project partners and their networks drafted an ambitious Vision Statement for WSFI, which was presented to the inter-governmental Wadden Sea meeting in Tønder, Denmark, in 2014 as follows:

“Migratory birds find lasting refuge along the East Atlantic Flyway from northern breeding areas to their key Wadden Sea stopover and to the African coastline, and inspire and connect people for future generations”.

It was proposed to address this vision by following five WSFI objectives, taking account of the key flyway issues, various workshop recommendations and the results of initial projects:

1. Strengthen cooperation, coordination and communication along the East Atlantic Flyway;
2. Establish an integrated flyway monitoring programme for the sustainable long-term monitoring of migratory waterbirds and critical sites;
3. Strengthen capacity along the East Atlantic Flyway in conservation, management and monitoring of migratory waterbirds and their critical sites;
4. Promote conservation and wise use management of coastal resources and migratory waterbirds of the East Atlantic Flyway;
5. Build awareness of the East Atlantic Flyway, and the value and connections of migratory waterbirds.

1.4 The role of different organizations (and the importance of cooperation and partnership)

1.4.1 The importance and difficulties of cooperation and partnership

Cooperation of organizations at international, national and site level, and between the different levels, is essential for successful flyway conservation. The scores of organizations (at all levels) with an interest in conservation of the EAF each have their own opinions and expectations, and there is a need to build on these in a strategic and transparent manner. Pannell *et al.* (2013) pointed out that this raises (at least) three questions:

- how to construct focused priorities from the multitude of opinions that come up in meetings and in documents prepared by widely differing interests?
- How to come to sound proposals?
- How to manoeuvre strategically among a multitude of interest groups?

Pannell *et al.* describe a tool called INFFER (Investment Framework for Environmental Resources) which was created to help investors of public funds to improve the delivery of outcomes from environmental programmes. This is an approach that could help prioritize activities and optimize investment in WSFI, but adoption of such a tool after two years of implementation would require a major shift in approach which is considered beyond the scope of this report.

These questions will therefore be best answered by addressing the objectives of WSFI, while giving consideration to the differing needs and geographic realities in different parts of the flyway, as well as ongoing programmes, and assessing them in terms of their urgency, importance, cost-effectiveness, feasibility and sustainability.

Preliminary lists of organizations which will contribute to, and benefit from, projects under the WSFI are provided in Annex 1, Table 1 (International organizations) and Annex 1, Table 2 (National Organizations).

The Partners of WSFI in 2014 included the following international and national organizations: [AEWA](#), [Birdlife International](#), [Wetlands International](#), [Ramsar Convention](#), [Mava Foundation](#), [Vogelbescherming](#), [National Park Wadden Sea Niedersachsen](#), [National Park Wadden Sea Schleswig-Holstein](#), [National Park Wadden Sea Denmark](#), [WWF](#), [Waddenvereniging](#), [Schutzstation Wattenmeer](#), [Verein Jordsand](#), [NLWKN-Staatliche Vogelwarte](#), [NABU-Bundesverband](#), [Dansk Ornitologisk Forening](#), [Deutsche Ornithologen-Gesellschaft](#), [Ornithologische Arbeitsgemeinschaft Schleswig-Holstein](#), [Dachverband Deutscher Avifaunisten](#)

1.4.2 The importance of AEWA

The objectives of WSFI and AEWA are very closely aligned. AEWA can provide a useful diplomatic and political framework at inter-governmental level within which WSFI can work, and WSFI can assist AEWA in delivering many of its objectives. The AEWA Action Plan:

http://www.unep-aewa.org/sites/default/files/basic_page_documents/strategic_plan_2009-2017.pdf

which is legally binding in countries that have joined the Agreement, describes the core activities that should be carried out under the Agreement. Table 1 of the Action Plan summarizes the conservation status of all waterbird species in the Agreement area, and species appearing in Column A of this Table are candidates for Single Species Action Plans. A number of information documents, including the 13 issues of the Conservation Guidelines series, e.g. <http://www.unep-aewa.org/en/publication/aewa-conservation-guidelines-no-1-guidelines-preparation-national-single-species-action>

provide guidance to Contracting Parties in dealing with particular issues affecting waterbirds and their habitats in the Agreement area, and will also be useful sources to use in the implementation of WSFI.

The AEWA African Initiative, which is guided by the *AEWA Plan of Action for Africa 2012-2017*, [http://www.unep-](http://www.unep-aewa.org/sites/default/files/basic_page_documents/aewa_poa_for_africa_final.pdf)

[aewa.org/sites/default/files/basic_page_documents/aewa_poa_for_africa_final.pdf](http://www.unep-aewa.org/sites/default/files/basic_page_documents/aewa_poa_for_africa_final.pdf)

provides a framework for action for many of the WSFI activities in Africa. With its emphasis on capacity development and monitoring, this initiative shares a number of proposed activities common to WSFI. Close cooperation with AEWA in planning and implementing future activities will be essential.

1.4.3 The Wings Over Wetlands Project 2006-2010

The Wings over Wetlands (WOW) Project <http://www.wingsoverwetlands.org/> implemented between 2006 and 2010, was a partnership between AEWA, Wetlands International, BirdLife International and the Ramsar Convention on Wetlands, funded by the UNEP Global Environment Facility (GEF) with considerable co-funding from a number of sources, including, at a high level, the

German government. The project was the world's first multi-million euro flyway scale project aimed at conserving species, sites and habitats along one of the world's major flyway regions, and much of the work of WSFI effectively follows up on the achievements of this project.

The main visible outputs of the WOW project were an internet portal, the Critical Site Network tool: <http://wow.wetlands.org/INFORMATIONFLYWAY/CRITICALSITESNETWORKTOOL/tabid/1349/language/en-US/Default.aspx>

and a comprehensive tool for capacity building, the Flyway Training Kit:

<http://wow.wetlands.org/CAPACITYBUILDING/TRAININGAWARENESSRAISING/WOWTrainingResources/tabid/1688/language/en-US/Default.aspx>

A third activity of the project comprised demonstration projects at important wetland sites in 11 countries throughout the AEWA Region. Another success of the WOW Project was in making the flyway approach much more clear and visible to the governments and practitioners involved in the African-Eurasian flyways.

2. WSFI in 2012 - 2014

Activities under WSFI between 2012 and 2014, which were funded by the German and Dutch Governments, concentrated on capacity development in Africa and waterbird and wetland monitoring along the East Atlantic Flyway, but concentrating on West Africa.

2.1 WSFI activities and documents 2012-2014

The over-arching goal of cooperation, coordination and communication along the East Atlantic Flyway was addressed in these two areas of capacity building and monitoring. The capacity building activities followed two main themes: developing capacity for policy and management, and building capacity for monitoring.

The capacity building and monitoring projects established between 2012 and 2014 were implemented in close cooperation with the BirdLife International / Wetlands International *Conservation of Migratory Birds* (CMB) Project in West Africa, conducted in partnership with Vogelbescherming Nederland and others, with funding from the MAVA Foundation:

<http://www.birdlife.org/africa/projects/conservation-migratory-birds-cmb>

This project engaged both governmental and non-governmental organizations with the aim of strengthening networks for the conservation of migratory birds and their habitats along the west coast of Africa in the six countries between Mauritania and Sierra Leone, plus the Cape Verde Islands.

2.1.1 Capacity building

Training courses and workshops were held as follows:

- WSFI and BirdLife CMB project inception meeting in Freetown, Sierra Leone, 6-7 February 2012;
- Dakar, Senegal: Linking Methods and People for monitoring, 19-21 June 2012;

- Diawling, Mauritania: Regional Monitoring Training Course, 4-6 December 2012;
- Bubaque, Guinea-Bissau: Training Course, 12-19 January 2013;
- Kent, Sierra Leone: Conservation of waterbirds and wetlands in the coastal zone, 22-26 January 2013;
- Parc National des Oiseaux du Djoudj – Sénégal: Regional training workshop on the Management and Conservation of Key Sites along the Western Coast of Africa for Migratory Birds, 14–18 December 2013;
- Tissana, Sierra Leone: Community waterbird training workshop, 9-11 January 2014;
- Luanda, Angola: Training of Trainers (ToT) workshop on the flyway approach, 27-31 January 2014.

The main training tools used were the Wings Over Wetlands (WOW) Flyways Training Kit (Dodman & Boere, 2010) and the toolkit on identifying and counting waterbirds in Africa produced by Office National de la Chasse et de la Faune Sauvage (ONCFS) (Hecker, 2102).

The development of a regional photographic guide to waterbirds of the East Atlantic Flyway in Africa, is scheduled for completion in 2015. A regional guiding document for the management of sites for migratory waterbirds is also planned as an output to the Djoudj regional workshop.

2.1.2 Monitoring

A framework and plan for integrated monitoring of coastal waterbird populations along the EAF was prepared and published in 2013 (van Roomen *et al.* 2013a). The plan is strongly based on the existing International Waterbird Census (IWC) and Important Bird Area (IBA) Monitoring programmes coordinated by Wetlands International and BirdLife International respectively, but with the addition of a new future component monitoring vital rates (reproduction and survival) of selected species to help identify the drivers of population trends. The strategy uses annual counts in January at a selection of sites as a basis for population trend estimates, supplemented by counts every six years at as many sites as possible to strengthen estimates of numbers.

This framework was complemented by simultaneous preparation, with the close cooperation of the CMB Project, of a waterbird monitoring strategy for the West African coastal zone from Mauritania to Sierra Leone, which includes many key sites for non-breeding Wadden Sea waterbird populations (van Roomen *et al.* 2013b). There is potential to extend this approach further south along the flyway.

A simultaneous, near-comprehensive total count of all key sites, organized by the local partners in West Africa and further south along the African coast, was carried out in January 2014 and results are expected to be published before the end of 2014. Such simultaneous counts, which act as an extension of normal activities under IWC, provide a more comprehensive ‘snapshot’ of waterbird populations than can be achieved by the routine, annual monitoring and it is proposed that the next total count should be coordinated in January 2016, and that they will be conducted every six years thereafter.

