

# Wadden Sea Flyway Initiative (WSFI)



**Ten years of capacity-building support  
along the East Atlantic Flyway  
2013 – 2023**



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**Photos**

**Front:** Tim Dodman - *main image: Regional training workshops in Senegal; top left: participants in Angola; top right: participant and school pupils, Benin.*  
**Back:** Tim Dodman - *Great White Pelicans, Parc National des Oiseaux du Djoudj, Senegal*

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# 1. Introduction

## The Wadden Sea and World Heritage

The Wadden Sea is one of the most important breeding, stopover, and non-breeding (or wintering) sites along the East Atlantic Flyway (EAF), visited by millions of migratory waterbirds each year. Trilateral monitoring and management efforts for migratory waterbirds in the Wadden Sea started in the 1990s. However, flyway conservation can only be effective if bird populations are managed over their entire migration range. Thus, upon the inscription of the Wadden Sea as a World Heritage Site, the World Heritage Committee requested the Wadden Sea countries “... to strengthen cooperation on management and research activities with States Parties on the African Eurasian Flyways, which play a significant role in conserving migratory species along these flyways.”

## The Wadden Sea Flyway Initiative

With the establishment of the Wadden Sea Flyway Initiative (WSFI) in 2012, the governments of Denmark, Germany and the Netherlands recognized their specific responsibility to contribute to conserving migratory waterbirds along the entire EAF and in the following years, successful collaborations have formed with a multitude of national and international partners. The WSFI Strategic Framework 2022-2029 sets out actions to contribute to realising the WSFI vision that “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”. These actions can broadly be subdivided into research and monitoring activities and capacity building, management and outreach activities, which nicely align with the two pillars of the WSFI, the monitoring programme and the capacity building and management programme.

## WSFI Capacity building and management programme

Capacity building is a key element of flyway conservation as it provides the basis for coordinated, sustainable, and independent conservation efforts to be taken at the local level. By enhancing knowledge, strengthening institutions, empowering communities, and facilitating exchange on best practices, capacity building ensures that local partners are well-equipped to appreciate and conserve migratory birds and their habitats. Thus, investing in capacity building and awareness raising encourages current conservation issues to be addressed, whilst also achieving structural changes needed to address future environmental challenges.

In the previous years, the WSFI capacity building and management programme has provided support for a broad range of activities. These have largely been through short-term local projects focused on gaps in capacity, specific conservation issues or sites, and outreach events. There have also been a number of flyway level activities, including regional capacity building workshops, development and publication of a flyway field guide and exchange visits.

## Ten years of capacity-building support along the East Atlantic Flyway, 2013 – 2023

This publication illustrates key activities of the WSFI capacity building and management programme between 2013 and 2023. It aims to create awareness of the programme and its reach, to highlight achievements and impact, and promote opportunities for future support and involvement.



**Map of the East Atlantic Flyway**, showing key breeding areas in the Arctic for long-distance migratory waders, the Wadden Sea stopover and two non-breeding sites in West Africa.

## 2. Country project profiles

### Morocco: training and Ramsar site designation

Morocco has a long Atlantic coastline that hosts numerous coastal wetlands, including the major sites of Merja Zerga in the north and Baie de Dakhla in the south. Capacity for wetland management and monitoring is less developed in the south than the north. Since 2017, WSFI has supported a series of training workshops for building capacity for wetland conservation and waterbird monitoring in different southern coastal wetlands of the Moroccan Atlantic Sahara, led by Professor Imad Cherkaoui of Moulay Ismail University, Meknès. These workshops have all focused on building capacity of local NGOs, and have comprised training indoors and in the field.

#### 2017: Baie de Dakhla and Khnifiss

The workshops in 2017 supported the NGOs Réseau Association Khnifiss and Association Nature Initiative of Dakhla, which advocate for the conservation of the Khnifiss Lagoon and Dakhla Bay, both protected areas and Ramsar sites of great importance for migratory waterbirds. The NGOs carry out environmental monitoring and education, and also promote ecotourism. Participants included volunteers, wardens, ecotourism guides and fishermen. Waterbird counts were conducted at seven wetlands.



Imad Cherkaoui



#### 2018: Foug El Oued Laayoun and Boujdour

The workshops in 2018 supported the Groupe de Recherches et Études sur le Littoral du Sahara (GRELS), based at Laayoune, and the Sahara Association for Coastal and Rural Development, based at Boujdour. Both NGOs are part of the Alliance Marocaine pour le Climat et le Développement Durable (AMCDD), a network for environmental protection and climate change adaptation. Participants were mostly students and volunteers of both NGOs. Waterbird counts were conducted at eight wetlands.



Imad Cherkaoui

During the workshop field surveys, large numbers of waterbirds were recorded at Foug El Oued, and in the light of these preliminary results, a technical factsheet was prepared and submitted to the Moroccan wildlife authorities (HCEFLCD) and Ramsar National Focal Point. Further, the AMCDD coalition decided to convene a workshop in Laayoune on the importance of Foug Al Oued and Atlantic Saharan Wetlands for flyways. These steps led to the formal designation of two new Ramsar sites - Oued Assaquia Al Hamra à La'youne and Côte Aftissate-Boujdour.

#### 2022: Guelmim Oued Noun Province and Baie de Dakhla



Imad Cherkaoui



Two workshops were organised in 2022 supporting three NGOs -

Association Aicha pour le développement de proximité et environnement, Réseau Association Khnifiss and the Association jeunes Trok pour la protection du Golf Oued Eddahab. Most of the trainees were university students, undergraduate teachers, site managers and voluntary members of the local NGOs. Waterbird surveys were conducted at five wetlands; waterbird numbers recorded at Oued



Imad Cherkaoui

Noun-Oumfiss met Ramsar 1% criteria for several species. A clear-up campaign of the Dakhla Lagoon also took place, and a Northern Gannet saved from fishing net entanglement had a high awareness-raising impact.

**2023: Boujdour and Khnifiss**

Two workshops were carried out supporting Association Khniffiss, AMCDD and the NGO Club AL Ajjal. Participants included students from the Higher Technology School of La'ayoun. Waterbird surveys were carried out at eight wetlands from Dakhla Lagoon south to the Bay of Cintra and Lagouira in Cap Blanc; a total of 99,694 waterbirds of 133 species were recorded, including very southerly records for the seabirds Atlantic Puffin and Razorbill. Northern Bald Ibis was also recorded at the Bay of Boujdour. Unfortunately, several seabirds were found dead and sent for autopsy; no incidents of avian influenza were detected.



