COOL TOOL
Tracking Africa’s migratory waterbirds

TEXT BY TIM DODMAN
It’s a dilemma. How do we conserve migratory animals? How do we justify protecting a site that they may visit for only a few months of the year, or perhaps once every few years? And how important are protected areas to a migrant that spends much of its time on the hoof or wing? Without a doubt, migratory creatures, from wildebeest to whales, bats to butterflies and turtles to turtle-doves, present us with complex conservation challenges.

No wonder there’s an international convention – the Convention for the Conservation of Migratory Species (CMS) – dedicated to them.

Waterbirds include some of the most remarkable migrants. It’s partly due to the astonishing distances they can cover; who can be impressed by the Arctic Tern’s annual round trip of 15,000 kilometres? (See also page 13 in this issue.) Satellite telemetry has given us some great insights in recent years. We now know that Bar-tailed Godwits can make it from Alaska to New Zealand in just one mighty flight. The congregatory nature of many waterbirds is equally spectacular. Mauritania’s famous Banc d’Arguin can support 2.5 million migratory waders at any one time – a swirling torrent of life on the edge of the Saharan sands.

It is therefore appropriate that migratory waterbirds have their own regional arrangement under the CMS: the African Eurasian Migratory Waterbird Agreement (AEWA). Fifteen years old last June, AEWA already has 26 African member countries and is a growing force for putting migratory birds on the map. But then there’s another dilemma: is the map good enough? (Or maps, to be precise.) In order to conserve migratory waterbirds we need to know where and when they go, and what they’re going to find when they arrive. In short, we need maps supported by information that helps us see the whole picture, to understand the inter-connectivity of sites and the conservation needs along the whole flyway. The good news is that we now have something that can do just that – the Critical Site Network (CSN) Tool.

NGOs, Wetlands International and BirdLife International. The project had three main components: developing the CSN Tool, capacity building and enhancing communication.

A key capacity-building output is the Flyway Training Kit, a major resource that displays all main aspects of flyway conservation through technical modules, training formats and PowerPoint presentations. It’s available free online – in several languages – if you can’t lay your hands on one of the impressive 2.5-kilogram folders. The approach was hands-on, with 11 demonstration projects throughout the regions covered – the range of sites alone illustrates the international aspect to flyway conservation. One site was South Africa’s Wakkerstroom wetland, where BirdLife South Africa has developed local capacity for managing wetlands and at the same time promoted viable income-generating activities to encourage the equitable distribution of tourism revenue. The CSN Tool functions through an open-access interactive web portal, which integrates a large amount of information on approximately 300 waterbird species, the Critical Sites upon which they rely and the flyways that they use. Although developed primarily for use on migrants, the tool covers all waterbirds of Africa, Europe and the Middle East. Critical Sites are those considered essential to the long-term survival of one or more waterbird populations at any life stage. The tool will support site managers, national authorities and international agreements, as well as researchers and enthusiasts. Its flyway reach is enhanced by its availability in Arabic, English, French and Russian.

For an example of its practical application, why not start in Botswana, a country of regional importance for waterbirds, with its magnificent Okavango Delta, extensive Makgadikgadi Pans and numerous ephemeral wetlands, ponds and dams? If you go online to http://csntool.wingsoverwetlands.org/csn/default.html you will find a map with an options menu on the right-hand side. You can search species or sites, and there are also choices for reports or help. If you go to Sites and choose the Okavango Delta, you’re taken to a location map with information about the site on the right. You can choose to look at the Critical Site boundary (shown in pink) or the Important Bird Area (IBA) position (orange). If you pick National Protected Areas, you’ll see a great swath of land in red, while it’s green for the Ramsar Sites. Each of these has links to further details on the Protected Planet and Ramsar websites, which provide much useful information.

