



**SECOND MEETING OF THE AFRICAN-EURASIAN MIGRATORY LANDBIRDS
WORKING GROUP**

Abidjan, Côte d'Ivoire, 25-27 November 2015

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Land Use Change and Migratory Landbirds in West Africa
(Prepared by the Secretariat)

Introduction

1. The African-Eurasian Migratory Landbirds Action Plan (AEMLAP) focuses on the conservation of migratory landbirds in the African-Eurasian flyway under Resolution 11.17 of the Convention of Migratory Species (CMS). The Action Plan identifies land use change as one of the key drivers for the decline of migratory landbirds in the region.

2. This document aims to provide background for the Landbirds Working Group meeting that takes place in November 2015 in Abidjan (Côte d'Ivoire) regarding the issue of land-use change in West Africa, particularly as it impacts landbirds. A map of the region is shown in Figure 1. The Action Plan entails the following land-use changes to which action must be taken: Agriculture (intensive agriculture and traditional agriculture); Timber and non-timber forest production; Water management; Energy development; and Re-vegetation and reforestation. In addition, it stresses the importance of implanting land-use management policies within the region, citing strategies such as the Ecosystem Approach under the Convention on Biological Diversity (CBD).

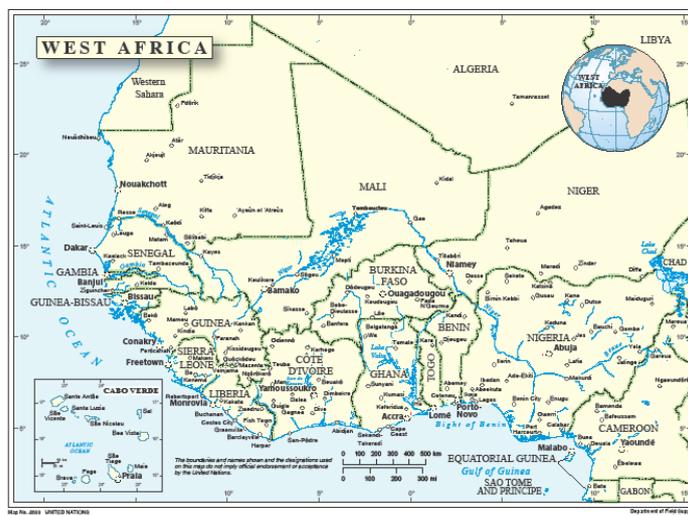


Figure 1: Map of West African Region

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Key Habitats for Migratory Landbirds

3. A research brief, prepared by the Cambridge Conservation Initiative (CCI), provides an outline of important bird habitats in the Sahel region. The brief is an output of their project on '*Reversing the declines of Africa-Palaearctic migrants: understanding the social and economic factors driving land use change in sub-Saharan West African wintering areas*'. The composition of the habitats, as well as the species and patterns of population declines, is highlighted in the document. In conclusion, the paper stresses the need for further research and understanding of the different habitat requirements of migrant birds in the West African Sahel region in order to mitigate their population declines (Cambridge Conservation Initiative: Brief 2).

4. The matrix found in the Annex uses the critical bird habitats identified by the CCI, and crosses it with the land-use drivers outlined in the landbirds Action Plan to provide an overview of the types of important habitats impacted by these land-use changes.

Drivers of land-use change in West Africa Agricultural Expansion

5. Conversion of natural habitats to agricultural croplands is a major threat to biodiversity in West Africa. Specifically in tropical countries, between 1999 and 2008, croplands have expanded by about 48,000 km² per year. With unprecedented population growth and rapid urbanization, global food demand is rising steeply alongside agricultural expansion. Some species are able to adjust to such changes in land use and successfully occupy altered habitats. However, the loss of habitat due to agricultural conversion has been a key driver of global biodiversity loss and presents the greatest extinction risk to birds contributing to the declines of 73% of all globally threatened species (BirdLife International 2013).

6. An example of land use change, in the form of agricultural expansion threatening bird species, is Agripalma's (a subsidiary of STP Invest and São Tomé investors) acquisition of former oil palm plantations in 2009 close to the Monte Carmo forests in São Tomé. The agricultural land, which is close to the Obô Natural Park and overlapping with the Natural Park's buffer zone, is planned to be restored and expanded. Opening up access to the forest, as a consequence of expanding the oil palm plantations, pose serious threats such as increased hunting and extractive pressures on the forest birds.

7. A request was made, by Agripalma, to use parts of the Obô Natural Park itself for oil palm plantations (BirdLife International 2014). The area consists of three particular critically endangered bird species, amongst others, the São Tomé Fiscal (*Lanius newtoni*), São Tomé Grosbeak (*Neospiza concolor*), and the Dwarf Olive Ibis (*Bostrychia bocagei*). All of these species are endemic to the area and therefore this type of intensive agriculture being implemented in the region would threaten an integral part of West Africa's biodiversity.