Imad Cherkaoui



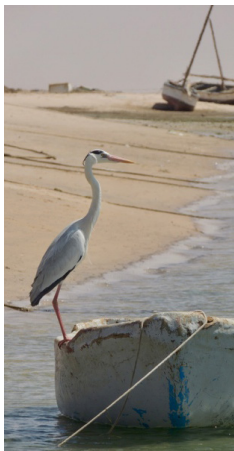
Tim Dodman

**Statement by Imad Cherkaoui, University of Ibn Tofail, Morocco**

“Raising the capacity of stakeholders in southern Morocco is vital to mitigate major risks to waterbirds and enhance wetland co-management and governance. WSFI has supported a series of training workshops, covering site management, threats and institutional frameworks, and enhancing abilities to monitor waterbirds and wetland habitats. After workshops in 2018, local NGOs in Moroccan Saharan wetlands lobbied successfully for the designation of two wetlands in the region, Oued Assaquia Al Hamra à La'youne and Côte Aftissate-Boujdour, as Ramsar sites – a lasting achievement demonstrating the need for strong local NGO capacity.”

### Mauritania: Memorandum of Understanding – Wadden Sea x Banc d’Arguin

The Parc National du Banc d’Arguin (PNBA) in Mauritania was inscribed on the UNESCO list in 1989, becoming the first marine World Heritage Site along the East Atlantic Flyway. Supporting up to three million birds in the northern winter, it is the most important African non-breeding (wintering) site for migratory birds travelling through the Wadden Sea. As a consequence of the resulting joint responsibility for migratory waterbirds, a Memorandum of Understanding was signed between the Banc d’Arguin and the Wadden Sea in 2014, with the intention to strengthen collaboration between the two World Heritage Sites.



Imad Cherkaoui



Andreas Klesse/BMUV

Like the Wadden Sea, the Banc d’Arguin contains extensive mudflats which act as feeding habitats for migratory and resident birds. This similarity offers opportunities for exchange of scientific information and best practices in monitoring, research and management. Regular site visits, the exchange of experience and knowledge on effective protection measures, and the development of joint conservation projects are examples of activities that have been implemented as part of bilateral action plans.

In addition, outreach activities such as leaflets and a joint social media campaign (#WaddenSeaxPNBA) are conducted to help raise awareness for the needs of migratory waterbirds and the key role that these World Heritage Site play for their protection.



CMSS

## Senegal: Technopôle and Casamance

Senegal hosts a range of wetlands in its coastal zone, from the Senegal Delta in the north, to the *niayes* of the Cap Vert peninsula and to the Sine-Saloum Delta and Casamance in the south. There is a significant range in climate from the semi-arid north to the more tropical south, resulting in a high degree of diversity in wetlands and wetland habitats, requiring considerable conservation efforts, some of which have been supported by WSFI:

### Technopôle / Grand Niaye de Pikine, Dakar



In 2019, WSFI supported Nature-Communautés-Développement (NCD) to implement a conservation project at the Technopôle wetland of the Réserve Naturelle Urbaine de la Grand Niaye de Pikine. The project enabled clean-up operations around this urban wetland, awareness-raising through two WMBD events, training of volunteers and NCD personnel and waterbird monitoring.

The clean-up operations, organised jointly with the Waste Management and Coordination Unit (UCG), were conducted with local associations, volunteers, partners and pupils from neighbouring schools. The main focus was the clean-up of plastic waste, an unwelcome feature of this and other urban wetlands, and the focus of the 2019 WMBD theme. NCD ecoguides and reserve staff were trained in waterbird identification and counting, as well as in guiding techniques through a combination of theoretical and practical sessions.



Nature-Communautés-Développement (NCD)

### Réserve Ornithologique de Kalissaye (ROK), Casamance



In 2019, WSFI supported the Direction des Parcs Nationaux to organise a training workshop in Ziguinchor on monitoring waterbirds and in the use of data collection tools. The workshop brought together the conservation players of the Casamance and set up a network of counters. It also raised

awareness of the importance of ecological monitoring and the management of biological resources and enabled participants to familiarise themselves with ecological monitoring tools, including the International Waterbird Census forms. Training also helped participants to become familiar with bird identification criteria, learn about bird counting methods and become familiar with the ObsMapp application.



Pathé Balde



Pathé Balde

In 2022, WSFI supported the ROK Management Committee to establish an ecotourism camp at Kassel, close to the reserve, and to hold a training workshop for ecoguides and committee members in tourism management and reception. The initiative to open a camp was part of the ROK management plan, and aimed to strengthen the mandate of the management committee to play an increased role in site protection. The training workshop led by Abdoulaye Ndiaye proved to be an engaging and informative event. The ecotourism camp ran into complications regarding the siting of the camp, but after an alternative site was agreed by the community, construction began, though its progress inevitably was beset by delays.



### The Gambia: Cooperation between The Gambia and the Wadden Sea

The Gambia is a long thin country dominated by the Gambia River, whose lower reaches support mangroves, with numerous tributaries or *bolongs* and mudflats. These wetlands, along with the short coastline, provide important habitats for numerous waterbirds. In 2016 the Department of Parks and Wildlife Management (DPWM), which is responsible for nature conservation issues in The Gambia, and the National Park Administration Wadden Sea Lower Saxony, Germany formalised cooperation under the framework of WSFI. Local ranger teams formed the basis for joint projects on monitoring, research, conservation and capacity building. January waterbird counts were conducted each year across The Gambia with a team of 8-10 people covering all sites.



NLPV/ Peter Sudbeck



NLPV/ Peter Sudbeck

Since 2015 the January census began with a group seminar, with participants from DPWM and the NGO West African Bird Study Association (WABSA). The seminars covered the WSFI, the conservation of migratory birds along the East Atlantic Flyway, waterbird identification, bird counting and the use of equipment, backed up with field trips to test counting methods. The partnership also looked at conservation approaches in the Wadden Sea and supported the successful application process for The Gambia's Niimi Biosphere reserve. Due to the lasting cooperation a fixed network of collegial exchange has grown, enriching the work of each participant and enlivening the cooperation.



