

Building capacities of local associations in the Atlantic Moroccan Sahara in waterbird identification and monitoring – Phase II

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Participants and members of **Sahara Association for coastal and rural development** at Fom EL Oued Layoun.



Participants and members of **Association Research and studies Group on Saharan Coast** at Boujdour



I. Results

R1. Two groups belonging to two NGOs representing local Associations trained in Bird ID and monitoring

With the financial support of the WSFI, two trainings on the identification and monitoring of waterbirds were organized from 14 to 24 February 2018 in the Moroccan Atlantic Sahara for the benefit of two local NGOs: **Sahara Association for coastal and rural development** and **Research and studies Group on Saharan Coast** respectively based in Laayoun and Boujdour.

The two NGOs are part of the **AMCDD** (*Alliance Marocaine pour le Climat et le Développement Durable*) and both are leading local civil societies in the Sahara and advocate for the protection of Saharan Biodiversity and natural areas including **Foum EL oued** and **Awsift coasts**, so far not listed as protected areas. This latter, which is situated 18 km south of Boujdour city, is considered as Important Bird Area -IBA (Magin, 1995) and SIBE- Site d'Intérêt Biologique et écologique (BCEOM-SECA, (1995) according to Protected Area Master Plan.

Trainings took place in venues nearby those two wetlands which are however not designated as protected areas but are very important for migratory waterbirds and for some resident species such as the vulnerable Marbled teal (*Marmaronetta angustirostris*) and Ruddy Shelduck (*Tadorna ferruginea*). The beneficiaries were mainly university students and / or voluntary members of both NGOs. Participants were interested in birdwatching, ecotourism and conservation. Among them, there were also artists and film-makers (see list of participants Annexes I and II).

In total, 15 participants attended the training in Laayoun including one representative of the Moroccan wildlife conservation authorities namely the Haut Commissariat aux Eaux et Forêts et à la Lutte contre la desertification (HCEFLCD) and 12 participants in Boujdour, making the total beneficiaries 27 individuals, demonstrating the strong interest of the civil society in wetlands and bird conservation locally.

Both associations are recognizing the importance of maintaining a regular monitoring of the birds at the level of these two key wetlands as well as in all



the wetlands of the Moroccan Atlantic Sahara region which represents a key stopover area for thousands of migratory birds using the East Atlantic Flyway. As a result, they are committed to contributing to the winter censuses of waterbirds in accordance with national and international guidelines and are grateful to WSFI for providing them with the opportunity to be trained by an expert in bird identification and initiated in waterbird counting methods.

Two participants from the 2017 training have attended this second phase session to demonstrate their learning and how they use it to perform waterbird census and wetland survey respectively in Dakhla Bay and Khnifiss Lagoon.

The trainings were carried out according to the programs in Annex III.

R2. A guideline of waterbird and wetland monitoring developed

The guideline document in Arabic developed during the first phase was disseminated.

R3. Two telescopes and 6 Binoculars distributed

One telescope and 3 binoculars per NGO were purchased and will be distributed in the course of April.

R.4 A supplementary set of six illustrated (WSFI) guides of waterbirds were disseminated by SPANA Morocco to the two NGOs, and the use of the guide was well understood.

II. Communication and visibility

The two training activities were covered by the Laayoun Radio and Television and it will be integrated as a 30 min sequence of a forthcoming documentary movie which will be displayed in June 2018 (See related photos).

All photos of the trainings are sent in a separate file.

III. Waterbird census



Waterbird censuses were carried out at 7 and 8 different wetlands respectively in 2017 and 2018. A scientific paper is being prepared for a peer-reviewed journal using the census results for 2017 and 2018 winters and the past years to show the protection effects on waterbird trends in this arid section of east-Atlantic flyway and the importance of maintaining long-term censuses in order to draw the best conservation measures and assess the response of waterbirds by comparing the relative abundance and species richness trends by sites and guilds.