8. Agricultural expansion has also greatly affected several other West African countries that make up the Sahel. The Sahel consists of a variety of ecoregions, including grasslands, farmlands and woodlands, providing wintering and staging areas for over 2 million song birds that migrate from Europe. Many of these species have been in decline for as long as 30 years, with others in constant and recent decline. Species being threatened by land use change in the region include the Common Whitethroat (*Sylvia communis*), Pied Flycatcher (*Ficedula hypoleuca*), Wood Warbler (*Phylloscopus sibilatrix*), Turtle Dove (*Streptopelia turtur*) and Spotted Flycatcher (*Muscicapa striata*) (Cambridge Conservation Initiative: Brief 1).

9. The expansion and intensification of arable land and livestock agriculture in their wintering grounds in sub Saharan Africa are a major cause of the population declines being observed. Much of this agricultural expansion can be attributed to population growth and the augmenting demands for

food. Consequently, there have been decreases in fallow periods causing a decline in the fertility of the soil as well as the productivity of the land (Mazzucato & Niemeijer, 2000). Ultimately, this has led to widespread intensification of agriculture as people are forced to cultivate new farmlands.

10. In Mali, a 40 year trend shows consistent increase in crop lands and soil erosion leading to decline in woody vegetation cover in the Sahelian region, specifically the Kouonkaba village (Ruelland et al., 2010). In Niger, there was between 7-16% increases in eroded land in the savannah between 1950-1998 due to the expansion of cultivated lands (Seguis et al., 2004). In more recent years, the agricultural expansion has intensified even more rapidly leading to continued degradation of lands in the West African region.

11. The World Bank has promoted efforts to protect and expand pastoralism in African countries in the Sahel. It cites the livelihoods of an estimated 80 million people living in the Sahel as the driving factor behind the need for increasing sources of food, water and economic growth. According to the World Bank and participatory West African countries in the 2013 agricultural summits in Mauritania and Senegal, this can be achieved through expanded pastoralism and large-scale irrigation projects (World Bank 2013).

12. Pastoral agriculture, with well-managed extensive livestock production in communal lands, is cited as an ideal use of the drylands in Africa (Notenbaert et al., 2012). With 50 million pastoralists residing in Africa, an estimated 16 million live in the Sahel in extreme poverty (World Bank, 2013). In Action 1.1.1, regarding traditional agriculture, the Landbirds Action Plan promotes agricultural policies that enforce natural resource management practices such as small-scale agriculture and traditional farming methods such as pastoralism.

13. In that, the efforts being made to expand pastoral agriculture in West Africa coincide with the recommendations of the Action Plan. In addition, evidence suggests that pastoralism plays an important role in biodiversity conservation. This includes considering each area individually as not all pastoral societies and lands are heterogeneous (Notenbaert et al., 2012).

14. The implementation of sustainable small-scale agriculture alongside management practices that would benefit populations of migratory landbird species and other biodiversity should be encouraged. However, the opposite applies for large scale irrigation projects in the region which could be extremely detrimental to the quality of habitats. With the current on-going projects in the region that focus on expanding agriculture in the West African Sahel, it is encouraged that awareness be raised regarding biodiversity in the region. The decline in populations of long distance migrants, covered under the Landbird Action Plan, and their dependence on habitats being considered for agricultural development must be considered.

Timber and non-timber forest products

15. Woodlands provide an essential habitat for several species of migratory landbirds in West Africa. Open woodlands are observed to have species such as the Pied Flycatcher (*Ficedula hypoleuca*), Icterine Warbler (*Hippolais icterina*), Common Redstart (*Phoenicurus phoenicurus*), Olivaceous Warbler (*Iduna pallida*), Lesser Whitethroat (*Sylvia curruca*) and the Subalpine Warbler (*Sylvia cantillans*). Wet woodlands provide habitat for several of the species found in open woodlands, in addition to the Iberian Chiffchaff (*Phylloscopus ibericus*), the Melodious Warbler (*Hippolais polyglotta*) and the Common Chiffchaff (*Phylloscopus collybita*). The research brief prepared by CCI indicates that the most recent declines in migrants are among species dependent on wintering sites in humid wooded habitats south of the Sahel.

16. The clearance of woodlands between 1990-2000 have been associated with the population declines observed in the region, specifically in farmland and grassland systems with trees. The

production of timber and non-timber forest products contribute to the clearance of habitats containing trees, directly impacting bird populations migrating to these areas. Therefore, understanding the impact of land-use change will have on these systems is essential for addressing the landbird population declines observed in these habitats.

17. The Mount Cameroon and Bioko Montane Forest ecoregion comprises of a volcanic chain along the border between Cameroon and Nigeria, in addition to extending itself southwest to the islands of São Tomé, Príncipe and Annobon. In Mount Cameroon itself, over 370 species of birds have been recorded, many of which are endemic such as the Mount Cameroon francolin (*Francolinus camerunensis*) and the Mount Cameroon speirops (*Speirops melanocephalus*).