NLPV/ Peter Sudbeck

## Guinea-Bissau: the Bijagós Archipelago and colonial breeding birds

### Bijagós Archipelago: supporting World Heritage status

The Bijagós Archipelago, a complex of islands, mudflats and shallow waters off Guinea-Bissau, is one of the foremost sites for nature along the western coast of Africa, whilst its islands also have rich and varied cultural traditions. When the government of Guinea-Bissau sought support for relaunching the process for World Heritage nomination of the Bolama-Bijagós Archipelago, WSFI stepped in to co-organise a stakeholder meeting in 2017 to review the options and procedures. The workshop, attended by the Minister of Environment, was led by the Instituto da Biodiversidade e das Áreas Protegidas (IBAP). Representatives from the Wadden Sea participated in the workshop, especially to contribute initial information for a comparative analysis, which was required as part of the eventual nomination. Traditional chiefs from different islands of the archipelago also participated.



### PROCESSO DA RECANIDATURA AO PM DA UNESCO ARQUIPÉLAGO DE BOLAMA-BIJAGÓS Bubaque, 16 e 19 de fevereiro de 2017



Tim Dodman



Tim Dodman

Since the workshop, follow-up meetings were held and a dossier and maps completed, with a final application for nomination submitted to UNESCO in 2024. CWSS and the WSFI anticipate strengthening links with the Bijagós Archipelago through future initiatives, for which World Heritage status of this key site for migratory waterbirds would be very welcome.



Tim Dodman

**Ilhéu de Jeta: Building capacity for breeding bird conservation**

Whilst the extensive Bijagós Archipelago is the most important site in Guinea-Bissau for migratory waders, the islet of Bantambur off Ilhéu de Jeta, west of the capital Bissau supports most breeding terns and gulls. The islet is unprotected, but forms part of the Rio Mansôa and Gêba Estuary IBA. In the 1990s, prior to the establishment of the WSFI, CWSS supported the formation of the NGO Organização para a Defesa e Desenvolvimento das Zonas Húmidas (ODZH), which remains a focal partner for WSFI in Guinea-Bissau. In 2014/15, WSFI supported ODZH to purchase a motorised pirogue to enable them to launch awareness raising activities at Jeta and to establish local-led monitoring and surveillance of Bantambur.



Tim Dodman



Tim Dodman

After a visit to Jeta in 2017, WSFI provided further support to build capacity of the local community-based organisation Djotchetchenglar through local training and awareness raising, and for construction of a small centre close to the islet of Bantambur. This centre is used by Djotchetchenglar for community meetings, and as a place for visitors to stay when carrying out monitoring, surveillance or research. The centre is also used for temporary storage of goods offloaded by boat. Engaging the local community has proved vital in helping to minimise disturbance at Bantambur.



ODZH



Axel Driol



Tim Dodman

## Sierra Leone: national training and nature guides

The coastline of Sierra Leone is rich in mangroves, river estuaries and long beaches, and supports important nature areas, with several key sites for waterbirds, as well as coastal cities and economies, notably fisheries. The high tourism potential has suffered a series of setbacks, but eco-tourism offers an important lifeline for communities. WSFI has supported a range of activities in Sierra Leone, including training, WMBD activities and supporting ecotourism development. Key events include:



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### 2013: Training workshop on the Conservation of coastal wetlands and waterbirds, Kent

This five-day training workshop involving 23 participants from Sierra Leone plus three from Liberia aimed to build and strengthen the capacities of environmental NGOs in conserving migratory waterbirds and their key habitats. It included a full-day field trip to Tissana. The workshop was organised with the Conservation Society of Sierra Leone (CSSL).



### 2014: Community training workshop, Tissana

CSSL and the National Association of Certified Tour Guides (NACToG) led this workshop, which aimed to establish a platform for collaboration between environmental NGOs and local communities for the conservation of migratory birds and their habitats at Tissana, part of Yawri Bay. The training introduced waterbirds, their identification and basic monitoring, and explained their flyways and the benefits to communities from ecotourism.

### 2016/2017: Improving capacity of nature guides in sustainable ecotourism and coastal birds

NACToG led two workshops, which aimed to build capacity of local tour guides in nature tourism and improve their awareness about birds of the coastal zone. WSFI also supported two NACToG guides to participate in the global travel trade show, ITB Berlin, to showcase Sierra Leone.

### 2019: Migratory waterbird training workshop, Tasso Island

CSSL led this workshop, which aimed to strengthen capacity in migratory bird conservation and monitoring in Sierra Leone.

### 2021-2023: Building capacity of nature tour guides and local awareness

Three consecutive workshops were organised to further strengthen local tour guides and engage them to build awareness of wetlands and waterbirds through WMBD events. These workshops led to the formation of the Sierra Leone Nature Guides Association (SLNGA).



Ousman Kamara



Tim Dodman

### Statement by Ousman Kamara, Sierra Leone Nature Guides Association

"Sierra Leone has benefited from capacity building for different target groups, supported by WSFI. Training for local nature guides has been very important for us, and can contribute to the creation of employment, helping us to get job opportunities and receive income in our different localities. We have also raised awareness about the importance of protecting migratory birds and their habitats in Sierra Leone, which can benefit birds and people."



## Benin: Surveys of waterbird hunting, waterbird colonies and awareness

Benin’s relatively short coastline is rich in coastal lagoons, which provide important habitat for waterbirds, and support local economies and culture, including traditional *acadja* fisheries. Since 2021, WSFI has supported the local NGO Oiseaux et Horizons, in collaboration with the Benin Environment and Education Society (BEES) to conduct short-term projects focused on the conservation of waterbirds, through surveys and awareness-raising. In 2021, the team conducted a survey of the hunting pressure on waterbirds during the dry season through community-based questionnaires of 141 hunters in 36 villages of the coastal belt between Ouidah and Grand-Popo. It was estimated that 11,591 waterbirds were captured per week by these hunters, the most frequently caught species being the Black Crake.



Surveys were of colonial breeding birds of southern Benin also conducted, notably of egrets, herons, African Cormorant and Openbill Stork, which nest in mangroves and other trees in coastal wetlands. An awareness programme encouraged local communities not to disturb the breeding colonies.



Camille Tchankpan



Camille Tchankpan

Awareness was further boosted through WMBD activities, carried out in partnership with the Association des Jeunes Volontaires pour la Conservation de l’Environnement (AJCVE) of Adouanko. Young participants formed a nature club at the end of the event. In 2024, full surveys of mixed waterbird colonies at two coastal Ramsar sites were conducted. It is anticipated that follow-up projects combining field surveys, education and awareness will take place.



Camille Tchankpan

### Statement from Camille Tchankpan, Oiseaux et Horizons

“WSFI has supported a valuable capacity-building and management programme in Benin focused on key coastal Ramsar sites, promoting studies on the threats to waterbirds, including hunting, and raising awareness among young people and local communities through educational World Migratory Bird Day activities. We have been able to monitor mixed colonies of herons, African Cormorant and African Openbill, strengthening our understanding of their distribution and the importance of sustainable conservation of their habitats, whilst also raising awareness among local populations.”