Monitoring on the East Atlantic Flyway was also strengthened by making improvements to the IWC database. Historical data from 'grey literature' were added to the database, and the GIS capabilities of the application were improved.

2.2 Developments in the Arctic

Projects under WSFI did not fully include the Arctic region in 2012-2014. There are well-developed research and monitoring programmes led by Denmark, Norway, Sweden and Finland in Greenland and the Nordic countries, but waterbird and wetland research and conservation activities in the Russian Arctic, and certainly those in cooperation with formerly active countries such as The Netherlands, Germany and some of the Scandinavian countries, have decreased since 2007 (Boere 2014). Coordination and enhancement of research, monitoring and management in the Arctic are essential and are proposed as a major development in the new phase of WSFI. All three Wadden Sea countries have a tradition of research in the Arctic, and Denmark is a member, and Germany and The Netherlands sit as observers on the Arctic Council and its working groups such as CAFF and AMAP. There is now a need to carefully consider the potential role of WSFI within the strategies of these bodies.

2.3 Documents discussed at 12th Trilateral Governmental Conference on the Protection of the Wadden Sea, Tønder, February 2014

2.3.1 Flyway Vision

The Vision was approved by the Conference:

“Migratory birds find lasting refuge along the East Atlantic Flyway from northern breeding areas to their key Wadden Sea stopover and to the African coastline, and inspire and connect people for future generations”.

2.3.2 Plan of Action

The Plan of Action was adopted by the conference along with the Flyway Vision. The Plan includes results of workshops conducted between 2011 and 2013, some in cooperation with the BirdLife International/Wetlands International CMB project, and makes use of the results of WSFI Project activities up until the end of 2013. The Plan of Action is designed to serve as a framework for implementing the WSFI Vision, through a set of five-year priority objectives and 38 supporting actions. These Actions are all important elements of a strategy for the future of WSFI and all have been included in some form in Section 3: *The future shape of WSFI from 2015*.

Suggested additions to the Plan of Action

2.3.2.1 Assessment of threats

One area of the Plan of Action that would benefit from greater attention is identifying and responding to environmental threats to habitats, sites and species. Responding to threats is a major element of Objective 4 and is included in the goals of three Actions in the Plan of Action (using amended Action numbers as presented in Table 1), as follows:

- 2.4 Integrate monitoring of waterbird abundance with monitoring of environmental factors, threats and conservation actions;
- 4.5 Strengthen partnerships for building flyway conservation into sectoral management policies and plans (e.g. agriculture, hunting, mining), and
- 4.7 Support procedures for impact assessments, climate change research and pollution preparedness, especially in West Africa.

There is a need to ensure that threats to waterbirds, their sites and habitats along the EAF are better understood. The principal means of achieving this is the IBA monitoring programme of BirdLife International, but the uptake and implementation of this programme has been far from universal. Action 2.4 (monitoring of threats) is essential, but it may be necessary first to establish better baseline information about which threats are acting on which sites, species and habitats throughout the flyway. There is a danger that activities 4.5 and 4.7 might be carried out in an ad hoc and reactive way, but having readily available data and information about threats would allow more strategic and pro-active approaches to dealing with threats to species, sites and habitats. Good cooperation with

the MEAs, particularly AEWA and Ramsar, will be an essential part of identifying and resolving issues impacting sites and species.

2.3.2.2 Sustainable site management and livelihood support

One area that should be given greater prominence concerns the support of the livelihoods of communities living on the flyway, especially in Africa where the question of survival often comes before research, conservation and management of wetlands and waterbirds, and where links between the two are often not well understood. Items 3.4 (site-based training for communities) and 4.5 (sustainable tourism initiatives) of the Plan of Action have implications for livelihood support, but stronger measures to provide communities with a sense of ownership of flyway conservation activities may be advisable. Such activities might, for example, include the provision of alternative methods for practices such as fish-drying, which can require extensive mangrove clearance, and alternative livelihoods for those whose work requires unacceptable damage to environmental resources. Payment for community members who participate in monitoring activities should also be considered, because the European concept of voluntary observers providing data as a part of their hobby is usually not applicable in Africa (with the notable exception of South Africa), and sustainable methods of obtaining data on a regular basis are needed.

2.3.3 Memorandum of Understanding between National Park Banc d'Arguin and the Wadden Sea

This MoU was signed by the Director of the National Park Banc d'Arguin (PNBA) and the Secretary General of the CWSS. The MoU is open for signing by other authorities managing WHC properties along the EAF. Among other things, the signatories agree:

- to cooperate on monitoring and management of shared migratory waterbird species,
- to promote and support cooperation between State Parties to the WHC and other organizations,
- to share knowledge and experience on the conservation, management and sustainable use of the sites,
- to support research into inter-tidal areas, and,
- to enhance communication and awareness.

An important future activity will be the organization of exchange visits to transfer scientific, management and advocacy know-how between site managers.

When the managers of other WHC Properties sign this MoU in future, it can become an important vehicle for cooperation on conservation and management along the flyway. The possibility of including additional protected areas along the flyway, especially in southern Africa and the Arctic, should also be considered.

2.3.4 Ministerial Council Declaration

Representatives of 23 stakeholders in WSFI signed a declaration confirming their intention:

- to support and contribute to the implementation of the Flyway Vision,
- to cooperate with partners along the EAF to further strengthen and enhance the flyway network,

- to cooperate in implementing the Plan of Action and to seek additional funding for its implementation.

2.4 Documents produced post-Tønder in 2014

2.4.1 Analysis of pressures, drivers and bottlenecks on migratory bird populations along the EAF

A report in preparation by VBN and RSPB, the BirdLife Partners in The Netherlands and the UK, presents results of an analysis of pressures, drivers and bottlenecks acting on selected waterbird species at different points of their journey through the flyway. The very detailed and comprehensive analysis summarizes the threats acting on shorebirds in four regions of the flyway: Arctic and Northern Europe, Western Europe, Southern Europe and Northern Africa, and Coastal Western Africa. It uses 12 threat categories, divided into over 40 sub-categories, acting on xx species of shorebird. A score has been given to the impact of each threat acting on each shorebird species in each region, and priority actions to mitigate each threat in each region are listed. When published, this report will inform and facilitate a number of the planned actions under objective 4 of the *Wadden Sea Flyway Initiative Plan of Action 2014-2020* and it is essential that the results and conclusions are used for this.

2.4.2 Wadden Sea Countries and Arctic Cooperation

A recently drafted report (Boere, 2014) provides a comprehensive summary of the current state of waterbird research and conservation in the European Arctic, and its conclusions and recommendations provide a strong basis for future activities in the region.

2.4.3 Conclusion: The state of WSFI in 2014

A lot has been achieved in two years and WSFI has built effectively on previous programmes and activities. There are plenty of documents and ideas, and the list of Actions, while forming an excellent basis, requires more context and better prioritization to produce a coherent, harmonized set of priorities for future action by WSFI. The future strategy needs to address the fact that objective 2 of the *Wadden Sea Flyway Initiative Plan of Action 2014-2020* is the best developed, objective 3 has started well, but needs intensive planning and preparation, and objective 4 is further behind still. The strategy should ensure that all three objectives reach the same level over the five years, and effective implementation of objectives 1 and 5 should facilitate this.

2.4.4 Lessons learned 2012-2014

2.4.4.1 Monitoring

The existence of the long-established IWC programme and the more recently established IBA Programme provide a strong basis for waterbird and wetland monitoring on the EAF, and allowed a

quick and efficient start to the WSFI monitoring project. These programmes are, however, becoming increasingly difficult to fund, and they should not be taken for granted. There is a strong need to ensure that resources for these programmes are secured, and to assess possibilities for their strengthening, enhancement and modernization. The IWC Programme has established a solid baseline of data at most sites along the EAF, and continuing and enhancing activities under the programme have been shown in 2012-2014 to provide useful and important data and information. There is, however, considerable scope for improving the fitness for purpose of this programme, and the recommendations of Pritchard (2009) provide a way forward for this, and should be followed up.

The IBA monitoring programme has not reached the same level as the IWC, and the low levels of uptake and use of the methodology give cause for concern. There is a need for review and assessment of this programme, and an exercise similar to that undertaken by Pritchard (2009) for the IWC would be valuable. IBA monitoring is the only currently available means of monitoring threats to habitats, sites and species in the EAF, and this is an area where more robust and pro-active endeavours would probably have a very positive influence on their conservation.

Van Roomen *et al.* (2013a) outlined plans to establish a new programme for monitoring of vital rates of selected waterbird species, starting with engagement of a consortium of researchers at research institutes and NGOs throughout the flyway. This will form a part of the coordination of existing monitoring in the Arctic such as the Arctic Breeding Bird Conditions Survey <http://www.arcticbirds.net/>, and the establishment of a new Arctic breeding bird monitoring programme, stimulated by CAFF. This will be a considerable challenge, especially in Russia.

The need to address threats to wetland and waterbird conservation at different scales has already been mentioned, but before threats can be addressed, they need to be identified and evaluated. Van Roomen *et al.* (in prep. 2014) were able to report extensively on waterbird numbers in West Africa and provided a strong baseline against which future surveys can be measured, but the data on threats from IBA monitoring were not comparably robust, and strong efforts are needed to enhance the implementation of the IBA monitoring programme.

As monitoring of species and sites improves throughout the EAF, there will be a need to ensure that the results feed into much improved species and site management and become available for e.g. AEWA Single Species Action Plans.

2.4.4.2 Capacity building

The WSFI Capacity building programme also achieved a lot in the first two years, but the need for more intensive, strategic, and continuing (not one-off) training in Africa is clear. Training of Trainers is a well-proven means of multiplying the impact of training, but it is important to ensure that the most appropriate candidates are selected for training, that their subsequent activities are monitored, and that any difficulties are followed up.