Significant numbers of waterbirds were counted during the survey in Foum AL Oued which qualifies this wetland to become Important Bird Area (Presence of Marbled Teal - VU, Common Pochard -VU, Black-tailed Godwit-VU, Knot – NT; Eurasian Curlew-NT,..) and Ramsar Site in the future since it verify several criterions:

- ✓ Criterion 1—Representative, rare or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region
- ✓ Criterion 2—Supports vulnerable, endangered, or critically endangered species or threatened ecological communities
- ✓ Criterion 5—Regularly supports 20000 or more waterbirds
- ✓ Criterion 6—Regularly supports 1% of the individuals in a population of one species or subspecies of waterbird

Example of the significant numbers counted per species

- Knot (*Calidris canutus*) – NT 12000
- Marbled Teal (*Marmaronetta angustirostris*) – VU- 2100
- Black-tailed Godwit (*Limosa limosa*) – VU-1450
- Shoveler (*Mareca clypeata*) –LC- 1200
- Greater Flamingoes (*Phoenicopterus ruber*) –LC- 1141
- Caspian tern (*Hydroprogne caspia*) – LC- 1086
- Moorhen (*Gallinula chloropus*) –LC- 1060
- Eurasian Spoonbill (*Platalea leucorodea*) –LC- 814
- Glossy Ibis (*Plegadis falcinellus*) –LC-719
- Pied Avocet (*Recurvirostra avosetta*) –LC- 500

Below the manuscript abstract



Title: Evaluating the effectiveness of Moroccan Atlantic strictly protected areas for wintering waterbirds using Before-After-Control-Impact (BACI) Model

Abstract

Assessment of management and conservation measures is a crucial step to ensure that the actions undertaken have achieved the expected results. Depending on the results of this evaluation, managers may reframe or even change their approaches. In this work, the effectiveness of setting-up strictly protected areas was assessed in three Moroccan Atlantic sites, namely Ad-Dakhla bay, Khnifiss lagoon, and Souss-Massa estuary. In particular, we investigated whether protection of these sites was followed by significant changes in the direction and/or strength of variation in waterbird diversity over time. Our results showed that during the pre-protection period, waterbird species richness has been declining over time, while total waterbird density and the diversity of wading and open-water birds have been maintained at low levels. However, shortly after site protection, a rapid increase in these parameters was observed, while no significant change was recorded for waterfowl diversity. Overall, these results suggest that the protection of these wetlands has been a watershed in the history of their birds, reversing the trends of a continuing decline towards rapid regeneration. This is one of the obvious faces of the success of the program undertaken by the Moroccan authorities for the conservation of biodiversity within these wetlands. Further investigations on the effects of protection in all national territory are needed to more profoundly understand the role of such conservation measures on wintering waterbird communities.

IV. Recommendations

In the light of the preliminary results about the significant importance of Foum EL Oued Wetlands, it has been decided to prepare a technical factsheet based on Ramsar's template in order to be submitted to Moroccan wildlife authorities (HCEFLCD) and Ramsar National Focal Point.

Also the AMCDD coalition has decided to convey an international workshop in Laayoun next fall on the importance of Foum Al Oued and Atlantic Saharan Wetlands for flyways. Support of WSFI will be highly appreciated in order to reveal the international character of those wetlands and the role of building capacities in waterbird monitoring along the East-Atlantic flyways.



V. Financial report

For some expenses that were impossible to justify by receipts/invoices, thus I have hired a society that has covered the workshop fees (venues, food, some participant accommodations) plus travel to sites including car rental. The society has charged 10% for management and delivered VAT-included invoices.

Activities		Item (MAD)	Per se	Total (MAD)	(€) 1 €= 11.2 MAD
	Return ticket Airfare Casablanca Layoun of trainer	1586,40	1	1586,40	142
	Return ticket Airfare Casablanca Layoun of trainer	1586,40	1	1586,40	166
	Trainer fees (including accommodation, food and transport from Casablanca to Rabat)	2200	9	19800	1768
	workshops (lunches, venue, others)	14359	1	14359	1282
	Travel to sites – Car rental	2100	1	2900	188
A1	Travel to sites - Fuel	400	2	800	71
A2	Writing, translation, printing documents	250	1	250	22
	Telescopes	5000	2	10000	893
A3	Binoculars	1000	6	6000	536
A4	Distribution of WSFI field guide	0	0	0	0
	Total			56481,8	5067

Annex I

Common
Wadden Sea
Secretariat

Royaume du Maroc

Haut Commissariat aux Eaux et Forêts
et à la Lutte Contre la Désertification

AMCDD
Alliance Marocaine pour le Climat
et le Développement Durable

العيون في 15 فبراير 2018

بناء قدرات الجمعيات المحلية في الصحراء الأطلسية
المغربية في التعرف و رصد الطيور المائية

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marocain dans l'identification et la surveillance des oiseaux d'eau**