Tim Dodman

## Nigeria: training and awareness

The major wetland of Nigeria’s coastal zone is the extensive Niger Delta, whose estuarine waters are fringed by extensive mangroves and seasonal swamp forest. Further west, shallow coastal lagoons extend behind barrier beaches, whilst to east is the Cross River Estuary. Nigeria’s coastal belt supports a major human population, especially in and around Lagos.

WSFI has supported the Nigerian Conservation Foundation (NCF) to carry out training and awareness programmes at Lekki, Lagos and in the Cross River Estuary, through institutional strengthening of community groups for the conservation of mangroves and migratory birds within Bakassi Local Government Area, including establishment of a community tree nursery.

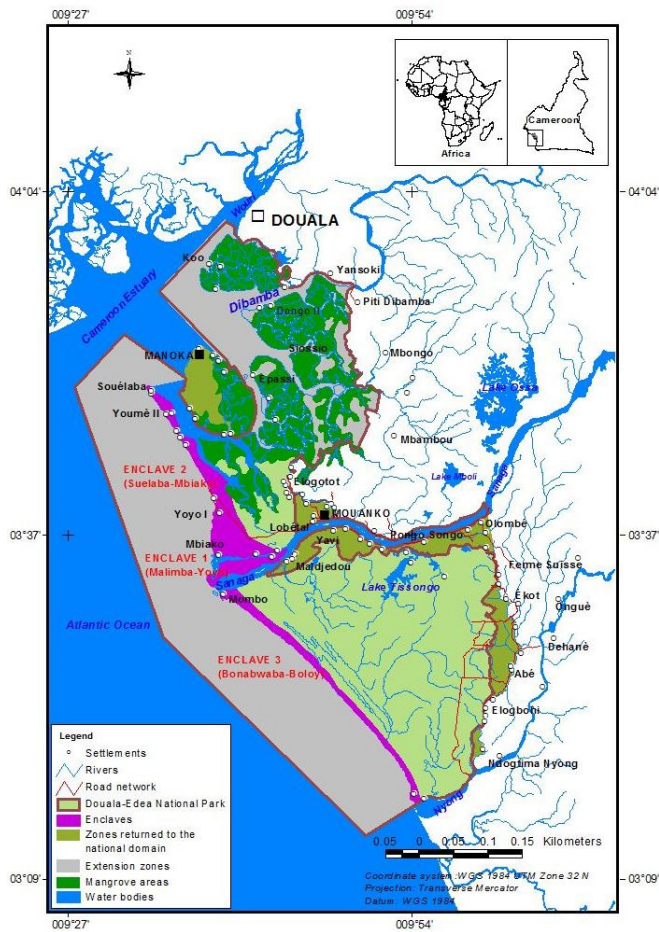
In Lagos, WSFI supported a photographic exhibition at the National Theatre, Iganmu, Lagos, created to highlight the biodiversity values of the natural wetlands and mangroves on the theatre’s land, which were threatened with destruction and conversion to development. The exhibition aimed to raise awareness about the value of wetlands for birds and people, to generate interest in wetland conservation and to influence the theatre management and general public to respond negatively to the idea of wantonly destroying more urban wetlands.



Tim Dodman

### Statement by Esther Nosazeogie, Nigerian Institute for Oceanography and Marine Research

“WSFI provided funds and support for creating an educational exhibition to save a key urban wetland in Lagos, Nigeria, which is located at the National Theatre, one of the country’s most important cultural icons. The wetland is currently undergoing restoration, and the exhibition has increased public awareness and engagement on wetland and waterbird issues in the city. We hope that this will be an example of urban wetland conservation, and promote wise use of coastal resources in Nigeria’s largest city and other coastal cities.”



### Cameroon: Building community awareness on waterbirds and their habitats, Douala-Edea National Park

The 300,000 ha Douala Edea National Park, wedged between a palm oil plantation to the northeast, local agriculture and fishing communities to the northwest and the Atlantic Ocean to the south, was created in October 2018. Its habitats span terrestrial, marine, river and lake ecosystems, and its extensive mud- and sand- flats support over 70 species of waterbirds.

WSFI supported the Cameroon Wildlife Conservation Society (CWCS) in 2019 to promote awareness of local communities and stakeholders of Douala-Edea on migratory waterbirds. The campaign focused on the importance, benefits and habitats of waterbirds and the need to minimise disturbance within and around the park, as well as the integration of waterbirds into its future management.

Sensitisation campaigns covered about 70% of park villages, and the project brought stakeholders together for a WMBD campaign focused on plastic pollution. The recognition of waterbird needs in development projects was also highlighted, and the project contributed to Cameroon’s accession to AEWA, through meetings between the Ministry of Forestry and Wildlife and CWCS.

Priorities identified for the future were awareness raising and education programmes in schools and local communities; encouraging improved participation of women; and for local councils to support construction of toilets and drinking wells and train village scouts in community health.



Roger Alomina

### Equatorial Guinea: training and field surveys

Equatorial Guinea comprises the region of Río Muni, the continental zone of the country with a 265 km coastline, and two larger islands, Bioko (where the capital Malabo is found) and the more distant Annobón. Río Muni’s coastline includes beaches and estuaries with mangroves, whilst Annobón has a large volcanic crater lake and small islets important for breeding terns and boobies.

In 2017, based on a request by the government of Equatorial Guinea, WSFI organised a three-day training course and field surveys to the main coastal wetlands of Río Muni. Equipment was donated to enable future surveys. This was the first training course of its kind to take place in the country. The course, with 12 full-time participants, aimed to build awareness about the importance of coastal wetlands and waterbirds, and to introduce practical knowledge to enable identification and monitoring. A full day of training in Bata was followed by two field visits to the Río Campo Natural Reserve in the north and the Río Muni Estuary Natural Reserve in the south.



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The trainer and three participants then visited the island of Annobón situated more than 500 km southwest of Bata, where surveys were carried out of the coastal zone by boat, and of Lagoa Mazafim, the country’s largest freshwater lake and . Annobón is of high importance for breeding noddies. Black Noddy *Anous minutus* was more numerous (3,890) than Brown Noddy *Anous stolidus* (750). The surveys also confirmed the presence of Squacco Heron *Ardeola ralloides* on Annobón (first recorded there in 2016) and a breeding population of Common Moorhen *Gallinula chloropus*.