Training in Africa is mainly required in four areas:

- Training in site and species management

- Technical training for monitoring and research;
- Training of decision makers about MEA processes, and including flyway conservation in national level policies;
- Community-based training to build local capacity for natural resource use and improving well-being; this can include training for alternative livelihoods to mitigate damaging activities (e.g. mangrove clearance)

There is a strong need for such training, and the countries, organizations and institutions to include in training require careful consideration and planning. A strategic capacity development plan, with training at its core, is required for the coming years. The NGO sector is poorly developed in most African countries, and institution building and strengthening, as carried out by BirdLife International with its partner organizations in each country, will also be important.

The addition to WSFI of activities in the Arctic in the coming years will necessitate the inception of a training strategy and new activities in that region, especially in Russia.

3. The future shape of WSFI from 2015

3.1 Aim of the Concept:

Intensification of management, research and conservation of species and critical sites along the EAF through cooperation in management and research throughout the flyway, prioritizing and implementing future flyway projects in line with WSFI partner objectives.

3.2 Proposed Actions to include in future development of WSFI

Table 1 lists the five main objectives of WSFI, and, with some modifications, the 38 Actions identified as being necessary to fulfil these objectives, as presented in Tønder in February 2014. This table includes all the information in the table presented at that meeting in the *Wadden Sea Flyway Initiative Plan of Action 2014-2020*, with the inclusion of four additional actions, and additional information relating to each action.

Table 1. Actions to include in future implementation of WSFI

Most of the points are taken from Annex 2 of the Declaration of Intent on the Flyway Vision of WSFI, signed in Tønder, Denmark in February 2014, and titled *Wadden Sea Flyway Initiative Plan of Action 2014-2020*.

The Actions are listed under the five WSFI objectives, which are highlighted with pale blue shading. The 38 existing Actions appear in blue, and normal black type has been used for additional information on geographic scope, status, and the most important organizations involved with each Action. Additional suggested Actions are included in red, which has also been used for re-drafted text. Note that the 'Priority' assessments adopted in Tønder seem rather arbitrary.

Action	Timing	Cost	Priority	Geographic scope	Status	Most important organizations involved (lead in bold)	Remarks
1 Strengthen cooperation, coordination and communication along the East Atlantic Flyway							
1.1 Develop a fund-raising strategy for WSFI	2014	Low	High	All flyway	new	Donors including other (European) governments on the EAF, governmental and Non-governmental agencies and foundations in the fields of international development, rural development, poverty alleviation, civil society development, climate change, marine and coastal zone management	Provision of co-funding from the 3 WSFI governments will allow strong proposals
1.2 Conduct a cost benefit analysis and risk assessment of using an interactive web portal based on the CSN Tool to facilitate WSFI Activities	2014	Low	High	All flyway	new	Former WOW partnership,	See 3.2.4
1.3 Develop and review a framework of cooperation for implementing the WSFI vision and Plan of Action	2014	low	high	All flyway	New	WSFI	This document
1.4 Establish working partnership with AEWA, especially the AEWA African Initiative, for implementing the AEWA Plan of Action for Africa	2014-2015	low	medium	All flyway, especially Africa	New	WSFI , AEWA	
1.5 Strengthen communication and links between East Atlantic Flyway World Heritage Sites	2014-2020	low	medium	All flyway	Started	WSFI , WHC, AMBI, WHC Parties and site managers	Increase scope of CWSS/PNBA MoU. Support and follow up current AMBI Project for Bijagos

Action	Timing	Cost	Priority	Geographic scope	Status	Most important organizations involved (lead in bold)	Remarks
1.6 Establish working partnerships for implementation of the Plan of Action, especially BirdLife International and Wetlands International in 'post-CMB scenario'	2014-2015	low	high	All Flyway, especially Africa	New	WSFI, BirdLife (VBN) , WI	
1.7 Establish and maintain close cooperation with relevant MEAs, notably AEWA, CMS, Ramsar, CAFF and the Abidjan Convention. Cooperation with the Arctic Council should continue through the membership status of DK and observer status of DE and NL.	2014-2020	low	medium	All Flyway	New	WSFI , WHC, AEWA, CMS, Ramsar, CAFF, Abidjan, OSPAR?	See Annex
1.8 Strengthen links with Wadden Sea partners for collaborative flyway research and monitoring	2014-2020	low	medium	All flyway	Started	Wadden Sea & Ornithological NGOs, Research Institutes and Universities	
1.9 Ensure professional guidance through WSFI Steering Group and Advisory Board Widen the expertise of the WSFI Steering Group, consider holding more frequent meetings and disbanding the Advisory Board	2014-2020	low	high	All flyway	Started	WSFI	See 3.2.3
1.10 Encourage governments of all countries along the EAF to become Contracting parties to AEWA and to engage with its processes.	2014-2020	Low	medium	Russia, Canada and Africa	Started	AEWA , WSFI	Important 'background' activity e.g. at advocacy workshops
2 Establish an integrated flyway monitoring programme for the East Atlantic Flyway							
2.1 Strengthen and support international and national waterbird and site monitoring coordination structures	2014-2020	medium	high	All flyway	Started	WI & BirdLife networks , SOVON, new Arctic partners	Exceptional value for money (15,000 volunteers)
2.2 Strengthen and increase capacity for monitoring, especially in coastal Western Africa and the Arctic	2014-2020	high	high	Especially Africa and the Arctic	Started	WI & BirdLife networks , SOVON, new Arctic partners, METAWAD, Research Institutes and Universities	Distribute new photographic guide to users (2015)
2.3 Carry out annual waterbird counts at an expanding network of selected sites along the East Atlantic Flyway, including expanding efforts in Western Africa and counts in other months than January	2014 - 2020	medium	high	All flyway	Started	WI & BirdLife networks , SOVON, new Arctic partners	[Suggest merging these three]
2.4 Integrate monitoring of waterbird abundance with monitoring of environmental factors, threats and conservation actions	2014 - 2020	medium	high	All flyway	Started	WI & BirdLife networks , SOVON, new Arctic partners	IBA monitoring needs strong encouragement and training
2.5 Carry out a repeated total waterbird count (all key	Jan.	high	high	All flyway	New	WI & BirdLife networks, SOVON, WIWO,	

Action	Timing	Cost	Priority	Geographic scope	Status	Most important organizations involved (lead in bold)	Remarks
sites) of the East Atlantic Flyway in January 2016	2016					new Arctic partners	
2.6 Initiate and conduct monitoring of vital rates of coastal waterbirds in the East Atlantic Flyway, start consortium and some pilot projects	2014 – 2020	medium	medium	All flyway	New	WI & BirdLife networks, SOVON, new Arctic partners, METAWAD, Research Institutes and Universities	Need to build trust and engagement of new network, and ensure they benefit. Possible data ownership issues
2.7 Ensure timely integration of data into IWC and IBA databases and support their further development and utilisation	2014 - 2020	low	medium	All flyway	Started	WI & BirdLife networks, SOVON, new Arctic partners	Databases have suffered years of under-investment
2.8 Carry out and publish an East Atlantic flyway quality assessment	2019	medium	high	All flyway	New	TMAP, CWSS, SOVON? WI? BirdLife?	
2.9 Integration of monitoring results in QSR Wadden Sea and arrange availability of flyway trends	2014–2020	low	high	All flyway	Started	TMAP, CWSS	
2.10 Strengthen and support monitoring of migratory waterbirds in Arctic breeding grounds (support the Arctic Breeding Bird Survey) Begin monitoring in the Arctic by supporting the Arctic Breeding Birds Condition Survey and identifying methodology and partners for an Arctic Breeding Birds Survey.	2016	medium	high	The Arctic	New	New Arctic partners, ABBCS, Wader Study Group, CAFF,	Need to build trust and engagement of new network, and ensure they benefit.
2.11 Contribute to knowledge about migration and connectivity between sites along the East Atlantic Flyway	2014 - 2020	medium	medium	All flyway	New	Bird ringing centres, ornithological NGOs, Research institutes and Universities	Strong public interest in migration. Excellent CEPA vehicle, with implications for fund-raising
3 Strengthen capacity along the East Atlantic Flyway in conservation, management of migratory waterbirds and their critical sites							
3.1 Plan the implementation of an integrated capacity building programme for the East Atlantic Flyway, especially in Africa and Russia	2014-2015	medium	high	Africa and Russia	New	WSFI, Training consultants, BirdLife	Training of Trainers with monitoring of results and any necessary follow-up
3.2 Strengthen the network of site managers along the East Atlantic Flyway through regional training and support, especially in site management	2014, Project	medium	medium	All flyway	New	WHC, AEWA, Governmental and NGO Site managers,	
3.3 Support the further development of NGOs through advocacy training in cooperation with BirdLife	2016 - 2019	high	high	Africa	Started	BirdLife, Training consultants	

