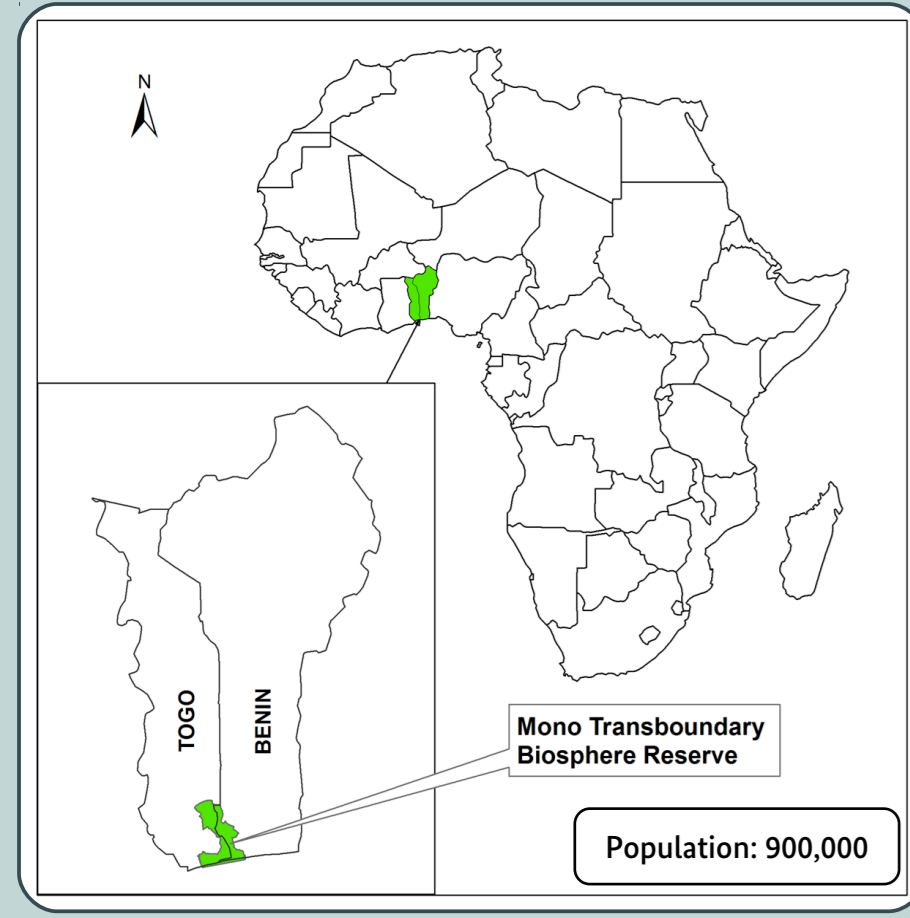


Mono Transboundary Biosphere Reserve (MTBR)

A new protected area in the West African Dahomey Gap



The Mono Transboundary Biosphere Reserve (MTBR) is situated along the downstream part of the Mono River which forms the Southern border of Benin and Togo.