Tim Dodman



## Angola: Mussulo Bay, Lobito and the Namibie coastline

Angola’s long coastal belt extends from tropical Cabinda in the north to arid Namibie region in the south, comprising estuaries, mangroves in the north, coastal cliffs and beaches, extensive sandbars, lagoons and mudflats. The coastal waters are enriched by the Benguela Current, and coastal wetlands support a diverse range of waterbirds. With its extensive coastline, keen environmental NGOs and few international partners present, Angola has been a key focal country for WSFI.

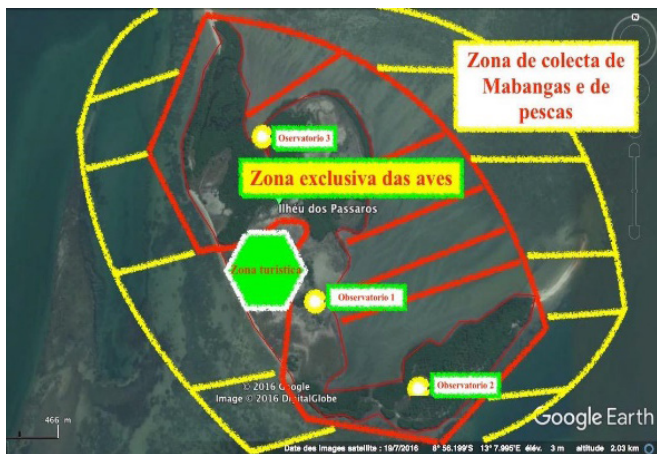
### Mussulo Bay

Mussulo Bay is a coastal wetland protected by the 30km long Mussulo Peninsula. Whilst it supports mangroves, tidal flats and waterbirds, it is also threatened by development and pollution, with Angola’s burgeoning capital, Luanda situated on the east coastline of the bay. The bay includes the protected Ilhéu dos Pássaros, a small islet that supports breeding and migratory birds, and the Saco dos Flamingos at its southern end, with shallow waters popular with flamingos, spoonbills and waders, amongst other birds. WSFI has supported the Instituto Nacional da Biodiversidade e Áreas de Conservação (INBAC) to construct a wooden observatory and sign at Ilhéu dos Pássaros, exchange meetings with fishermen illegally settled on the island, litter cleaning, training and awareness raising campaigns and bird surveys.



Miguel Xavier

In 2020, WSFI also supported the Ilhéu dos Pássaros management plan for INBAC. Key threats relate to establishment of a semi-permanent fishing camp in 2011 by communities engaged in collection of mabangas (cockles). Resulting impacts include mangrove cutting and overfishing of *mabanga*, whilst high levels of plastic pollution arise from urban settlements in the bay. Among its recommendations, the plan proposed zonation of the reserve to better control the different activities.



Map data: 2016 Google, DigitalGlobe



Miguel Xavier

### Building wetlands awareness in Lobito

Lobito is in Angola’s Benguela Province on the Atlantic coastline, north of the Catumbela Estuary. The city has an important port protected by a long sand spit, adjacent to which is a shallow urban lagoon, which includes a patch of mangroves. Since 2021, WSFI has been supporting the local volunteer-run NGO ADAMA (Associação dos Defensores e Amigos do Ambiente) to organise conservation activities in Lobito, including campaigns to clean and remove urban waste from the site, and to raise environmental awareness of local authorities and community members. ADAMA has proven to be an enthusiastic and active partner, and with WSFI support has conducted WMBD awareness campaigns, public meetings, bird-watching activities and setting up a small new wetland centre (CIOMA).



ADAMA



ADAMA



Miguel Xavier

### Statement from Madaleno Constantino, ADAMA

“Partnership with WSFI has been key for our organization, taking into account the skills, abilities, mentorship, lessons and resources received. The introduction of CEPA in our working scheme has created a more collaborative and friendly local community attitude towards migratory birds and their habitat in Lobito. WSFI has helped us to develop relationships with other organisations along the Eastern Atlantic Flyway, and has played a key role in our conservation flagship project - the CIOMA wetland centre (Centro de Informação Observação e Monitorização de Aves). Through CIOMA, Lobito has become a conservation national reference in Angola, playing an international role as an important bird migration stopover site. Through our shared conservation projects and their impact in the field, we are pleased to name WSFI as our Most Valuable Partner.”



ADAMA

### Taking steps to halt the trade in cormorants in southern Angola

Angola’s southern coastline supports important numbers of the globally Endangered Cape Cormorant *Phalacrocorax capensis*, with over 100,000 birds recorded in January 2020. Their recently discovered excessive capture for local commerce is considered a significant and urgent problem, representing a direct threat to this species. In addition, their sale in local markets poses a health risk to people who handle or consume them, especially from avian influenza which has recently impacted other colonial birds of Africa’s Atlantic coastline. The breeding populations of Cape Cormorants in South Africa and Namibia have decreased by around 50%, but their status in Angola is largely unknown, with only occasional past surveys and no regular research or monitoring programme.



Miguel Xavier



Miguel Xavier



Miguel Xavier



Miguel Xavier

The excessive modern trade in this species presents a problem that, if not addressed, may lead to the disappearance of this species from Angola. WSFI has supported Omulamba Biota Conservation (OBC) to check the presence of wild bird trade, which they confirmed, and to conduct awareness work in the town of Tômbwa, where cormorants are sold in the market, and at Baía dos Tigres, where fishermen capture the birds. Dishes made with waterbird or seabird meat are locally known as ‘caquiriquiri’.

In the future, OBC aims to establish an integrated conservation and health project in southwest Angola to halt the trade in Cape Cormorants and suppress the health risk to people.

### 3. Overview of projects in African countries of the East Atlantic Flyway, 2013-2023

The table below provides a brief overview of activities carried out with WSFI support in African countries of the East Atlantic Flyway between 2013 and 2023. A map showing the location of all projects supported is shown on the [WSFI website](#), where further information and project reports are available, and regularly updated.