Action	Timing	Cost	Prio rity	Geographi c scope	Status	Most important organizations involved (lead in bold)	Remarks
3.4 Support site-based training for integrating communities into site management and monitoring (citizen support)	2016 - 2020	high	med ium	Africa; possibly Russia	Started	BirdLife, WI, Training consultants,	
3.5 Ensure use of existing training tools, especially the Flyway Training Kit and the ONCFS Tool Kit	2014-2020	low	med ium	Africa	Started	BirdLife, WI, ONCFS, Training consultants	FTK covers all aspects in detail. ONCFS Kit for bird identification and counting
4 Promote conservation and wise use management of coastal resources and migratory waterbirds of the East Atlantic Flyway							
4.1 Enhance efforts to identify, measure and monitor threats, through sectoral reviews, site and regional assessments, as appropriate	2014-2020	med ium	High	All flyway	New	AEWA, Ramsar, BirdLife, Environmental Consultancy	Baseline information on many threats remains sparse. VBN/RSPB report will be an important source
4.2 Develop management plans for selected wetlands of the East Atlantic Flyway and support their implementation	2014 - 2020	med ium	high	All flyway	Started	WHC, AEWA, Governmental and NGO Site managers	
4.3 Establish and implement practical twinning mechanisms for site exchange and management, especially between the Wadden Sea, Banc d'Arguin and Bijagos	2014 - 2020	med ium	high	All flyway	Started	WSFI, WHC, AEWA Governmental and NGO Site managers	
4.4 Support and promote important waterbird sites in Arctic, Russia, West and Southern Africa in becoming marine World Heritage sites. Support the establishment of Protected Areas under all available international and national mechanisms.	2014 - 2020	low	high	Africa and Russia	New	WSFI, WHC, national protected area agencies	See Appendix (potential WHC sites)
4.5 Strengthen partnerships for building flyway conservation into sectoral management policies and plans (e.g. agriculture, hunting, mining)	2014 - 2020	med ium	med ium	All flyway	New	AEWA, Ramsar, national government agencies, leaders in industry and commerce	
4.6 Develop sustainable tourism initiatives focused on migratory birds /coastal wetlands along the East Atlantic Flyway	2014 - 2017	med ium	med ium	All flyway	New	AEWA, International Ecotourism Society (TIES), Governmental and NGO Site managers, Tourism operators near Protected Areas	Strong link to CEPA
4.7 Support procedures for impact assessments, climate change research and pollution preparedness, especially in West Africa	2014 - 2020	med ium	med ium	Africa (and Russia?)	New	AEWA, Abidjan Convention, Universities and research institutes	Consider resilience of site networks under future climate change scenarios
4.8 Support and implement migratory waterbird Species Action Plans	2014 - 2020	high	med ium	All flyway	Started	AEWA, National government agencies	AEWA AP Table 1 Column A species (See Annex)

Action	Timing	Cost	Prio rity	Geographi c scope	Status	Most important organizations involved (lead in bold)	Remarks
4.9 Adopt sustainable livelihood approaches in selected communities to address specific issues of unsustainable natural resource management	2014-2020	high	high	Africa (and Russia?)	started	WSFI, AMBI, RAMPAO, PRCM, UNEP-WCMC, MAVA Foundation. Appealing to funders	Need to extend AMBI work in Bijagos, and identify a suite of project communities throughout western Africa
5 Build awareness of the East Atlantic Flyway, and of the value and connections of migratory waterbirds							
5.1 Implement the WSFI / CMB Flyway Communication Plan	2014 - 2020	low	high	All flyway	New	WSFI, BirdLife	A new, medium-term plan is needed
5.2 Hold awareness raising seminars for policy makers	2014 - 2020	high	medium	All flyway	Started	AEWA, National government agencies	
5.3 Develop flyway educational material in appropriate languages for use along the flyway	2014 - 2018	medium	high	All flyway	New	WSFI, Education and training consultants	FTK is a good start for most audiences
5.4 Organize / support activities linked to annual migratory bird events, e.g. WMBD, Migratory Birds and Brent Goose Days (Germany)	2014 - 2020	low	high	All flyway	Started	AEWA, BirdLife, National NGOs	
5.5 Establish and actively update the WSFI website and establish networking arrangements with other flyway websites	2014 - 2020	low	high	All flyway	New	WSFI, AEWA, Ramsar, WOW, WI, BirdLife	
5.6 Organize special awareness campaigns with other partners	2015, 2018, 2020	high	medium	All flyway	New	WSFI, AEWA, Ramsar, WOW, WI, BirdLife	
5.7 Produce awareness raising outputs focused on the East Atlantic Flyway, such as a film, flyers, atlas, posters and games, also linked to the campaigns	2014 - 2020	Low - medium	high	All flyway	Started	WSFI, AEWA, Ramsar, WOW, WI, BirdLife	
5.8 WSFI Conference Coordinate a WSFI Conference in 2015, if possible including participants from other flyways (Edinburgh 2004 follow-up)	2015	high	high	All flyway	New	All WSFI stakeholders	
5.9 Present the WSFI activities through side-events at international meetings such as COPs and MOPs	2015-2020	Low	High	All flyway	new	WFC, AEWA, Ramsar, CMS,	Participation in the next Pan-African Ornithological Congress, (Dakar, 2016) should be a priority

3.2.2 The Arctic

The preliminary recommendations of Boere (2014) in relation to the Arctic breeding areas of Wadden Sea birds have been included in the Table. The Arctic Council and CAFF are important potential partners in this region, and close links should be developed between WSFI and the Arctic Biodiversity Assessment (ABA) of CAFF. Participation by WSFI in the Arctic Biodiversity Congress in Trondheim, Norway, 2-4 December 2014, would provide an opportunity to renew engagement with these partners, especially the Russian partners. Another immediate priority is a project under the Arctic Migratory Bird Initiative (AMBI) of CAFF, to support the authorities in Guinea-Bissau in listing the Bijagos Archipelago as a World Heritage Site.

3.2.3 Cooperation, Coordination and Communication along the Flyway

Flyway scale conservation demands high levels of cooperation, coordination and communication, and while some of these need to be formalized, continuous, informal networking and communication based on common interests and trust are also extremely important. At the end of the WOW Project in 2010, the four main partners, AEWA, BirdLife International, the Ramsar Convention and Wetlands International, signed a Memorandum of Cooperation for continuation of the work (WOW 2010): http://wow.wetlands.org/Portals/1/documents/communication/final_signed_wow_moc.pdf. This MoC expired, unused, in mid-2013. Much of the content of this MoC is still relevant and would support the implementation of WSFI. If the four signatory organizations are amenable, renewal and re-drafting of the MoC could provide a strong basis for cooperation between these key actors in WSFI, and additional organizations could sign up if appropriate.

The important thing is for stakeholder organizations, including funding bodies, to reach agreement about the details of the separate projects which make up WSFI, and this will be done through contracts between CWSS, as the principal facilitator of WSFI, and the stakeholders in each project. A strong coordination body which meets at regular intervals could lead this process, and the existing Steering Group could be strengthened to perform this function. If this happens, the role of the Advisory Board may need to be re-assessed, especially as WSFI is now well-established.

Appendix 1 lists international and national organizations along the EAF which are relevant to the development of projects under WSFI, and should be a useful resource when deciding which organizations should be included in projects.

3.2.4 CSN Tool

A major output of the WOW Project that has received little attention so far under WSFI was the Critical Site Network (CSN) Tool. The WOW Memorandum of Cooperation mentioned above included continuing development of this application as one of its objectives, but it has not been possible to invest in this web portal since the end of the WOW project in 2010, and it is becoming increasingly out of date as time passes. The flexible presentation of data and information about sites, species and organizations, all of which is open to query by users, could benefit a wide variety of waterbird and wetland conservation practitioners from policy makers, project managers and site managers to tour

guides, planners, scientists, naturalists of all persuasions, and hunters at site, national and international level. Possible additional features might include an archive of publications and datasets, and links to websites presenting data from migration studies using satellite transmitters, colour rings and geolocators. With proper investment and management, this application has the potential to inform, facilitate and communicate many aspects of research, monitoring, site and species management, policy development, capacity building, communication and awareness raising – all the elements required for successful flyway conservation and management. The scope of the CSN tool was ambitious, covering the entire AEWA region, and any future commitment would need to concentrate on the EAF, in partnership with stakeholders having complementary interests. The revitalization and enhancement of the CSN Tool into a broader, up-to-date and continuously maintained application might therefore facilitate many of the objectives of WSFI, but this is a proposal with inherent risks.

The risks associated with further development of the CSN portal are related to the need for continuous, ongoing investment, maintenance and updating. Data available for public use have to be comprehensive and of the highest quality, and maintaining these standards is time consuming and expensive. The rewards, can, however, be proportional. Such state-of-the art web applications are very appealing, especially to younger audiences, and undoubtedly represent the future. The CSN Tool was perhaps over-ambitious and premature, but maybe its time has come? The other major objection to such an approach is that users in Africa rarely have access to the facilities and infrastructure needed to support it. This is certainly a problem at present (and was a big problem in 2010), but the difficulties decrease each year and it seems likely that most African countries will develop the capacity to support and use bandwidth-hungry applications in the not too distant future.

3.3 A prioritized list of activities

For presentation of activities in the Recommendations (Section 4), the activities in Table 1 were taken as a basis, and a pragmatic approach was adopted because of the difficulty of defining objective criteria for prioritizing activities.

The most urgent activities, which may be time-bound because they are related to an existing work programme, or which provide essential baseline data and information or form an obvious first step in a process, are clear candidates to be top priority activities, and these are listed in sections 4.2.1 and 4.2.2. These are followed by less urgent or immediately necessary activities in sections 4.2.2 and 4.2.3, separated respectively according to whether they are existing activities, which will generally be easier and less expensive to continue, or new activities which will need more planning and research. High-quality fund-raising efforts to support all these activities are essential.

Prioritization is rarely straightforward, and, while sustainable livelihood approaches, for example, might not immediately appear to be a high priority due to expense and other potential risks, this activity will probably appeal to more potential funders than many of the other activities, which boosts its position in the priority list.

3.4 Links with other flyways

This concept concerns the East Atlantic Flyway, but the EAF is one of eight to 10 regional flyways throughout the world connecting the Arctic to southern hemisphere regions through the tropics, and there are good reasons for establishing and maintaining links with organizations in these other flyways.

3.4.1 The Global Flyway Network

The Global Flyway Network (GFN) e.g. <http://globalflywaynetwork.com.au/> is a partnership between researchers worldwide who are devoted to long term — usually demographic — research on long distance migrating shorebirds. The focus is on Flagship species such as Red and Great Knots, and Bar and Black-tailed Godwits, using cutting-edge science and analysis. The partnership aims to build on the strengths of comparative demographic shorebird studies worldwide, with the aim of understanding and analysing the factors determining shorebird numbers in a rapidly changing world. In practice it also tries to fill major gaps in coverage of fieldwork of the world's most threatened shorebird flyways.