18. Mount Cameroon's forests are not currently protected under formal park status, and the areas in the foothills belong to the Cameroon Development Corporation which is currently in the process of privatization. Forest reserves on the flanks of the mountain provide little protection as they are becoming increasingly degraded. These reserves were established for timber production and are also encroached upon for farming and subject to illegal logging and hunting pressures.

19. Proposals have been made to include three more reserves, through collaboration between the Government of Cameroon, DFID, GTZ and GEF. These projects aim to promote sustainable use of the forests, however progress is still pending. As the soils of the region are fertile, further conversion of some forest to agriculture is regarded as inevitable, especially in view of the proposed CDC privatization (WWF).

Water Management

20. The protection of wetlands and river basin management is essential for protecting landbirds, as well as the estimated 3 to 4 million waterbirds migrating to the region yearly. (Wetlands International). A recent issue has arisen regarding this matter with the World Bank's plans to construct the Fomi Dam at the source of the Niger River, in Guinea. This proposal severely threatens the ecological stability of Mali's Inner Niger Delta, one of Africa's largest wetlands, which serves as a key wintering and breeding site for several species of avifauna. In addition, the delta provides around 1-2 million surrounding inhabitants with resources such as fishing, agriculture, pastureland and flood recession.

21. The Fomi Dam would provide year round irrigation in the Office du Niger by withholding flows during the rainy season and allowing releases managed throughout the year. The withholding of water in the dams would have severe ecological consequences, as it would significantly reduce the area of the Inner Niger Delta which is inundated by up to 1,300 km². This could result in depleted fish stocks, impacts on recession rice cultivation and increase competition among herders that use the delta's grass to graze their livestock.

22. In addition to its impact on the lives of its surround human inhabitants, the construction of the Fomi Dam will alter the hydrology of the wetlands and river basin significantly, posing a severe threat to the biodiversity that depends on this habitat (International Rivers).

Energy

23. Energy development in West Africa increasingly threatens migratory birds, as the construction of large scale energy production projects deplete their natural habitats and stand as obstacles in their migratory routes (Wetlands International). Plans for hydropower dams in West Africa, such as the Fomi Dam previously mentioned, pose serious risks to the wetland systems which they will alter. Inevitably, these changes will affect the millions of birds and other species dependent on these resources. Support for such energy production is driven by the incentive of providing

irrigation schemes, economic growth and poverty reduction to developing West African countries (World Bank 2015).

24. However, as stated in the AEMLAP (Action 1.1.4) and CMS Resolution 11.27 on Renewable Energy adopted at COP11, it is important to map renewable energy potential overlaid with maps of key sites and habitats for migratory landbirds and other relevant biodiversity. In the case of the Fomi Dam, despite promising potential for a sustainable renewable energy project, the area is an integral breeding and wintering site for several migratory species.

Re-vegetation (including reforestation), and reducing desertification and carbon emissions from deforestation and degradation

25. Land degradation is defined by a reduction in the physical, chemical or biological status of land, which affects its productivity (Eswaran et al., 2001). Deteriorating soil quality, diminishing vegetative covering, severe droughts and desertification are issues that plague several West African countries. Some of the world's most severely affected regions occur in the Sahel (UNEP, 2012).

26. The United Nations Conference on Environment and Development defines desertification as land degradation in the arid, semiarid and dry sub humid areas attributed to population growth, urbanization and agricultural expansion (UNCED, 1992/3). The Sahel's main form of land degradation occurs through soil erosion and nutrient losses, physical degradation through crust development and salinization (UNEP, 2012).

27. In addition, deforestation contributes to the decrease in suitable habitat for biodiversity in the region. An estimated 10 million hectares of forest are believed to have been lost in the 20th century, with 80% of the original forest area now serving as a forest-agriculture mosaic (Norris et al., 2010). Undoubtedly, biodiversity in such forests come into close contact with land use change such as deforestation and diminished tree cover. It has been noted that through re-vegetation of such forests, both needs for conservation and economic revenue may be met through land-uses such as planting of trees for carbon trading (Norris et al., 2010).

28. The potential of incorporating conservation issues into projects attempting to implement reforestation and/or re-vegetation in previously altered landscapes is high in the West African region, and is recommended in Action 1.1.5. The increase in indigenous trees and plants in the region would be of high value to the migratory landbird species within the critical habitats.

Action requested:

- i. The African-Eurasian Migratory Landbirds Working Group is requested to take note of this document and provide comments if needed.

Habitats	Land-use Drivers				
	Agriculture	Forest Products	Water Management	Energy Development	Deforestation & Desertification
Farmland with Shrubs	✓				✓
Grassland with shrubs	✓				✓
Farmland with trees	✓	✓			✓
Grassland with trees	✓	✓			✓
Shrubland with trees	✓	✓			✓
Open woodland	✓			✓	✓
Wet woodland			✓	✓	

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