

Niger: Food Security and Ecosystem Resilience

Introduction

The Ministry of Agriculture and Livestock sets and implements policy providing overall direction to the sector. Other relevant institutions include the National System for the Prevention and Management of Food Crises and the National Committee for the Prevention and Management of Food Crises (which is decentralized to the regional and departmental levels). Niger is active in the food security and nutrition arena at the regional level as a member of the Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (CILSS).

The legal and policy framework include the Agricultural Policy 2016, “Nigériens Nourishing Nigériens” (3N) initiative for food security, nutrition, and sustainable agricultural development for 2013-2035, the Accelerated Development and Poverty Reduction Strategy 2008-2012 and the Strategy for Sustainable Development and Inclusive Growth Niger 2035: A prosperous country and people 2017.

Table 1: Key indicators (World Bank, 2017) (UNDESA, 2018)

NIGER	2018
Total population (million)	22.31
Total area (km ²)	1,267,000
Population density (persons/km ²)	17.6
Per capita income (US \$ in 2015)	390

Agriculture in the Economy of Niger

The population of Niger in 2018 was 22.3 million and grew at an average annual rate of 3.8 per cent in the same year (see [Table 1](#)). The proportion of people who live in urban areas is 16.4 per cent and has not changed much from 2005. The contribution of agriculture to GDP was 19.7 per cent in 2017. In 2018, 33.9 per cent of the population was employed in agriculture compared to 47.5 and 18.6 per cent in services and industry respectively (World Bank, 2018).

Relevant SDG 2 indicators

- 2.1.2** Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)
- 2.4.1** Proportion of agricultural area under productive and sustainable agriculture

Land area is 1.3 million km² and agricultural land takes up 35 per cent of the total land area as shown in [Figure 1](#) (World Bank, 2017).

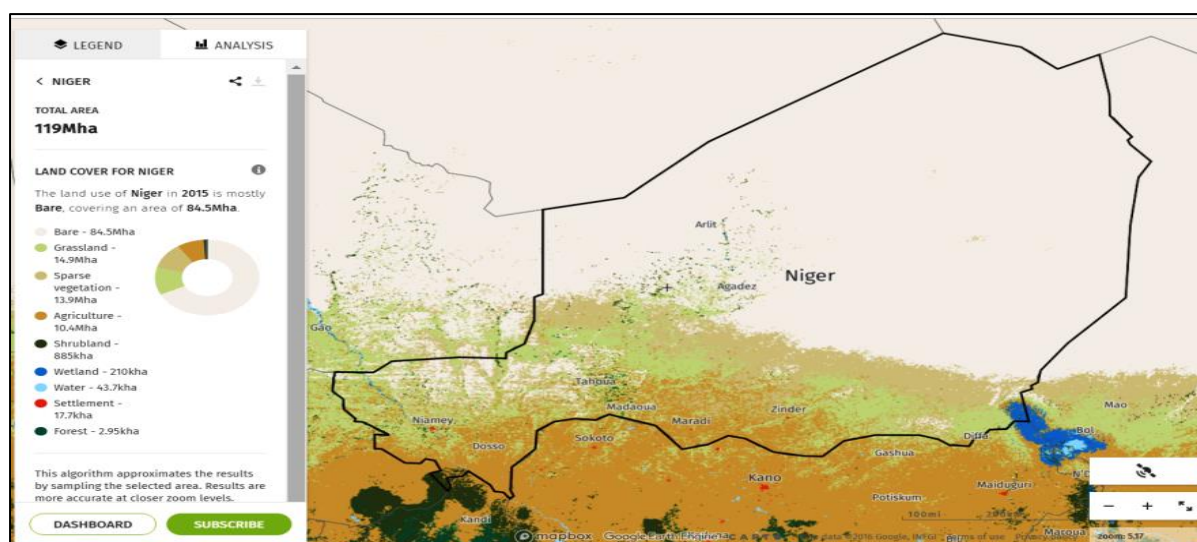


Figure 1: Land cover Niger (2015) Data source: Global Forest Watch

Food Security Situation

Food security is an issue in Niger. Between 2015 and 2017, 27.2 per cent of the total population was classified as severely food insecure. The prevalence of undernourishment between 2015 and 2017 was 14.4 per cent and decreased from 15.1 in the 2004-2006 period. Stunting among children under 5 is a big problem with 42.2 per cent of children under 5 stunted in 2017 (UN Stats, 2019). These issues are compounded by insecurity in Niger and civil conflict in the bordering countries which continues to date. For instance, recent data indicates that in the June to August 2019 period about 1.2 million people were in need of food aid (FAO, 2019). [Table 2](#) and [Figure 2](#) highlights the food insecurity trends and livelihood zones in Niger.