3.4.2 The Global Inter-flyway Network

The Global Inter-flyway Network first convened in 2011 (Global Interflyway Network 2012). The objective was to review good practice in international initiatives to conserve migratory waterbirds and other migratory species and to bring together different flyway initiatives to share knowledge on best practices in developing and implementing flyway-scale waterbird conservation. WSFI would have much to learn and much to offer should any future meetings be arranged.

3.4.3. Edinburgh revisited

The final statement in the Edinburgh Declaration at the end of the 2004 *Waterbirds around the world* conference was that the participants “Agree to meet again as a conference in ten years time to review progress”. The CWSS has developed a proposal, drafted by the Chair of the Advisory Board, to extend the proposed WSFI conference, planned for 2015, towards a more global conference but with limited participation. Organizing a large conference such as Edinburgh 2004 is not realistic under the current financial and economic conditions. This proposal has not so far been awarded, but having representatives from other flyways at a future WSFI conference would provide opportunities to share experiences and work strategically with colleagues from other flyways.

4. Conclusions and recommendations

4.1 Conclusions

- Two successful years of WSFI have provided a sound basis for continuing work, in the form of the Flyway Vision, the Plan of Actions and a number of reports and other outputs relating to monitoring and capacity building.
- The high ambition of WSFI requires the raising of funding additional to that anticipated from the Danish, Dutch and German Governments. A fund-raising strategy under objective 1 would be a useful starting point for this.
- Objective 1 includes all the activities necessary for effective cooperation, coordination and communication, and these have all been included as high-priority activities in the Recommendations (4.2).
- The monitoring project (objective 2) has progressed further than capacity development (objective 3) and site and species conservation and management work (objective 4), because it was founded on strong existing programmes which gave it a head start. There is a need to continue to enhance the monitoring project while at the same time bringing the other projects up to an equivalent level. The fund-raising strategy should reflect this need.
- The points in the Plan of Action (Table 1) provide a more detailed structure to the points under Objective 2 (Establish an integrated flyway monitoring programme for the East Atlantic Flyway) than for objective three. Under Objective 3 (*Strengthen capacity along the East Atlantic Flyway in conservation, management of migratory waterbirds and their critical sites*), point 3.1: *Plan the implementation of an integrated capacity building programme for the East Atlantic Flyway, especially in Africa and Russia*, should provide a good basis for bringing activities under this objective up to the required level. Action points under Objective 4 seem less complete and well structured, and activities under this objective have been re-ordered and modified accordingly.
- Objective 4, as drafted in February 2014, may have under-emphasized the need for more work on identifying and assessing threats to habitats, sites and species. The IBA programme will, with the necessary investment in training and implementation, provide a means of assessing changes in threats, but it has not provided the necessary baseline. The unpublished VBN/RSPB report analyzing pressures, drivers and bottlenecks acting on migratory bird populations along the EAF, will soon provide much relevant and important data and information, but there may be a need for additional baseline assessments of threats and pressures acting on the flyway.
- Objective 4 also lacks explicit reference to sustainable livelihood approaches, and these should be established in selected communities to address specific issues of unsustainable natural resource management.
- Objective 5 (Communication and awareness raising) should be included as a part of all other activities, and is the most important objective related to the final part of the Flyway Vision *“Migratory birds find lasting refuge along the East Atlantic Flyway from northern breeding areas to their key Wadden Sea stopover and to the African coastline, and inspire and connect people for future generations”*.

4.2 Recommendations

In the light of these Conclusions, the following Recommendations can be made, based on the Activities listed in Table 1, in approximate order of priority.

4.2.1 Urgent, time-bound activities in partnership with other international organizations

- Participation in the Arctic Biodiversity Congress in December 2014.
- Participation in the AMBI project in Guinea-Bissau for the Bijagos Archipelago.
- Coordination of a WSFI Conference in 2015.

4.2.2 High priority activities

These activities 1) provide essential baseline data and information, or 2) comprise obvious first steps in a process, or 3) appear relatively easy to fund

- All activities (1.1 – 1.9) related to Table 1. Objective 1. *Strengthen cooperation, coordination and communication along the East Atlantic Flyway*
 - Prepare a fund-raising strategy.
 - Investigate the feasibility and desirability of using a web portal to inform, facilitate and communicate research, monitoring, site and species management, policy development, capacity building, communication and awareness raising.
 - Establish working partnerships with AEWA, WHC, BirdLife International, Wetlands International, CMS, Ramsar, Arctic Council, CAFF, Abidjan, and Wadden Sea Partners.
 - Strengthen the WSFI Steering Group and disband the Advisory Board.
- 2.1, 2.2, 2.3, 2.4, 2.7 Evaluate, strengthen, enhance and integrate the IWC and IBA programmes at national and international level.
- 2.10 Begin monitoring in the Arctic by supporting the Arctic Breeding Birds Condition Survey and identifying and exploring methodology and partners for an Arctic Breeding Birds Survey.
- 3.1 Plan the implementation of an integrated capacity building programme for the East Atlantic Flyway, especially in Africa and Russia.
- 3.3 Support the further development of NGOs through advocacy training in cooperation with BirdLife.
- 3.5 Ensure use of existing training tools, especially the Flyway Training Kit and the ONCFS Tool Kit.
- 4.1 Enhance efforts to identify, measure and monitor threats, through sectoral reviews, site and regional assessments, and using the VBN/RSPB report analyzing pressures, drivers and bottlenecks acting on migratory bird populations along the EAF, as appropriate.

- 4.4 Strengthen partnerships for building flyway conservation into sectoral management policies and plans (e.g. agriculture, hunting, mining).
- 4.3 Support and promote important waterbird sites in the Arctic, Russia, Western and Southern Africa in becoming marine World Heritage Sites. Support the establishment of Protected Areas under all available international and national mechanisms.
- 4.8 Adopt sustainable livelihood approaches in selected communities to address specific issues of unsustainable natural resource management.
- 5.1 Implement the WSFI / CMB Flyway Communication Plan.

4.2.3 Existing, less immediately important activities

- 1.10 Support the recruitment of all governments in the EAF to AEWA, and train appropriate policy makers, civil servants and others in its processes and possibilities.
- 2.9 Integrate monitoring results into QSR Wadden Sea analyses and arrange availability of flyway trends.
- 3.4 Support site-based training for integrating communities into site management and monitoring (citizen support).
- 4.1 Develop management plans for selected wetlands of the East Atlantic Flyway and support their implementation.
- 4.7 Support and implement migratory waterbird Species Action Plans.
- 5.2 Hold awareness-raising seminars for policy makers.
- 5.4 Organize and support activities linked to annual migratory bird events, e.g. WMBD, Migratory Birds and Brent Goose Days (Germany).
- 5.7 Produce awareness raising outputs focused on the East Atlantic Flyway, such as a film, flyers, atlas, posters and games, also linked to the campaigns.
- 5.9 Present the WSFI activities through side-events at international meetings such as COPs and MOPs

4.2.4 Additional, new, important activities

- 2.5 Carry out a repeated (once in six years) total waterbird count (all key sites) of the East Atlantic Flyway in January 2019.
- 2.6 Initiate and conduct monitoring of vital rates of coastal waterbirds in the East Atlantic Flyway; start consortium and some pilot projects.
- 2.8 Carry out and publish an East Atlantic flyway quality assessment.
- 2.11 Contribute to knowledge about migration and connectivity between sites along the East Atlantic Flyway.
- 3.2 Strengthen the network of site managers along the East Atlantic Flyway through regional training and support, especially in site management.
- 4.5 Develop sustainable tourism initiatives focused on migratory birds /coastal wetlands along the East Atlantic Flyway.
- 4.6 Support procedures for impact assessments, climate change research and pollution preparedness, especially in West Africa.
- 5.3 Develop flyway educational material in appropriate languages for use along the flyway.
- 5.5 Establish and actively update the WSFI website and establish networking arrangements with

other flyway websites.

- 5.6 Organize special awareness campaigns with other partners.

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Annex 1. Organizations relevant to WSFI implementation 2012-2020

Table 1. International Organizations

This list of relevant organizations is incomplete, but provides a starting point for engagement of potential international stakeholders

Organization	Membership	Remarks
Multilateral Environmental Agreements		
UNESCO World Heritage Convention (WHC)	All EAF countries are signatories	
UNEP African-Eurasian Migratory Waterbird Agreement (AEWA)	All EAF countries, plus the European Union, are signatories, except: Angola, Canada, Cape Verde, DRC, Liberia, Mauritania, Namibia, Poland, Russia, Sao Tome & Principe, Sierra Leone	
UNEP Convention on Migratory Species (CMS)	All EAF countries, plus the European Union, are signatories, except: Canada, Iceland, Namibia, Russia, Sierra Leone	
Ramsar Convention on Wetlands	All EAF countries except Angola, plus the European Union, are signatories,	
UNEP Convention on Biodiversity (CBD)	All EAF countries are signatories	
The Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region (Abidjan Convention)	All Western African EAF countries are signatories except Angola, Cape Verde, Equatorial Guinea, Namibia, Togo and São Tomé & Príncipe	
OSPAR Convention on protecting and conserving the North-east Atlantic and its resources	15 North-east Atlantic (European) countries are signatories	
Bern Convention on the Conservation of European Wildlife and Natural Habitats	All European EAF countries, plus Morocco, Senegal and the European Union, are signatories	
Convention on International Trade in Endangered Species (CITES)	All EAF Countries, plus the European Union are signatories	
Other Inter-governmental organizations		
Arctic Council		

International funding organizations		
International consultants		

Annex 1. Table 2. National level organizations

This list of relevant organizations is incomplete, but provides a starting point for engagement of potential stakeholders in each country