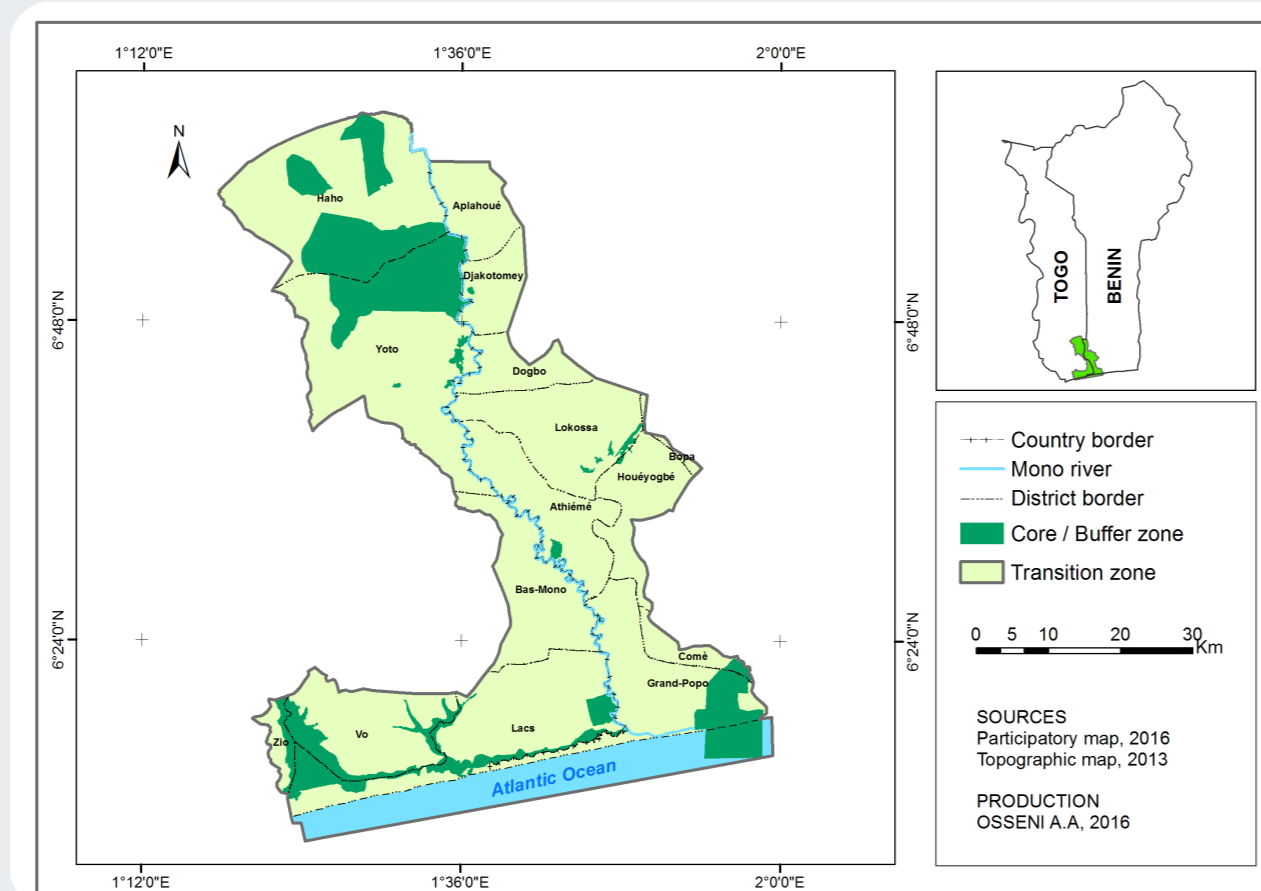
The region of the Mono Delta is part of the Dahomey Gap, a unique savannah area in Benin, Togo and Ghana that has been formed millions of years ago and that disrupts the band of coastal rain forest in West Africa. It is characterized by a diversity of ecosystems, and though densely populated, it is still home to several emblematic species.

However, due to the non-sustainable use of natural resources, many of these ecosystems are already at the brink of destruction. As the local population depends almost entirely on activities such as fishing, farming and hunting, the rational use of the remaining natural resources is of paramount importance for their survival as well as for their cultural identity which has a close connection to nature and wildlife.

The MTBR's vision is to conserve, restore and sustainably manage natural resources and ecosystem services of the region a participatory manner and, thus, to contribute to the well-being of local communities.

Acronyms	
CENAGREF	Centre National de Gestion des Réserves de Faune (National Center for the management of fauna reserves)
DRF	Direction des Ressources Forestières (Department of Forest Resources)
MTBR	Mono Transboundary Biosphere Reserve

C



A bottom-up approach for conservation

The South of Benin and Togo is a highly populated and largely degraded wetland area. In an effort to conserve the few remaining natural values of this region, ecologically important areas in the Mono Delta - such as rivers and lakes, wet and dry forests, mangroves and coastal areas - have been identified. Subsequently, managing entities have been created with an intensive participation of the local population and the necessary capacities have been built. The resulting transboundary biosphere reserve extends on 3462.86 km² along the border of Benin and Togo. Of this surface, 144.96 km² are designated as core zones and 433.78 km² as buffer zones. To enhance ownership and to draw on local knowledge, the individual core and buffer zones will be managed by legally recognised associations composed of people living in the surrounding villages.



A leatherback sea turtle on the beach.

In 2016, the documents for the creation of the MTBR have been submitted. With this new protected area, the conserved terrestrial surface in Benin augments from 23.6 to 24.8 % and in Togo from 7.6 to 10.1 %.