The policy framework for food security is provided by the National System of Agricultural Council (SNCA), 2017, Agricultural Policy 2016 Economic and Social Development Plan (PDES, 2017-2021) and the National Policy of Nutritional Security in Niger (2016-2025).

Table 2: Food insecurity trends in Niger (FAO, IFAD, UNICEF, WFP and WHO, 2018)

Location	Prevalence of undernourishment in the total population (%)		Prevalence of severe food insecurity in the total population (2015-2017)	Prevalence of wasting in children under 5 (2017)	Prevalence of stunting in children less than 5 years of age (%)		Prevalence of overweight in children under 5 years of age (%)	
	2004-2006	2015-2017	%	%	2012	2017	2012	2017
Niger	15.1	14.4	37.2	10.3	43.0	42.2	3.0	-
Western Africa	12.3	13.1	25.1	8.1	31.9	29.9	2.6	2.4
Africa	21.3	19.6	25.9	7.1	32.6	30.3	5.0	5.0

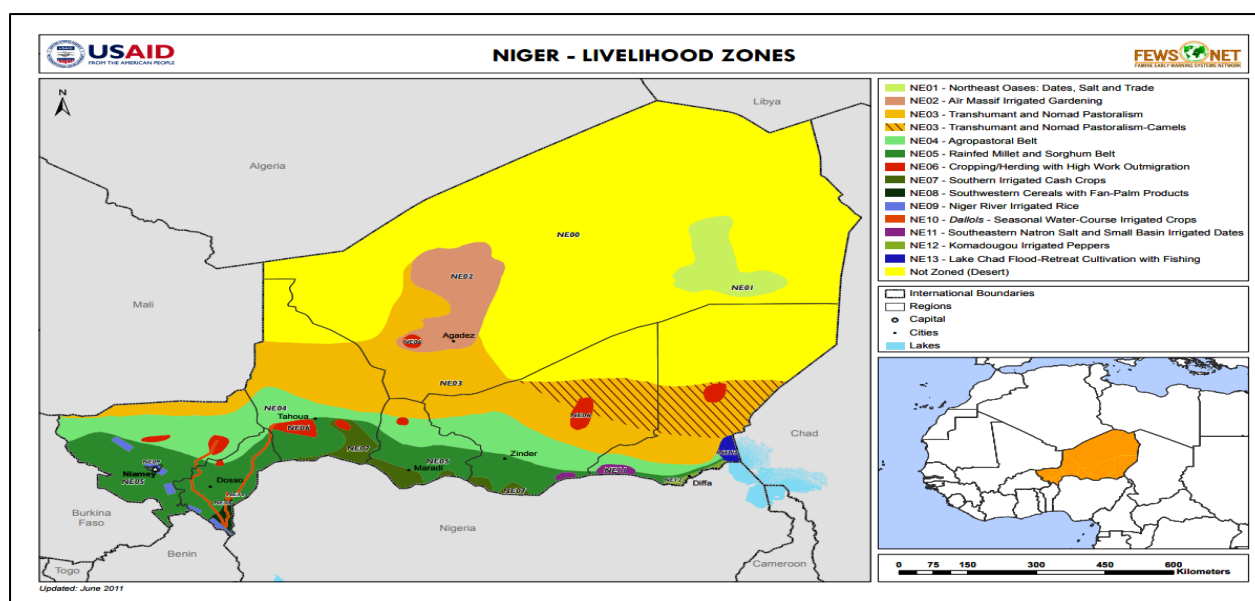


Figure 2: Niger Livelihood zones fesw.net

Ending Hunger

Genetic Diversity

By 2018, there were 28 local breeds kept in the country, but no genetic material of these local breeds is stored. By 2018, the risk of extinction of 11 of these breeds was unknown, up from just one breed in 2000. (UN Stats, 2019).