You can also see the positions of all International Waterbird Census (IWC) sites or African Waterbird Census (ADWC) sites in Africa. Botswana has participated in the IWC since 1991, and BirdLife Botswana is soon to publish a 20-year review of this impressive set of counts. Seeing the count sites so easily within the CSN Tool helps put them in perspective and shows at a glance their location in relation to other count sites in the region.

There is also a really useful function for conservationists and site managers – the Critical Site species list. A simple click...
and you have a table listing the recog-
nized populations of all species for which
the Okavango is of ‘critical importance’. For
each population you can see mini-
imum, maximum and median counts, the
units (breeding pairs or individuals) and
the population percentage. This last one’s
important as it shows the percentage of
each population that the Okavango has
been known to support. So for their re-
spective populations, that’s six per cent
for the African Pygmy-Goose, 20 per cent
for the Wattled Crane and 50 per cent for
the Slaty Egret. You can also see a time-
series chart for each species based on AWAC
counts, then a link to that species’ page.

That, of course, is the other option at
the site’s opening page: to do a species
search. If you choose Slaty Egret, you can
see the species’ range map and popula-
tion boundaries, with different colours
highlighting breeding and non-breeding
areas. On this you can overlay Critical
Sites, Ramsar Sites, IBAs and protected
areas. And for Slaty Egret, it’s encouraging
that many of the Critical Sites have some
measure of protection. You can also see
locations of all count sites where Slaty
Egret has been recorded during the AWAC,
and get the population estimate (3 000 to
5 000 birds) and one per cent level (40).

There are external links to AWAC and
BirdLife Species Factsheets, which include
detailed information on species ecology
derived from more than 2 000 references
and a great resource in itself, as well as to the
Global Register of Migratory Species.

In a nutshell, you can access just about
all the relevant information on a chosen
species, site or area and can even gener-
ate reports based on a range of selected
categories. For example, you can view all
sites where Globally Threatened herons
and egrets occur, then bring in other lay-
ters, such as threats and habitat. Looking
at threats, you’ll see that at least 46 per
cent of Critical Sites for migratory water-
birds in Africa appear to have little or no
protection. That figure is even higher for
the Middle East (61 per cent). With regard to
the protection status of Critical Sites for Gl-
bally Threatened waterbirds, 31 per cent
of sites in Africa are protected, whereas
4 per cent have little or no protection.
This is perhaps a best-case scenario, as a
large number of Africa’s protected areas
are under-resourced and lacking in actual
conservation measures.

This practical interactive tool was de-
veloped by a technical team of the World
Conservation Monitoring Centre, Wet-
lands International and BirdLife Inter-
national, who achieved the tricky feat of
making four global databases – the World
Bird Database, the IUCN database, the
Ramsar Sites Information Service and the
World Database on Protected Areas – talk
to each other and share information.

What are the limitations? The main
one is coverage, and this is where
African birders can help. Some gaps
were identified during WOW workshops
(select ‘Gap sites’ on the CSN Tool web-
come page). The coverage imbalance is
well illustrated by a graph showing the
number of IWC counts per degree latitude
(page 63, below). Clearly, much of Africa
is still poorly covered, although bear in
mind that extensive sites such as Zambia’s
Kafue Flats may count as only one IWC
site, whereas an equivalent area in Europe
is still poorly covered, although bear in
mind that extensive sites such as the
Swiss or Austrian wetlands may count as
only one IWC site, whereas an equivalent
area in Europe may contain many smaller
sites.

In sub-Saharan Africa, South Africa has
the best coverage, as the Coordinated
Waterbird Counts (CWAC) have been op-
erating since 1992 at 400 wetlands across
the continent. CWAC serves as an effec-
tive long-term monitoring tool for South Af-
rica and beyond, and has been submitting
data to the AWAC since it began. The
CSN Tool now helps to put the CWAC data into
an international perspective. If you use the
CSN Tool to look at Red Kollard Cahuits canutus, for instance, you can quickly see the
position of South Africa in the flyway.