The new MTBR is home to several endangered species, such as hippos, sea cows, four species of sea turtles, some endemic monkeys and several kinds of antelope. In addition, this wetland area is an important feeding and nesting area for local and migrant birds. The implementation of several core zones will contribute to the conservation of these species.

A



Mainstreaming of ecosystem services for an improved cross-sectoral cooperation

As Benin and Togo have little industry and a small, formal commercial sector, the main source of income for the largest part of the population are sectors depending on natural resources, such as agriculture, fishery and forestry. Despite the strong dependency on related ecosystem services, this concept has been new to most of the decision makers. Furthermore, due to the lack of knowledge about natural processes, the loss of these resources has been noted, but their decline often has not been attributed to the current practices. The existing local development plans focus on sectors, such as health, water, agriculture and infrastructure, without taking into account the importance of the ecosystem services, which are essential for these sectors. For example, several infrastructure projects have been conducted lately in the two countries to improve the general conditions for the population, but the recently built roads and bridges are jeopardized by erosion due to strong rain and flooding. Their reconstruction uses up additional resources and slows down the progress of the other construction projects.



Vegetable production in the South of Benin

To improve the process of the elaboration of the development plans and to enhance the capacities of decision makers on the local and regional level, several workshops have been conducted with the aim to familiarize them with the ecosystem service approach and its application during the planning process.

Local NGOs designed educational posters to raise awareness about the importance of ecosystems and biodiversity among the mostly illiterate local population living around the core zones.

Local and regional decision makers participated in several trainings on the importance of mainstreaming of ecosystem services in the planning documents and processes, e.g., into local development plans.

As one of the steps during the process of the creation of the biosphere reserve, management rules for the sustainable use of natural resources were developed in a participatory manner for each buffer zone. The challenge was to elaborate rules that are in accordance with national legislation as well as applicable on the local level.

D



The importance of ecosystem services provided by the Mono Delta to the local population

The Mono Delta is an important wetland area in the South of Benin and Togo. It is home to around 900 000 people who live mainly on agriculture and small scale fishery. Being among the poorest countries in the world, the local population depends to a high degree on provisioning ecosystem services of the surrounding environment, such as the availability of fish, game, fibers, building materials and fire wood, as well as on the underlying regulating services (e.g., regarding the quantity and quality of water, which is used for drinking, domestic uses and small scale agriculture) and supporting services (e.g., soil fertility). The cultural services play an important role, for example, in the context of sacred forests (see target 18). These ecosystem services will be conserved and managed in a more sustainable way within the scope of the newly created MTBR.



Villagers participate in reforestation

The Mono Delta is an important wetland area which provides a range of ecosystem services, such as provision of food, regulation of quality and quantity of water, protection against flooding and erosion as well as cultural and recreational services. The integrated biosphere approach facilitates the combination of measures for the conservation of ecosystems in the core zones as well as the sustainable use of their services, especially to the benefit of the local population, in the buffer zones.

B



Synergies between species conservation and sustainable fishery in hippopotamus lakes of Afito

Small scale fishery in the lakes, rivers and along the coast is one of the main economic activities within the biosphere reserve. During the last decades, especially the fish stock in the lakes has been almost depleted due to unsustainable practices.

In the Northern part of the biosphere reserve, near the village of Afito, there is a chain of small lakes where the last hippos living in the South of Benin and Togo can be found. Local fishermen are scared by these impressive creatures, but as they are also aware that hippos contribute to their fishing success by bringing, with their feces, plant material into the lakes which, then, fertilizes underwater plants eaten by fish. Therefore, local fishermen communities around the hippopotamus lakes of Afito have decided to take measures to improve their quality of life by better management of their fishery resources. To make sure that the rules for the management and use of these resources are effective, a biodiversity indicator has been established. It takes into account the amount of fish species, the number of individuals and their size and it is measured once per trimester in an average catch. This indicator contributes to convincing the local population of the importance of a rational management of natural resources for their fight against poverty.



Participatory biodiversity monitoring

By designating core zones in the unique Dahomey Gap, the MTBR contributed to the conservation of its specific ecosystems and several endemic species.

An integrated management approach focuses on synergies between measures for the recovery of the fish population in a chain of lakes and the conservation of hippos.