Country	Activities
<b>Morocco</b>	Training workshops, wetland surveys, Ramsar site designations and awareness-raising in Saharan Morocco.
<b>Mauritania</b>	Cooperation through the Wadden Sea-Banc d’Arguin MOU.
<b>Senegal</b>	Host of two regional flyway workshops (one on site management, one on communication, awareness and wetland centres). Ecotourism development in Casamance. Surveys, litter campaign and awareness at Technopôle.
<b>The Gambia</b>	Cooperation for waterbird surveys and Biosphere site nomination.
<b>Guinea-Bissau</b>	Support for the Bijagós World Heritage nomination process. Training in waterbird and wetland surveys. Logistical and equipment support for Ilheu de Jeta and Bantambur - a key site for breeding terns and gulls.
<b>Guinea</b>	Awareness-raising /WMBD activities.
<b>Sierra Leone</b>	Training workshops in waterbird monitoring, flyway conservation and community engagement. Awareness-raising / WMBD activities. Support to developing nature guide network.
<b>Liberia</b>	Support for participants in training workshop in Sierra Leone.
<b>Ghana</b>	Support international participants to a regional wetland workshop.
<b>Togo</b>	Community-based initiatives / alternative income generation around coastal wetlands.
<b>Benin</b>	Host of an international Training of Trainers flyway workshop.
<b>Nigeria</b>	Support a wetlands and waterbirds exhibition at the Lagos Theatre. Training and materials at Lekki Education Centre, Lagos. Institutional Strengthening of Community Groups for conservation of mangroves and migratory birds, Cross River State.
<b>Cameroon</b>	Community sensitisation and awareness raising on migratory waterbirds and their habitats, Douala-Edea National Park.
<b>Equatorial Guinea</b>	First national training course in wetland and waterbird monitoring, with donation of equipment. Field surveys in all coastal regions, including seabird colonies of Annobón.
<b>Angola</b>	Host of an international Training of Trainers flyway workshop. Logistical support, construction of a bird hide, awareness-raising, surveys and litter campaigns, Ilhéu dos Aves / Mussulo Lagoon. Initiation of a wetland centre, awareness / WMBD activities, community-based surveys and training, Lobito. Addressing local trade of cormorants in Namibie province.
<b>Namibia</b>	Hosted an exchange visit of members of the Angolan waterbird monitoring team.



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## 4. Flyway Activities

In addition to local actions, WSFI has organised several flyway level activities in collaboration with partners, with physical workshops, online events and participation in conferences, notably the Pan-African Ornithological Congress (PAOC), supporting wetland symposia and side events at PAOC14 in Senegal and PAOC16 in Zimbabwe, as well as financing participants. Key regional events include:

### 2013: Regional Workshop: Management of key sites along the western coast of Africa for migratory birds, Senegal

This major regional training workshop, organised by WSFI, Wetlands International and BirdLife International, aimed to improve understanding of the flyway approach to conservation and wise use of waterbirds and wetlands among managers and administrators of sites along the western coast of Africa. With 50 participants involved in wetland and waterbird management from 18 African countries, the workshop was a real melting pot of shared ideas and experiences with indoor interactive presentations, group work with practical exercises and case studies, backed up by role plays and field trips within the Djoudj National Park. The workshop served as a springboard to discuss and explore ways and means to facilitate networking between managers of critical sites and to create a basis for cooperation with partners along the flyway.



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### 2014: Training of Trainers workshop for Portuguese-speaking countries: The flyway approach to conservation, and awareness-raising for flyway conservation, Angola

This workshop, a joint initiative of the African-Eurasian Migratory Waterbird Agreement (AEWA) and WSFI, with participants from Angola, Guinea-Bissau, Mozambique, São Tomé e Príncipe and Cabo Verde, aimed to build understanding about flyways and flyway conservation through presentations, interactive exercises and field visits. Participants underlined the advantage of having this type of training delivered in Portuguese and also underscored the importance of access to binoculars, telescopes and field guides. The workshop included a full day field trip to Mussulo Lagoon, where participants took part in group exercises and observed issues affecting this key coastal wetland.



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**2019: AEWA Training of Trainers Workshop for Francophone Countries of Western and Central Africa, Benin**

This workshop aimed to deliver training at the regional level to establish / strengthen a network of experienced trainers in francophone Western and Central Africa to enable them to conduct future local, national and regional trainings. The 44 trainees from 18 different countries were technical staff or affiliates of conservation, education or environmental organisations already engaged in the design or delivery of training at some level. Significant attention was paid to the Training of Trainers aspect, through carrying out and discussing novel exercises and by assigning participants with topics to deliver themselves. The highlight was an awareness-raising session with a school in the Sô-Ava commune at Ganvié. Field visits were designed to deliver shared experiences and to stimulate discussion, and there was a final session on developing future in-country training plans.



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**2022: Regional workshop: Building capacity of Africa’s coastal Atlantic wetland centres, Senegal**

This workshop organised by Migratory Birds for People (MBP), WSFI and Wetlands International brought together 34 participants from 14 countries engaged in CEPA, especially those involved in an environmental education centre or planning to develop a wetland centre. The main focus was on interaction through group work and exercises, and learning from each other. An integral part was a WMBD event at Palmarin, which showcased the importance of engaging local communities and schools. The workshop yielded some important recommendations for and insights into developing and operating wetland centres and organising CEPA events, as well as fundraising and networking. Participants were highly motivated and showed great interest in continuing to network together.



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## World Migratory Bird Day

World Migratory Bird Day (WMBD) is a key biannual event for building awareness about migratory bird conservation. WSFI has supported a number of events in several countries linked to WMBD, including in Senegal, Guinea, Sierra Leone, Ghana, Benin, Nigeria and Angola. A few examples of supported activities are shown below.



ADAMA

### a. Litter clean-up in Lobito, Angola

WSFI has supported local NGO ADAMA to carry out WMBD events at Lobito. The presence of a significant wetland in proximity to a major city results in urban waste being a key threat, but also enables outreach activities to reach a large audience. Hence one of the WMBD activities supported in Lobito was a litter-cleaning campaign, in addition to other activities such as public meetings, interviews with local wetland users and a school twinning programme with EVOA Wetland Centre in Portugal.

### b. Field excursion in Guinea

In October 2021, WSFI supported the NGO Guinée Ecologie to celebrate WMBD, with two local organisations, Terrafrik and the Association des Jeunes pour la Restauration de l'Ecosystème. A conference and field excursion were held at the Lansana Conté University at Sonfonia to inform about the importance of protecting migratory birds and their habitats.



Roger Doré

### c. Awareness raising campaigns in Ghana

WSFI supported Ghana's Wildlife Division of the Forestry Commission to organise WMBD events at two coastal Ramsar sites – Songor Lagoon and Keta Lagoon. The celebrations combined comprehensive awareness and outreach activities to encourage support to protect migratory birds and their habitats, and involved children from schools adjacent to the wetlands.