Angola
<ul style="list-style-type: none"> - Ministry of Environment http://www.portaldeangola.com/category/ministerios/ministerio-do-ambiente/ - UNDP 2004 Capacity Development Project: http://iwlearn.net/iw-projects/842/reports/environmental-flow-assessment-reports/capacity-building-for-environmental-planning-and-biodiversity-conservation-in-angola-final-evaluation.pdf
Belgium
<ul style="list-style-type: none"> - Ministry of Foreign Affairs, Trade and Development http://diplomatie.belgium.be/en/ - Flemish Institute for Nature and Forests (INBO) http://www.inbo.be/ - BirdLife Partner – Flanders http://www.natuurpunt.be - BirdLife Partner – Wallonia http://www.natagora.be/ - IWC National Coordinator: (Flanders) Koen Devos, INBO - IWC National Coordinator: (Wallonia) Jean-Paul Jacob, COA - WWF Office http://wwf.panda.org/who_we_are/wwf_offices/belgium/ - IUCN EU Representative office http://www.iucn.org/europe
Benin
<ul style="list-style-type: none"> - Benin has no ministry with “Environment’ in its name, and a poorly developed NGO sector. - Government of Benin Environment dossier http://gouv.bj/dossiers/environnement - The governments of DE, DK and NL all have embassies in Cotounou - IWC Coordinator: Jacques Adjakpa, Centre de Recherche Ornithologique et de l'Environnement
Cameroon
<ul style="list-style-type: none"> - Ministry of Environment, Nature Conservation and Sustainable Development http://www.minep.gov.cm/ - Birdlife affiliate - http://www.birdlife.org/africa/partners/cameroon-biodiversity-conservation-society-cbcs - IWC Coordinator: Gordon Ajonina, Cameroon Wildlife Conservation Society - WWF Central Africa Office http://wwf.panda.org/who_we_are/wwf_offices/cameroon/ - IUCN Country Programme Office cameroun@iucn.org
Canada:

<ul style="list-style-type: none"> - Environment Canada http://www.ec.gc.ca/ - BirdLife Partners – Bird Studies Canada http://www.birdscanada.org/ Nature Canada http://naturecanada.ca/
Cape Verde
<ul style="list-style-type: none"> - Second national Action Plan for the Environment http://www.governo.cv/documents/PANAll-sintese-final.pdf
Congo
<ul style="list-style-type: none"> - Ministry of Sustainable Development, Environment and Forests - IWC Coordinator: Jérôme Mokoko Ikonga, Wildlife Conservation Society http://www.wcs.org/where-we-work/africa/republic-of-congo.aspx
Côte d’Ivoire
<ul style="list-style-type: none"> - Ministry of Environment and Sustainable Development http://www.environnement.gouv.ci/ - BirdLife Affiliate http://www.birdlife.org/africa/partners/ivory-coast-sos-forets - IWC Coordinator: Bomisso Germain, Parc National d’Azagny
Democratic Republic of Congo
<ul style="list-style-type: none"> - Ministry of Environment, Nature Conservation and Tourism - IUCN Country Office colette.mavungu@iucn.org - IWC Coordinator: Dieudonné Upoki Agenong’a, Université de Kisangani
Denmark
<ul style="list-style-type: none"> - Ministry of Environment http://mim.dk/ - Ministry for the Environment Nature Agency http://eng.naturstyrelsen.dk/ - BirdLife Partner – Dansk Ornitologisk Forening http://www.dof.dk/ Faroese Ornithological Society http://www.faroenature.net/ - IWC Coordinator: Stefan Pihl, Aarhus University Dept. of Bioscience - WWF Office http://wwf.panda.org/who_we_are/wwf_offices/denmark/
Equatorial Guinea
<ul style="list-style-type: none"> - Ministry of Fisheries and the Environment
Estonia
<ul style="list-style-type: none"> - Ministry of the Environment http://www.envir.ee/en - BirdLife Partner - Estonian Ornithological Society http://www.birdlife.org/europe-and-central-asia/partners/estonian-ornithological-society-eos - IWC Coordinator: Leho Luigujoe, Institute of zoology and botany
Finland
<ul style="list-style-type: none"> - Ministry of the Environment http://www.ym.fi/en-US - BirdLife Partner - Birdlife Finland http://www.birdlife.org/europe-and-central-asia/partners/finland-birdlife-suomi - IWC Coordinators: Alekski Lehikoinen, Finnish Museum of Natural History; Martti Hario, Finnish Game & Fisheries Research Institute; Markku Mikkola-Roos Finnish Environment Institute (SYKE) - WWF Office http://wwf.panda.org/who_we_are/wwf_offices/finland/

France
<ul style="list-style-type: none"> - Ministry of Agriculture, Food, Fisheries, Rural Affairs and Spatial Planning http://agriculture.gouv.fr/ - Ministry of Ecology, Sustainable Development and Energy http://www.developpement-durable.gouv.fr/ - BirdLife Partner: Ligue pour la Protection des Oiseaux - http://www.birdlife.org/europe-and-central-asia/partners/france-ligue-pour-la-protection-des-oiseaux-lpo - IWC Coordinator: Bernard Deceuninck, Ligue pour la Protection des Oiseaux - Birdlife France - WWF Office http://wwf.panda.org/who_we_are/wwf_offices/france/ - AEWA Technical Committee expert on Game Management Mr. Jean-Yves Mondain-Monval: jean-yves.mondain-monval@oncfs.gouv.fr
Gabon
<ul style="list-style-type: none"> - Ministry of Housing, accommodation, Town Planning, the Environment and Sustainable Development http://www.en.legabon.org/phone-directory/ministry-housing-accommodation-town-planning-environment-and-sustainable-development - IWC Coordinator: Alphonsine Koumba Mfoubou, Ministere de l'Enseignement Technique et de la Formation Professionnelle
Gambia
<ul style="list-style-type: none"> - Ministry of Forestry and the Environment http://www.accessgambia.com/information/forestry-department.html - Department of Parks and Wildlife Management http://www.accessgambia.com/information/parks-wildlife-department.html - IWC Coordinator: Kawsu Jammeh, Department of Parks and Wildlife Management
Germany
<ul style="list-style-type: none"> - Federal Ministry for the Environment, Nature Conservation and Nuclear Safety http://www.bmub.bund.de/en/ - BirdLife Partner: Naturschutzbund Deutschland or NABU: http://www.birdlife.org/europe-and-central-asia/partners/germany-nature-and-biodiversity-conservation-union-nabu - IWC Coordinator: Johannes Wahl, Dachverband Deutscher Avifaunisten (DDA) - Six WWF Offices http://wwf.panda.org/who_we_are/wwf_offices/germany/
Ghana
<ul style="list-style-type: none"> - Ministry of Environment, Science Technology and innovation http://www.ghana.gov.gh/index.php/2012-02-08-08-18-09/ministries/250-ministry-of-environment-science-technology-and-innovation - BirdLife Partner - Ghana Wildlife Society http://www.birdlife.org/africa/partners/ghana-wildlife-society-gws - AEWA Technical Committee representative for West Africa Erasmus Owusu: ehowusu@ug.edu.gh - IUCN Project Office: Forest Services Division, P.O Box 527, Accra, Ghana
Guinea
<ul style="list-style-type: none"> - Ministry of Environment - IWC Coordinator: Namory Keita, Division Faune et Protection de la Nature

Guinea Bissau
<ul style="list-style-type: none"> - Ministry of natural Resources http://guinebissaurepublic.com/ - IWC Coordinator: Joãozinho Sá, ODZH/Wetlands International Guinee-Bissau Office - IUCN Programme Office iucngb@iucn.org
Iceland
<ul style="list-style-type: none"> - Ministry for the environment and natural resources http://eng.umhverfisraduneyti.is/ - BirdLife Partner – BirdLife Iceland http://www.birdlife.org/europe-and-central-asia/partners/iceland-fuglavernd-%E2%80%93-birdlife-iceland-ispb
Ireland
<ul style="list-style-type: none"> - National Parks and Wildlife Service http://www.npws.ie/ - Environmental Protection Agency http://epa.ie/#&panel1-1 - BirdLife Partner - BirdWatch Ireland http://www.birdlife.org/europe-and-central-asia/partners/ireland-birdwatch-ireland - IWC Coordinator: Helen Boland, BirdWatch Ireland
Latvia
<ul style="list-style-type: none"> - Ministry of Environmental Protection and Regional Development http://www.varam.gov.lv/eng/par_ministriju/ - BirdLife Partner - Latvian Ornithological Society http://www.birdlife.org/europe-and-central-asia/partners/latvian-ornithological-society-lob - IWC Coordinator: Antra Stipniece University of Latvia, Institute of Biology
Liberia
<ul style="list-style-type: none"> - Environmental Protection Agency http://epaliberia.org/ - BirdLife Partner - The Society for Conservation of Nature in Liberia http://www.birdlife.org/africa/partners/liberia-society-conservation-nature-liberia-scnl - IWC Coordinator: Jerry C. Garte Society for Conservation of Nature of Liberia (SCNL) -
Lithuania
<ul style="list-style-type: none"> - Ministry of the Environment http://www.am.lt/Vl/en/Vl/index.php - BirdLife Partner - Lithuanian Ornithological Society http://www.birdlife.org/europe-and-central-asia/partners/lithuanian-ornithological-society-lod - IWC Coordinator: Laimonas Sniuksta Lithuanian Ornithological Society (LOD) - AEWA Technical Committee representative for Eastern Europe Saulius Svazas: svazas@ekoi.lt
Mauritania
<ul style="list-style-type: none"> - Ministry of Rural Development and Environment - IWC Coordinator: Yelli Diawara Parc National du Banc d'Arguin (PNBA) - National Park Banc d'Arguin http://www.pnba.mr/pnba/ - IUCN Programme Office http://www.iucn.org/places/mauritania
Morocco
<ul style="list-style-type: none"> - Ministry of energy, mines water and the Environment http://www.oilgasafrika.com/directory/ministry-energy-mines-water-and-environment-morocco - BirdLife Affiliate – Grepom http://www.birdlife.org/africa/partners/morocco-grepom