The focal institution for the International Treaty on Plant Genetic Resources for Food and Agriculture is the Institut National de la Recherche Agronomique du Niger. Relevant laws guiding the sector include the Framework Law on Environment 1998, the Law 2014-67 of 2014 supplementing the Regional Seed Regulation (C/Reg.04/05/2008) and the Ordinance No. 97-001 of Environment Impact Assessments.

Plant breeding is on-going in Niger in institutions such as the National Agricultural Research Institute of Niger, several departments in the University of Abdou Moumouni and the National Seed Producers Association.

Relevant SDG 2 indicators

- 2.5.1** Number of plant and animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities
- 2.5.2** Proportion of local breeds classified as being at risk, not at risk or at unknown level of risk of extinction

Renewable Energy

The renewable energy share in 2016 was estimated at 79.69 per cent of the total final energy consumption down from 87.69 per cent in 2000 as shown in Figure 3 (UN Stats, 2019). The policy and legal framework includes the National Renewable Energies Strategy and the Electricity Code 2016. The Energy Sector Regulatory Authority created in 2015 manages the sector.

Relevant SDG 7 indicators

- 7.2.1** Renewable energy share in the total final energy consumption

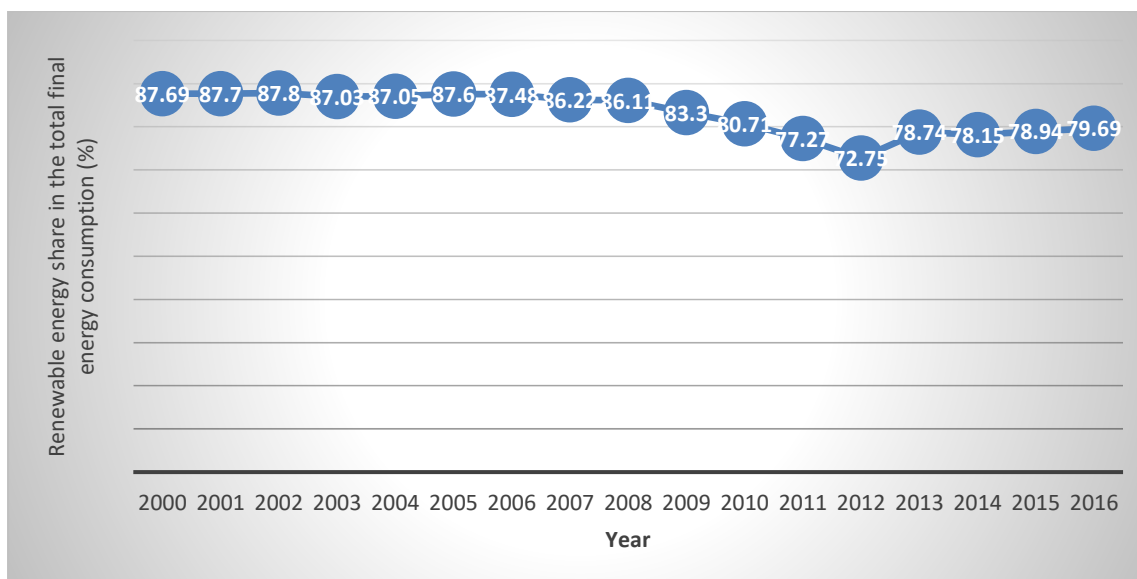


Figure 3: Trends in renewable energy share in the total final energy consumption (%) 2000-2016 (UN Stats, 2019)

Clean Water and Fisheries

Water Quality

Water stress or withdrawals, as a proportion of available freshwater resources, are estimated at 7.5 per cent in 2015 (above 25 per cent which is considered the threshold of initial water stress) (UN Stats, 2019).

Pollution from poorly or untreated effluent from municipal authorities is a major problem, with only 3.47 per cent of people using safely treated domestic water (UNDESA, 2018). The proportion of open defecation in 2015 in Niger was 71.3 per cent and the proportion of households using at least basic sanitation service was only 8.53 per cent in the same year (SDGCA and SDSN, 2018) (UN Stats, 2019). [Figure 4](#) shows the trends in open defecation in Niger between 2000 and 2015.