Agyeman Dickson



Ousman Kamara

### d. School outreach activities in Sierra Leone

WMBD events organised by the Sierra Leone Nature Guide Association (SLNGA) between 2021 and 2023 have reached mainly local pupils of Yawri Bay and engaged them in birdwatching and entertaining meetings, which have included skit plays. In 2023 SLNGA organised a three-day training event for local youth participants to raise awareness about the conservation of migratory birds.

## Wetland centres

Wetland centres can play an important role in building awareness about the values of wetlands and in providing facilities for education and recreation, as well as a potential source of sustainable income. WSFI has played a key role in supporting wetland centres along the Atlantic coastline of Africa through the development of wetland centres and educational activities and by enabling exchanges between centres. In addition, WSFI is an active partner in the Migratory Birds for People (MBP) initiative of the Wildfowl and Wetlands Trust (WWT).

### a. Development of wetland centres in Angola

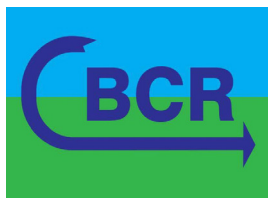
Angola has a number of coastal wetlands close to urban centres, and as such lends itself well to the development of wetland centres. WSFI supported construction of a bird hide on Mussulo Lagoon, which has served as a centre for observation and recreation. WSFI is further supporting the development of a wetland centre at Lobito, the Centro de Informação, Observação e Monitorização de Aves (CIOMA).

A stakeholder forum was held in January 2022, which brought together communities to propose solutions for conservation of the city’s urban wetlands. The forum recommended securing funds for the creation of a wetland centre and provision of a space by the municipal authority. While the initial plans drawn up were rather ambitious in terms of fundraising, the centre already went ahead through the enthusiasm and ambition of the local partner ADAMA, who started with a gazebo and chairs placed outside.



ADAMA

### b. Planning for a wetland centre at Densu Delta, Ghana



The Densu Delta Wetland is a vital ecosystem located in the urban settlement of Accra, and a Ramsar Site since 1992 designated for the significant number of waterbirds it supports.

Through WSFI support, the Centre for Biodiversity Conservation and Research (CBCR) carried out a feasibility study to establish a wetland centre at Densu Delta, including a stakeholder engagement meeting and school outreach. A roadmap was drawn up defining steps to undertake in order to establish a centre.



Emmanuel Teye

### c. Lekki Conservation Centre, Nigeria

The Lekki Conservation Centre (LCC), a 78 ha natural reserve in Lagos which hosts over 60,000 visitors annually, was established in 1990 to promote biodiversity conservation, research and environmental education, policy advocacy and ecotourism. WSFI has supported various activities at LCC, including the development and production of an identification guide on migratory waterbirds, a capacity-building workshop for wildlife officers and a WMBD celebration involving over 200 participants. In 2023, WSFI supported an exchange visit from Lobito, Angola to Lekki, which served as a fruitful knowledge exchange, providing much practical guidance for Lobito.



NCF (Nigerian Conservation Foundation)



## African East Atlantic Flyway Guide

Field guides are key to help build capacity for the identification, awareness and appreciation of waterbirds. The WSFI published the African East Atlantic Flyway Guide, developed by Tim Dodman and Clive Barlow, in 2015 (with a second issue in 2021). The attractive comprehensive field guide in English, French and Portuguese highlights bird migration and the linking of continents and provides support to WSFI monitoring objectives.

The field guide covers the Atlantic coastline of Africa from Morocco to South Africa, focusing on waterbirds, seabirds and other prominent wetland birds. It is photo-rich and has maps showing the coastal distribution in Africa of all 273 bird species covered.

The field guide aims to assist wildlife personnel, students and enthusiasts along the western coast of Africa to learn about the rich diversity of birds found in the region. Improving field skills through use of the guide should help to improve monitoring, management and conservation. The guide contributes to build bird identification skills, awareness of bird ecology, behaviour and movements, and a wider appreciation of waterbirds and their habitats.

Crucial for conservation efforts, the field guide has been and continues to be distributed freely to field workers, students and other flyway conservationists in all African countries of the East Atlantic Flyway . It is used widely in monitoring, field research, education and in raising awareness, and has received very positive reviews.



NLPV/ Gundolf Reichert



Tim Dodman

## East Atlantic Flyway Youth Forum

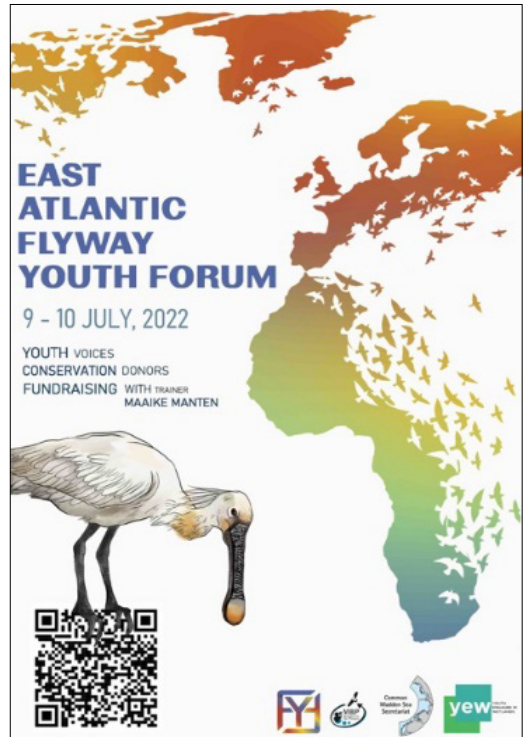
Youth voices are often neglected in ongoing discussions and decision-making, despite that fact that young people are going to be most affected by future environmental changes and that many young people already actively work in wetland and waterbird conservation.



The East Atlantic Flyway Youth Forum (EAFYF) is an initiative aimed at engaging and empowering young conservationists and activists from countries along the East Atlantic Flyway. It provides a platform for youth to connect with peers, acquire knowledge, and share ideas on conservation projects focused on protecting waterbirds and their wetland habitats. Participants include young people from diverse backgrounds who share a passion for biodiversity, conservation and the environment in general. The forum aims to equip them with expertise, skills and networks to influence conservation efforts in their regions.

Initiated in 2021, based on the experience of the 1<sup>st</sup> Flyway Youth Forum in the East Asian-Australasian Flyway, the EAFYF has established itself as an annual training and networking event, and has so far covered topics from fundraising to storytelling and citizen science. Youth from 20 flyway countries have participated in these events. Beside the training provided as part of the annual event, participants have benefitted from additional funds raised by the WSFI for youth involvement, giving them the opportunity to conduct small conservation projects or participate in regional training workshops. A group of flyway youth ambassadors is advising the organisers on topics of interest to youth and helping to raise awareness of the needs for flyway conservation.