<ul style="list-style-type: none"> - IWC Coordinator: Mohamed Dakki, Institut Scientifique (CEMO), Departement de Zoology
Namibia
<ul style="list-style-type: none"> - Ministry of Environment and Tourism http://www.met.gov.na/Pages/DefaultNew.aspx - IWC Coordinator: Holger Kolberg, Ministry of Environment & Tourism - 2004 Capacity Building report http://projects.inweh.unu.edu/inweh/display.php?ID=1308
Netherlands
<ul style="list-style-type: none"> - Ministry for economic affairs; Department of nature and biodiversity http://www.government.nl/issues/nature-and-biodiversity - Ministry of Infrastructure and the Environment http://www.government.nl/ministries/ienm - BirdLife Partner – Vogelbescherming Nederland http://www.birdlife.org/europe-and-central-asia/partners/netherlands-society-protection-birds-vbn - IWC Coordinator: Menno Hornman, SOVON - SOVON https://www.sovon.nl/ - WWF Office http://wwf.panda.org/who_we_are/wwf_offices/netherlands/
Nigeria
<ul style="list-style-type: none"> - Federal Ministry of Environment http://environment.gov.ng/ - BirdLife Partner - Nigerian Conservation Foundation http://www.birdlife.org/africa/partners/nigerian-conservation-foundation-ncf - IWC Coordinator: Alade Adeleke, Nigerian Conservation Foundation - WWF Associate http://www.ncfnigeria.org/ - IUCN Project Office nigeria@iucn.org
Norway
<ul style="list-style-type: none"> - Ministry of Climate and Environment http://www.regjeringen.no/en/dep/kld.html?id=668 - Environment Agency http://www.miljodirektoratet.no/english/ - BirdLife Partner - Norwegian Ornithological Society http://www.birdlife.org/europe-and-central-asia/partners/norwegian-ornithological-society-nof - IWC Coordinator: Svein-Håkon Lorentsen, Norwegian Institute for Nature Research - NINA - WWF Office http://wwf.panda.org/who_we_are/wwf_offices/norway/
Poland
<ul style="list-style-type: none"> - Ministry of the Environment http://www.mos.gov.pl/?j=en - BirdLife Partner - Polish Society for the Protection of Birds (OTOP) http://www.birdlife.org/europe-and-central-asia/partners/polish-society-protection-birds-otop - IWC Coordinator: Włodzimierz Meissner, University of Gdansk - WWF Office http://wwf.panda.org/who_we_are/wwf_offices/poland/
Portugal
<ul style="list-style-type: none"> - Ministry for Environment Spatial Planning and energy http://www.portugal.gov.pt/en/the-ministries/ministry-of-environment-spatial-planning-and-energy/know-the-team.aspx - BirdLife Partner - Portuguese Society for the Study of Birds (SPEA) http://www.birdlife.org/europe-and-central-asia/partners/portuguese-society-study-birds-spea

<ul style="list-style-type: none"> - IWC Coordinator: Vitor Encarnação, Divisão de Habitats e Ecossistemas (DSCN) - WWF Office http://www.wwf.pt/
Russian Federation
<ul style="list-style-type: none"> - Ministry of Natural Resources and Environment http://www.mnr.gov.ru/english/ - IWC Coordinator: Alexander Solokha, Wetlands International Russia - WWF Office http://wwf.panda.org/who_we_are/wwf_offices/russia/
São Tomé & Príncipe
<ul style="list-style-type: none"> - Ministry of natural Resources, Energy and Environment - National report on biodiversity 2009 http://www.cbd.int/doc/world/st/st-nr-04-en.pdf
Senegal
<ul style="list-style-type: none"> - Ministry of Environment and Sustainable Development http://www.environnement.gouv.sn/ - IWC Coordinator: Ibrahima Diop, Direction des Parcs Nationaux - WWF West Africa Office http://wwf.panda.org/who_we_are/wwf_offices/senegal/ - IUCN Senegal Programme Office http://http://www.iucn.org/fr/propos/union/secretariat/bureaux/paco/paco_senegal/
Sierra Leone
<ul style="list-style-type: none"> - Ministry of Lands, Country Planning and the Environment http://www.ogi.gov.sl/content/ministry-lands-country-planning-and-environment - BirdLife Partner - Conservation Society of Sierra Leone http://www.birdlife.org/africa/partners/sierra-leone-conservation-society-sierra-leone-cssl - IWC Coordinator: Arnold Okoni-Williams, Conservation Society of Sierra Leone
South Africa
<ul style="list-style-type: none"> - Department of environmental affairs https://www.environment.gov.za/ - BirdLife Partner - BirdLife South Africa http://www.birdlife.org/africa/partners/south-africa-birdlife-south-africa-blsa - IWC Coordinator: Animal Demography Unit, University of Cape Town - WWF Office http://wwf.panda.org/who_we_are/wwf_offices/south_africa/ - IUCN South Africa Country Office http://www.iucn.org/esaro
Spain
<ul style="list-style-type: none"> - Ministry of Agriculture, Food and Environment http://www.magrama.gob.es/es/ http://epanet.ew.eea.europa.eu/european_epas/countries/es/ministry-environment-and-rural-affairs - BirdLife Partner - SEO/BirdLife http://www.birdlife.org/europe-and-central-asia/partners/spain-seobirdlife - IWC Coordinator: Blas Molina, SEO/BirdLife - WWF Office http://wwf.panda.org/who_we_are/wwf_offices/spain/
Sweden
<ul style="list-style-type: none"> - Ministry of Enterprise, Energy and Communications - Ministry of the Environment http://www.government.se/sb/d/2066 - Swedish Environmental Protection Agency http://naturvardsverket.se/en/ - BirdLife Partner - Swedish Ornithological Society (SOF) http://www.birdlife.org/europe-and-central-asia/partners/swedish-ornithological-society-sof - IWC Coordinator: Leif Nilsson, University of Lund - WWF Office http://wwf.panda.org/who_we_are/wwf_offices/sweden/

Togo
<ul style="list-style-type: none"> - Ministry of Environment and Forest Resources http://www.westafricagateway.org/services/contacts/ministry-environment-and-forest-resources - IWC Coordinator: Okoumassou Kotchipka Direction de la Faune et de la Chasse
United Kingdom
<ul style="list-style-type: none"> - Joint Nature Conservation Committee http://jncc.defra.gov.uk/ - Department for Environment, Food and Rural Affairs https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs - BirdLife Partner - Royal Society for the Protection of Birds http://www.rspb.org.uk/ - IWC Coordinator: Chas Holt British Trust of Ornithology (BTO) - WWF Office http://wwf.panda.org/who we are/wwf_offices/uk/ - AEWA Technical Committee representative for North and South-western Europe: David Stroud David.Stroud@jncc.gov.uk

Annex 2. Membership of EAF countries of MEAs and other international initiatives, October 2014

Country	WHC	AEWA	CMS	CBD	Ramsar	Abidjan /OSPAR A Abidjan O OSPAR	Bern	CITES	Arctic Council m member o observer
Russian Federation	+			+	+			+	m
Finland	+	+	+	+	+		+	+	m
Sweden	+	+	+	+	+	O	+	+	m
Norway	+	+	+	+	+	O	+	+	m
Denmark	+	+	+	+	+	O	+	+	m
Iceland	+	+		+	+	O	+	+	m
Canada	+			+	+			+	m
Estonia	+	+	+	+	+		+	+	
Latvia	+	+	+	+	+		+	+	
Lithuania	+	+	+	+	+		+	+	
Poland	+		+	+	+		+	+	o
Germany	+	+	+	+	+	O	+	+	o
Netherlands	+	+	+	+	+	O	+	+	o
Belgium	+	+	+	+	+	O	+	+	
UK	+	+	+	+	+	O	+	+	o
Ireland	+	+	+	+	+	O	+	+	
France	+	+	+	+	+	O	+	+	o
Spain	+	+	+	+	+	O	+	+	o
Portugal	+	+	+	+	+	O	+	+	
Morocco	+	+	+	+	+		+	+	
Mauritania	+		+	+	+	A		+	
Cape Verde	+		+	+	+			+	
Senegal	+	+	+	+	+	A	+	+	
Gambia	+	+	+	+	+	A		+	
Guinea Bissau	+	+	+	+	+	A		+	
Guinea	+	+	+	+	+	A		+	
Sierra Leone	+			+	+	A		+	
Liberia	+		+	+	+	A		+	
Côte d'Ivoire	+	+	+	+	+	A		+	
Ghana	+	+	+	+	+	A		+	
Togo	+	+	+	+	+			+	
Benin	+	+	+	+	+	A		+	
Nigeria	+	+	+	+	+	A		+	
São Tomé & Príncipe	+		+	+	+			+	
Cameroon	+		+	+	+	A		+	
Equatorial Guinea	+	+	+	+	+			+	
Gabon	+	+	+	+	+	A		+	
Congo	+	+	+	+	+	A		+	
D R Congo	+		+	+	+	A		+	
Angola	+		+	+				+	
Namibia	+			+	+			+	
South Africa	+	+	+	+	+	A		+	

Annex 3. Priority Species for the development of Single Species Action Plans in the EAF (AEWA AP Table 1 Column A species)

The Tables summarize all populations of species which appear in Table 1, Column A of the AEWA Action Plan, for which preparation of Single Species Action Plans are required

Key to categories in Table 1 and 2

- Category 1:** (a) Species which are included in Appendix I to the Convention on the Conservation of Migratory species of Wild Animals;
 (b) Species, which are listed as threatened on the IUCN Red list of Threatened Species, as reported in the most recent summary by BirdLife International; or
 (c) Populations, which number less than around 10,000 individuals.
- Category 2:** Populations numbering between around 10,000 and around 25,000 individuals.
- Category 3:** Populations numbering between around 25,000 and around 100,000 individuals and considered to be at risk as a result of:
 (a) Concentration onto a small number of sites at any stage of their annual cycle;
 (b) Dependence on a habitat type, which is under severe threat;
 (c) Showing significant long-term decline; or
 (d) Showing large fluctuations in population size or trend.
- Category 4:** Species, which are listed as Near Threatened on the IUCN Red List of Threatened species, as reported in the most recent summary by BirdLife International, but do not fulfil the conditions in respect of Category 1, 2 or 3, as described above, and which are pertinent for international action.