لائحة الحضور
15 فبراير 2018

التوقيع	رقم الهاتف او الايميل	الهيئة	الاسم الكامل
	06.70.02.99.09	جمعية منسوكي كبريتا	محمد عيسى محمد
	06.20.80.93.87	النادي المغربي للبيئة والتنمية مركز العيون	عبد الرحمن الانشاري
	06.38.01.28.42	النادي المغربي للبيئة والتنمية مركز العيون	الموسامير محمد
	0661734381	جمعية الماء والطاقة للمصنع	عبد الله الموزن
	06.29.6350.16	النادي الثقافي الشمعي - البرقي	خطاي المهدي
	0663767089	جمعية اساتذة علوم الحياة والبيئة مركز العيون	محمد عادل الخورى

Annex I (Bis)

Common
Wadden Sea
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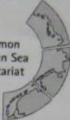
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Annex II

لائحة الحضور لورشة بناء قدرات الجمعيات المحلية في التعرف ورصد الطيور المائية
يوم الخميس 22 فبراير 2018

الاسم الكامل	الهيئة	الاميل	رقم الهاتف	الامضاء
يوسف صموون	ج. شباب الخبز للتنمية والتعاون	—	06.71.87.17.19	
عبد الرحيم دباسي	ج. عمى النهضة للشعبية والتعاون	adderrachim.balbal@gmail.com	06.82.98.19.93	
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برالدين حدرم	ج. الصالح للتربية والقناعة	—	0767665049	
دبدي ابراهيم	—	FRAHIMDAIDDIH@gmail.com	0707909293	
الطيب ابي بعا	—	AZE9945SD@gmail.com	0768487969	

جمعية شباب هي النهضة للتنمية والتعاون - المقر الوقت : دار الشباب المدينة - بوجدور
 البريد الإلكتروني : annahdaboudour@gmail.com
 الهاتف : 2126.70.04.69.47

Annex III



Annex III

	Fev-17	9h -10h	10h-11h	11h-12h	12h-12h30	12h30-14h	14h-15H	15h-16h	16h-17h	17h-18h	18h --	
14/02				Voyage de Rabat à Casablanca				Casablanca -Laayoun				
J1		Enregistrement Tour de table Introductions/ programme	Les Zones humides et oiseaux d'eau (OE) Directives suivi zones humides et OE	Aproche voie de migration: initiative Wadden Sea, WI, AEWa et Ramsar	Questions/débat s	Pause-déjeuner	Identification, comptage et suivi des oiseaux d'eau au Maroc	Utilisation du matériel optique (Jumelles et telescope) et Guide d'identification d'oiseaux				
J2		Plan de la journée	Observation des oiseaux dans la Lagune Foum AL Oued Identification, Recensement et description des parametres du mileu Prise de poto des espèces		Pause-déjeuner	Exercices: Identification des Oiseaux photographiés Utilisation du formulaire	Evaluation Besoin en matériel Engagement pour le suivi des Oiseaux d'eau					
J3		Recesement hivernal des Oiseaux d'eau dans les zones humides du Maroc Sud Atlantiques - Khnifiss Lagoon - Zones Humides de Laayoune - Oued Amma Fatma - Oued Chbeyka							Départ de Laayoun à Casablanca			
21/02		Waterbird census			Voyage de Rabat à Casablanca				Casablanca -Laayoun			
J4		Voyage Laayoun à Boujdour			Visite du Point d'Awsift et les Falaises de Boujdour							
J5		Enregistrement Tour de table Introductions/ programme	Les Zones humides et oiseaux d'eau (OE) Directives suivi zones humides	Aproche voie de migration: initiative Wadden Sea, WI, AEWa et Ramsar	Questions/débat s	Pause-déjeuner	Identification, comptage et suivi des oiseaux d'eau au Maroc	Utilisation du matériel optique (Jumelles et telescope) et Guide d'identification d'oiseaux				



J6		et OE							
	Plan de la journée	Observation des oiseaux dans la Baie de Boujdour : Identification, Recensement et description des parametres du mileu Prise de poto des espèces			Pause-déjeuner	Exercices: identification des Oiseaux photographiés Utilisation du formulaire	Evaluation Besoin en matériel Engagement pour le suivi des Oiseaux d'eau		
	Waterbird census				Layoun - Rabat				

	Workshop
	Fied work/ Waterbirds census
	Travels