The EAFYF is a collaboration between the WSFI, Migratory Birds for People (MBP) – a Wildfowl and Wetlands Trust (WWT) initiative - and Youth Engaged in Wetlands (YEW).



Tim Dodman

## 5. International partners in capacity building and management

CWSS and the WSFI work in collaboration with a range of partners along the East Atlantic Flyway. Key international partners to CWSS and WSFI at the flyway level are:



- **African-Eurasian Migratory Waterbird Agreement (AEWA)**

AEWA is an intergovernmental treaty dedicated to the conservation of migratory waterbirds and their habitats. It brings together countries and the conservation community for coordinated conservation and management of migratory waterbirds throughout their migratory range. The AEWA Africa Initiative promotes implementation of AEWA in Africa, guided by the AEWA Plan of Action for Africa.



- **BirdLife International**

BirdLife is a global family of 123 national Partners covering all continents, landscapes and seascapes, whose mission is to conserve birds, their habitats and global biodiversity, working with people toward sustainability in the use of natural resources. The BirdLife partnership established the East Atlantic Flyway Initiative (EAFI) to facilitate the monitoring of birds and sites, identify conservation priorities, and increase conservation capacity along the flyway.



- **Wetlands International**

Wetlands International is dedicated to protecting and restoring wetlands for their environmental value as well as for the services they provide to people. Wetlands International also coordinates the International Waterbird Census, and provides support in the region from its office in Dakar.



- **Migratory Birds for People (MBP), an initiative of the Wildfowl and Wetlands Trust (WWT)**

MBP connects about 30 wetland visitor centres across Europe and West Africa in a network that follows the flight paths of migratory wetland birds. These centres work together to share best practice and develop new approaches to delivering wetland messages to their visitors.



- **Partenariat Régional pour la Conservation de la Zone Côtière et Marine en Afrique de l'Ouest**

PRCM is a coalition of actors working on coastal issues of West Africa from Mauritania to Sierra Leone, with activities coordinated from its office in Dakar. PRCM has a number of projects along West Africa's coastline, and organises the Regional Coastal and Marine Forum.

### Statement from Evelyn Moloko, AEWA

"The collaboration between AEWA and WSFI over the past decade has been instrumental in advancing the conservation of migratory waterbirds along the East Atlantic Flyway, with emphasis on joint activities between the [AEWA African Initiative](#) and the WSFI Capacity Building and Management Programme. By combining efforts through joint strategic planning operations, project development initiatives and on-the-ground capacity enhancement activities such as the Flyway Training of Trainers workshops jointly organized for Lusophone African countries in [Angola \(2014\)](#) and for francophone Western and Central African countries in [Benin \(2019\)](#), we have not only strengthened waterbird conservation across the East Atlantic Flyway, but also maximised the impact of our shared resources for more effective attainment of our common goals. This partnership has significantly enhanced the visibility of both AEWA and WSFI along the East Atlantic Flyway and has helped provide targeted support for waterbird monitoring, national/flyway-level implementation of AEWA International Single Species Action Plans such as the one for the Lesser Flamingo, and the establishment of a valuable network of highly motivated persons advancing both political and technical aspects of waterbird and wetland conservation."



Tim Dodman

## 6. Acknowledgements

WSFI is an international multi-stakeholder initiative which involves enthusiastic conservationists in rural areas, as well as large international organisations. The projects presented in this report give an insight into some of the successful activities conducted by partners with support of the WSFI capacity building programme, but many more inspirational activities have taken place. The [WSFI website](#) provides a map with further information on projects and is regularly updated. Please have a look and learn more about our joint efforts.

Without the financial support of partners from the Wadden Sea, we could not have achieved any of this. Hence, we would like to express our gratitude to the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection, which has been the main funder of the WSFI capacity building programme, funding capacity building activities in partner countries even before the official launch of the WSFI. The regular annual financial contributions have ensured the sustainability of investments by allowing to build on local achievements. Additional financial support has been provided by the Danish Environmental Protection Agency, the Dutch Ministry of Agriculture, Fisheries, Food Security, Nature and the Lower Saxon Wadden Sea National Park Authority, and Migratory Birds for People.

The WSFI team thank all the partners who we've worked with over a productive ten-year period and who have implemented some fantastic activities. We are very impressed by the enthusiasm of this dynamic network of the East Atlantic Flyway. We look forward to continuing this work together. We also warmly thank Gerold Lürßen, who led the WSFI launch in 2011-2012 and coordinated activities until his retirement in 2020.

If you would like to become more involved in the work of the Wadden Sea Flyway Initiative, please get in contact via [wsfi@waddensea-secretariat.org](mailto:wsfi@waddensea-secretariat.org).

### Statement from Ariana Cabral, Lantuna, Cabo Verde

"As a young graduate at the start of my career, I took part in the CEPA workshop in Senegal. The workshop was fundamental in opening up my learning horizons, and the networking that took place was of great value to me; making connections and sharing experiences led to valuable opportunities. The workshop was extremely enriching and gave me valuable tools to interact more effectively with people in the community. I learnt communication techniques that promote empathy and active listening, which made a big difference to my approaches. In addition, the group dynamics helped me to better understand the needs and concerns of others, allowing me to connect in a more genuine and constructive way. I feel better prepared to collaborate and build solid relationships in the community and hope to continue applying what I've learnt in my professional career."



Tim Dodman

### Statement from Tim Dodman, WSFI

"WSFI's capacity-building and management programme has managed to support a wide range of small projects over ten years, embracing almost all countries along Africa's Atlantic coastline in one way or another. There has been real enthusiasm, innovation and purpose, and it's amazing what can be achieved sometimes through short targeted small projects. Flyway conservation is a great way to bring people together, and the rewards for both birds and people invariably justify the effort."



Jennifer Foley

### Statement from Kristine Meise, WSFI coordinator at the Common Wadden Sea Secretariat

In 2021, I joined the ongoing efforts of the Wadden Sea Flyway Initiative as the new coordinator. Seeing the progress that has been made over the years to advance the conservation of migratory birds is truly inspiring. This report clearly shows that enthusiastic people and collaborators are key for achieving tangible results. By providing tools, training and networking opportunities for local partners the WSFI's capacity building and management programme contributes to strengthen the protection of migratory birds at the national and local level.



CWSS