Table 1. Waterbird Populations on AEWA Action Plan Table 1, Column A: Long-distance migrants

English Name	Scientific name	Population	Category	SSAP written?
Great Northern Diver	<i>Gavia immer</i>	Europe (win)	1c	
White-billed Diver	<i>Gavia adamsii</i>	Northern Europe (win)	1c	
Red-necked Grebe	<i>Podiceps grisegena grisegena</i>	Northwest Europe (win)	3c	
Slavonian Grebe	<i>Podiceps auritus auritus</i>	Northwest Europe (large-billed)	1c	
Purple Heron	<i>Ardea purpurea purpurea</i>	West Europe & West Mediterranean/West Africa	2	
Little Bittern	<i>Ixobrychus minutus minutus</i>	W Europe, NW Africa/Subsaharan Africa	2	
Great Bittern	<i>Botaurus stellaris stellaris</i>	W Europe, NW Africa (bre)	1c	
Black Stork	<i>Ciconia nigra</i>	South-west Europe/West Africa	1c	
White Stork	<i>Ciconia ciconia ciconia</i>	W Europe & North-west Africa/Sub-Saharan Africa	3b	
Glossy Ibis	<i>Plegadis falcinellus falcinellus</i>	Black Sea & Mediterranean/West Africa	3c	
Eurasian Spoonbill	<i>Platalea leucorodia leucorodia</i>	West Europe/West Mediterranean & West Africa	2	2008
Greater Flamingo	<i>Phoenicopterus roseus</i>	West Africa	3a	
Lesser Flamingo	<i>Phoeniconaias minor</i>	West Africa	2	2008
Lesser Flamingo	<i>Phoeniconaias minor</i>	Southern Africa	3a	2008
Whooper Swan	<i>Cygnus cygnus</i>	Iceland/UK & Ireland	2	

English Name	Scientific name	Population	Category	SSAP written?
Bewick's Swan	<i>Cygnus columbianus bewickii</i>	Western Siberia & NE Europe/North-west Europe	2	2012
Bean Goose	<i>Anser fabalis fabalis</i>	North-east Europe/North-west Europe	3c*	
White-fronted Goose	<i>Anser albifrons flavirostris</i>	Greenland/Ireland & UK	2*	(2012)
Barnacle Goose	<i>Branta leucopsis</i>	Svalbard/South-west Scotland	3a	
Brent Goose	<i>Branta bernicla hrota</i>	- Svalbard/Denmark & UK	1c	
Brent Goose	<i>Branta bernicla hrota</i>	-Canada & Greenland/Ireland	3a	
Steller's Eider	<i>Polysticta stelleri</i>	Western Siberia/North-east Europe	1a 1b 2	
Smew	<i>Mergellus albellus</i>	North-west & Central Europe (win)	3a	
Collared Pratincole	<i>Glareola pratincola pratincola</i>	Western Europe & NW Africa/West Africa	2	
Kentish Plover	<i>Charadrius alexandrinus alexandrinus</i>	West Europe & West Mediterranean/West Africa	3c	
Black-tailed Godwit	<i>Limosa limosa limosa</i>	Western Europe/NW & West Africa	4	2008
Black-tailed Godwit	<i>Limosa limosa islandica</i>	Iceland/Western Europe	4	2008
Eurasian Curlew	<i>Numenius arquata arquata</i>	Europe/Europe, North & West Africa	4	
Purple Sandpiper	<i>Calidris maritima maritima</i>	NE Canada & N Greenland (bre)	3c	
Dunlin	<i>Calidris alpina schinzii</i>	Britain & Ireland/SW Europe & NW Africa	2	
Dunlin	<i>Calidris alpina schinzii</i>	Baltic/SW Europe & NW Africa	1c	
Dunlin	<i>Calidris alpina arctica</i>	NE Greenland/West Africa	3a	
Audouin's Gull	<i>Larus audouinii</i>	Mediterranean/N & W coasts of Africa	1a 3a	
Gull-billed Tern	<i>Sterna nilotica nilotica</i>	Western Europe/West Africa	2	
Lesser Crested Tern	<i>Sterna bengalensis emigrata</i>	S Mediterranean/NW & West Africa coasts	1c	
Little Tern	<i>Sterna albifrons albifrons</i>	Europe north of Mediterranean (bre)	2	
Little Tern	<i>Sterna albifrons albifrons</i>	West Mediterranean/ W Africa (bre)	3b	
Damara Tern	<i>Sterna balaenarum</i>	Namibia & South Africa/Atlantic coast to Ghana	2	

Table 2. Waterbird Populations on AEWA Action Plan Table 1, Column A: Non-migratory and non-coastal species

The following populations are included in Column A of the AEWA Action Plan, but are less relevant for WSFI because they are not long-distance migrants and/ or do not habitually use coastal habitats:

English Name	Scientific name	Population	Category	SSAP written?
African Penguin	<i>Sphensicus demersus</i>	Southern Africa	1b	
Crowned Cormorant	<i>Phalacrocorax coronatus</i>	Coastal South west Africa	1c	
Bank Cormorant	<i>Phalacrocorax neglectus</i>	Coastal Southwest Africa	1b 2	
Great Cormorant	<i>Phalacrocorax carbo lucidus</i>	Coastal Southern Africa	2	
Cape Cormorant	<i>Phalacrocorax capensis</i>	Coastal Southern Africa	4	
Squacco Heron	<i>Ardeola ralloides ralloides</i>	SW Europe, NW Africa (bre)	1c	
Night Heron	<i>Nycticorax nycticorax nycticorax</i>	W Europe, NW Africa (bre)	3c	
Little Bittern	<i>Ixobrychus minutus minutus</i>	W Europe, NW Africa/Sub-Saharan Africa	2	
Great Bittern	<i>Botaurus stellaris capensis</i>	Southern Africa	1c	
Black Stork	<i>Ciconia nigra</i>	Southern Africa	1c	
White Stork	<i>Ciconia ciconia ciconia</i>	Southern Africa	1c	
Northern Bald Ibis	<i>Geronticus eremita</i>	Morocco	1a 1b 1c	2005
Eurasian Spoonbill	<i>Platalea leucorodia balsaci</i>	Coastal West Africa (Mauritania)	1c	2008
White-backed Duck	<i>Thalassornis leuconotus leuconotus</i>	West Africa	1c	
White-headed Duck	<i>Oxyura leucocephala</i>	West Mediterranean (Spain & Morocco)	1a 1b 1c	2005
Egyptian Goose	<i>Alopochen aegyptiacus</i>	West Africa	1c	
Ruddy Shelduck	<i>Tadorna ferruginea</i>	North-west Africa	1c	
Cape Shelduck	<i>Tadorna cana</i>	Southern Africa	3c	
African Pygmy Goose	<i>Nettapus auritus</i>	West Africa	1c	
Marbled Teal	<i>Marmaronetta angustirostris</i>	West Mediterranean/West Medit. & West Africa	1a 1b 1c	
Ferruginous Duck	<i>Aythya nyroca</i>	West Mediterranean/North & West Africa	1a 1c	2005
Black-crowned Crane	<i>Balearica pavonina pavonina</i>	West Africa (Senegal to Chad)	1b 1c	
Grey-crowned Crane	<i>Balearica regulorum regulorum</i>	Southern Africa (N to Angola & S Zimbabwe)	1b 1c	
Blue Crane	<i>Grus paradisea</i>	Extreme Southern Africa	1b	
Wattled Crane	<i>Grus carunculatus</i>	Central & Southern Africa	1b 1c	
Baillon's Crake	<i>Porzana pusilla intermedia</i>	Europe (bre)	1c	
Crested Coot	<i>Fulica cristata</i>	Spain & Morocco	1c	
African Black Oystercatcher	<i>Haematopus moquini</i>	Coastal Southern Africa	1c	
Black-winged Stilt	<i>Himantopus himantopus himantopus</i>	Southern Africa ('meridionalis')	2	
Pied Avocet	<i>Recurvirostra avosetta</i>	Southern Africa	2	
Chestnut-banded Plover	<i>Charadrius pallidus pallidus</i>	Southern Africa	2	
White-fronted Plover	<i>Charadrius marginatus mechowii</i>	West Africa	2	
Eurasian Dotterel	<i>Eudromias morinellus</i>	Europe/North-west Africa	(3c)	
Lesser Black-winged	<i>Vanellus lugubris</i>	Southern West Africa	2	

English Name	Scientific name	Population	Category	SSAP written?
Lapwing				
Greater Black-winged Lapwing	<i>Vanellus melanopterus minor</i>	Southern Africa	1c	
Brown-chested Lapwing	<i>Vanellus superciliosus</i>	West & Central Africa	(2)	
Great Snipe	<i>Gallinago media</i>	Scandinavia/probably West Africa	4	2002
Slender-billed Gull	<i>Larus genei</i>	West Africa (bre)	2	
Caspian Tern	<i>Sterna caspia caspia</i>	Southern Africa (bre)	1c	
Greater Crested Tern	<i>Sterna bergii bergii</i>	Southern Africa (Angola - Mozambique)	2	
Roseate Tern	<i>Sterna dougallii dougallii</i>	Southern Africa	1c	
Little Tern	<i>Sterna albifrons guineae</i>	West Africa (bre)	1c	
Bridled Tern	<i>Sterna anaethetus melanopterus</i>	W Africa	1c	
African Skimmer	<i>Rynchops flavirostris</i>	Coastal West Africa & Central Africa	2	
Black Guillemot	<i>Cephus grylle islandicus</i>	Iceland	3c	
Black Guillemot	<i>Cephus grylle faeroeensis</i>	Faeroes	1c	
Atlantic Puffin	<i>Fratercula arctica naumanni</i>	NE Canada, N Greenland to Jan Mayen, Svalbard, N Novaya Zemlya	3a	



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