Relevant SDG 6 indicators

- 6.3.2** Proportion of bodies of water with good ambient water quality
- 6.4.2** Level of water stress: freshwater withdrawal as a proportion of available freshwater resources.
- 6.6.1** Change in the extent of water-related ecosystems over time

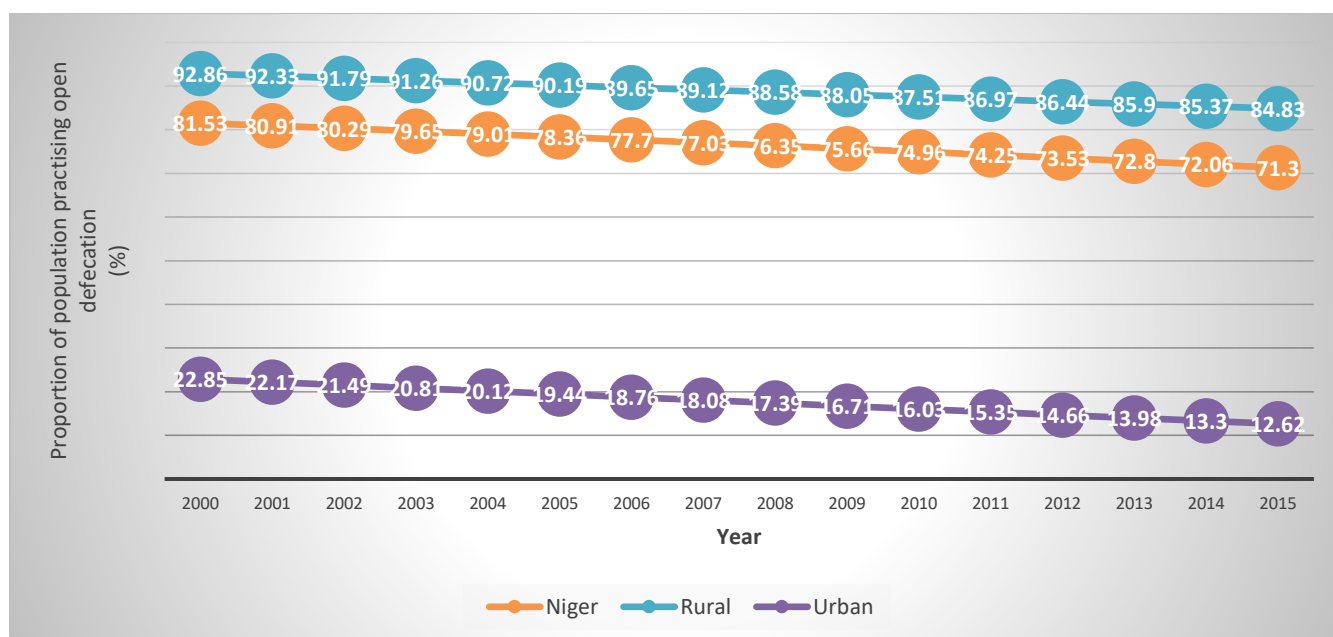


Figure 4: Trends in open defecation in Niger 2000-2015 (UN Stats, 2019)

The legal framework includes the Water Code of Niger 2010, the National Drinking Water Standards (NN 03-02-002, February 2006), Standards for the Management of Liquid Waste (NN 03-02-001), and Law No. 2000-12 reorganizing the activity of production, transport and distribution of water in the urban water subsector and creating the Niger Water Heritage Society 2000, and the Sector Program Water Hygiene and Sanitation (PROSEHA) 2016-2030. The institutions responsible for water quality are the Ministry for Hydraulics and Environment and the National Water and Sanitation Commission (CNEA).

Sustainable Management of Fisheries

Total fisheries production in 2015 was 35,600 metric tonnes in 2018. The capture fisheries and aquaculture sectors grew by 5.3 and 22.1 per cent respectively between 2000 and 2015 (World Bank, 2017). Fish consumption in 2013 was estimated at 2.3 kg per capita per annum (FAO, 2017).