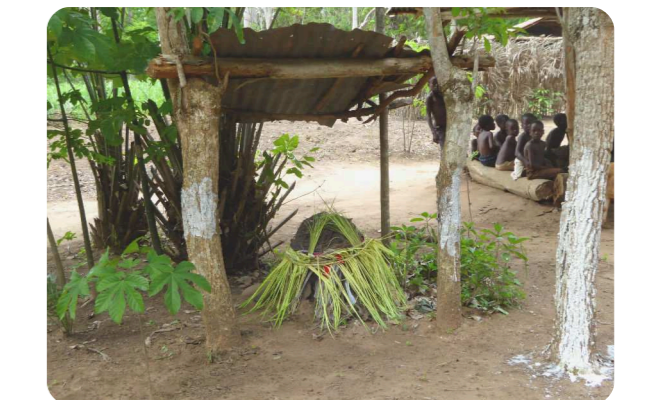
Land insecurity leads people to rather focus on measures which promise higher short term revenues, instead of adopting sustainable agricultural activities. The pragmatic solution in the buffer zones of the MTBR: land owners agreed to let their land in these areas for long term use to local peasants which gives them a reason to invest in the restoration of the degraded land.

E



Sociocultural and ecological importance of the Godje-Godjin forest

One of the core areas is the sacred forest of Godje-Godjin in Togo. It contains several species of trees which are venerated by the local population as the home of a variety of deities. The forest has been protected for hundreds of years by traditional priests and used for religious ceremonies as well as a source of healing herbs. In addition, the priests conduct initiations to the traditional rites for young religious devotees. By contributing to the conservation of an important habitat for wild animals as well as of certain sociocultural structures and customs, the stewardship of traditional priests over the sacred forests of the region plays an important social and ecological role. To establish a legal basis for this kind of local governance, the forest of Godje-Godjin has received the legal status as a community protected area by the state of Togo and is integrated into the MTBR.



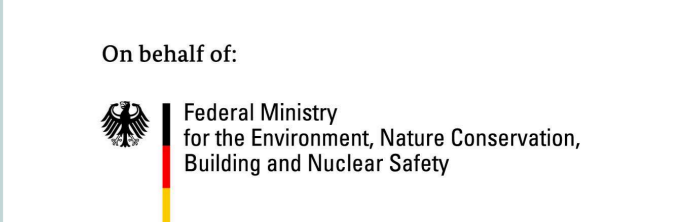
Holy place in the sacred forest of Godje-Godjin

The national biodiversity strategies and action plans of Benin and Togo focus on the importance of the conservation of nature as the base of a sustainable development. The creation of the MTBR contributes directly to this objective and its participatory approach enhances ownership and acceptance among the local population.

Some of the core and buffer zones of the MTBR are community protected areas based on traditional laws such as sacred forests, which have been recognized by the government and given a legal status.

The Facebook page of the MTBR (<https://www.facebook.com/rbtmd>) contributes to the exchange of experiences between local stakeholders and the interested public. At a later stage, a formal database will be developed in cooperation with the local universities.

The recurring costs will be covered by the Ministry for Sustainable Development of Benin, via the CENAGREF, and the Environmental Ministry of Togo, via the DRF.



On behalf of:
Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
of the Federal Republic of Germany



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Photo credits:

Box A: Africa Mobile Nature/ Mr. Patrice Bada and GIZ/ Mr. Aurélien Garreau

Box B: GIZ/ Ms. Maïthé Rosier, GIZ/ Ms. Antje Heideroth and GIZ/ Mr. Olivier Courbon

Box C: GIZ/ Mr. Abdel Aziz Osseni and AGBO-ZEGUE/ Dr. Gabriel Segniagbeto

Box D: GIZ and Africa Mobile Nature/ Mr. Patrice Bada

Box E: COSOL PG

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AICHI BIODIVERSITY TARGETS STRATEGIC GOALS

A

Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

- Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.
- Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.
- Target 3: By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.
- Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

B

Reduce the direct pressures on biodiversity and promote sustainable use

- Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.
- Target 6: By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.
- Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.
- Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.
- Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.
- Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

C

To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

- Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.
- Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.
- Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

D

Enhance the benefits to all from biodiversity and ecosystem services

- Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.
- Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.
- Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.

E

Enhance implementation through participatory planning, knowledge management and capacity building

- Target 17: By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.
- Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their contribution to national legislation and relevant international obligations, are fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.
- Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.
- Target 20: By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.