Although Langebaan has fewer birds, its
importance at the far end of the flyway
is great. In order to conserve this cos-
mopolitan wader effectively, we need to
ensure that such sites remain productive
and continue to offer a safe haven into
the future.

One of Africa’s major gaps in coverage is
South Sudan. The Sudd Wetland Ram-
sar Site extends to 57 000 square kilo-
meters, while other Nile Basin wetlands
include the Machar Marshes (5 000 square
kilometres) and Lotilla/Veeno swamps (9 000 square kilometres). These wetlands are
important destination and stopover sites
for many Palearctic migrants, but they
are also critical for intra-African mi-
grants such as the African Openbill. The
Sudd is Africa’s most important site for
two Globally Threatened waterbirds, the
Shoebill and Black Crowned Crane.
Civil unrest in the region has put wildlife
research on hold since the 1980s, but recent
air reconnaissance surveys indicate that
Shoebills are still found in reason-
able numbers in areas not surveyed for
decades. Single birds and pairs stand firm
on raised mounds, like noble grey statues
amidst a seemingly limitless expanse of
green swamp and swaying floodplain.

Further north along the Nile, wetlands
south of Khartoum are critical for many
Paleartic-breeding ducks (including the
Ferruginous Duck whose three populations
are all in decline), yet we just don’t know
enough about them. Um-Gaz is one such
wetland of the White Nile, a remote, un-
protected location known to local hunters
and not yet an established count site. The
CSN Tool shows just a sprinkling of count
sites along an immense river that we recog-
nise to be a vital migratory corridor.

The Sudd is of ‘critical importance’. This is
where the CSN Tool fits nicely with the Flyway Training Kit. Here are areas
crying out for waterbird-monitoring
programmes and site inventories, activ-
ties that require teams of competent
people. There is thus a need for capacity
building – field training, institutional sup-
port, resources... Training courses were
held in 2010 in both Sudan and South
Sudan, but there’s a long way to go.

Peter Minasoa is the AWAC National Co-
ordinator in South Sudan and he knows
that there are challenges ahead. Neverthe-
less, he is keen to address these gaps and
hopes to establish a wetland training cen-
tre for the Sudd.

We can thus use the tool constructively
to highlight gaps and help us to prioritise
future monitoring efforts. Further, by con-
centrating on the most important sites
along the flyways and their protected sta-
tus, we can use the tool to prioritise con-
servation efforts and lobby for improved
site protection. The tool can also help us
to focus limited conservation resources on
building a clearer picture of the chains
of critical sites that are necessary for migra-
tory waterbirds to complete their annual
cycles, and on improving the protection of
these sites.

In the flyway approach to conservation
we all need to think big and understand
how our local sites are pieces of a global
jigsaw – take away one piece and the pic-
ture will never be complete. We need to
share resources and responsibilities to
con-
serve migratory waterbirds and the sites
on which they depend. We now have a great
tool to help us, so let’s use it!

Opposite: The Nile River spills out into the vast Sudd wetlands of South Sudan, with its lakes, swamps and floodplains.
Below: The Shoebill, a flagship bird of Central Africa’s swamps and marshes.

HOW YOU CAN GET INVOLVED
• Use the CSN Tool: http://csntool.wingsoverwetlands.org/esrldfault.html. (You can read or download the User Guide from the Help page.) Let us know about any sites not yet included, or other information you think the tool should capture, or improvements you feel could be made. Contact the technical team through csntool@wetlands.org
• Get involved in monitoring schemes by contacting your AWAC National Coordinator or national IBA monitoring focal point. Find out who they are by contacting sabcsacks nagy@wetlands.org (AWAC) orademola.ajagbe@birdlife.org (IBAs).
• Contribute to gap-filling surveys and support this important work. Contact szabolcs.nagy@wetlands.org
• Have a look at the Flyway Training Kit: http://www.wingsoverwetlands.org/flywaytrainingkit
• Why not organise a training course in your country? For advice, contact jay.mundie@birdlife.org