Relevant SDG 14 indicators

- 14.2.1:** Proportion of national exclusive economic zones managed using ecosystem-based approaches
- 14.4.1:** Proportion of fish stocks within biologically sustainable levels
- 14.5.1:** Coverage of protected areas in relation to marine areas.
- 14.6.1:** Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing.
- 14.b.1:** Progress by countries in the degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries

The main laws are the Law No. 98-42 on the Fishery Regime 1998 and the Decree No. 74-284 PCMS MER / CAP MI implementing Law No. 71-17 of March 30, 1971, establishing the fishing regime 1974. Although Niger is a party to the UN Convention on the Law of the Sea since 1982, it has not ratified it. The country is a member of the Committee on Inland Fisheries and Aquaculture of Africa.

Terrestrial Ecosystems: Land, Biodiversity and Forests

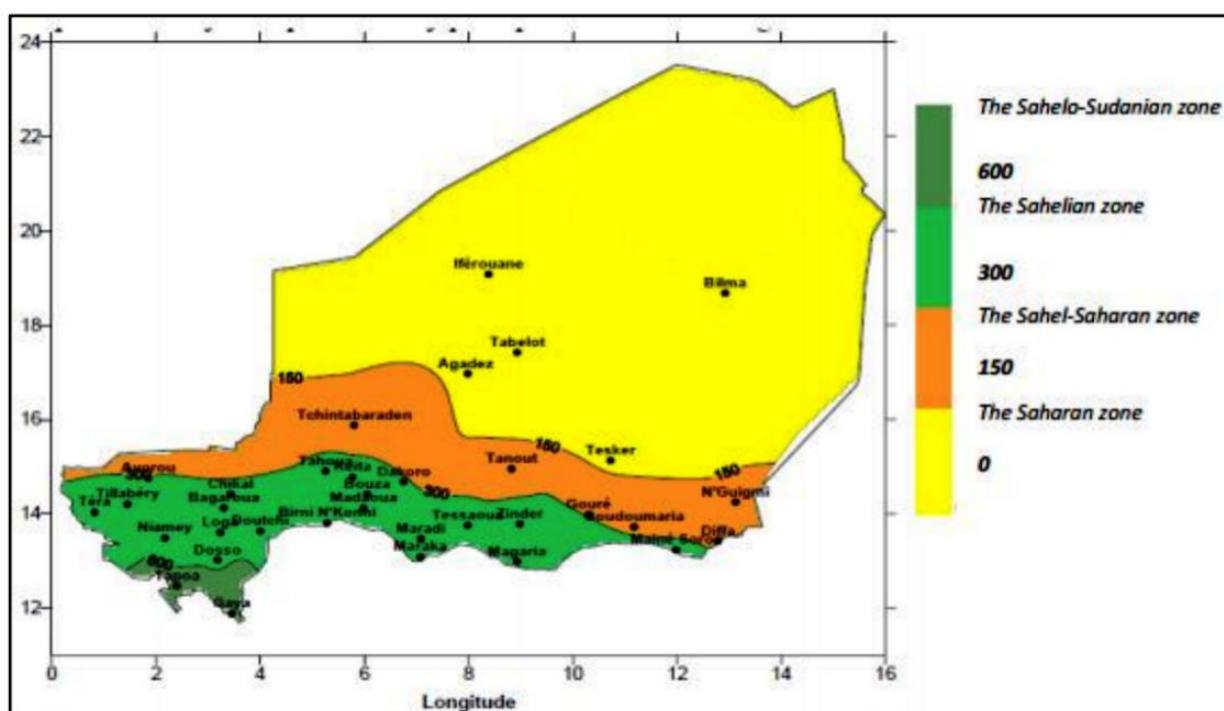


Figure 5: Niger agro-ecological zones (FAO/GEF, 2016)

Tree and Forest Cover

The area of land covered with forest is 0.9 per cent of the total or 1.14 million hectares. Forest coverage has been on the decline with net forest area change estimated at -1.05 per cent in 2015 (UN Stats, 2019). Table 3, Figure 5, 6 and 7 highlight these changes.

Table 3: Forest area as a proportion of total land area 2000-2015 (UN Stats, 2019)

Year	2000	2005	2010	2015
%	1.04	0.99	0.95	0.90
'000 ha	1,328	1,266	1,204	1,142

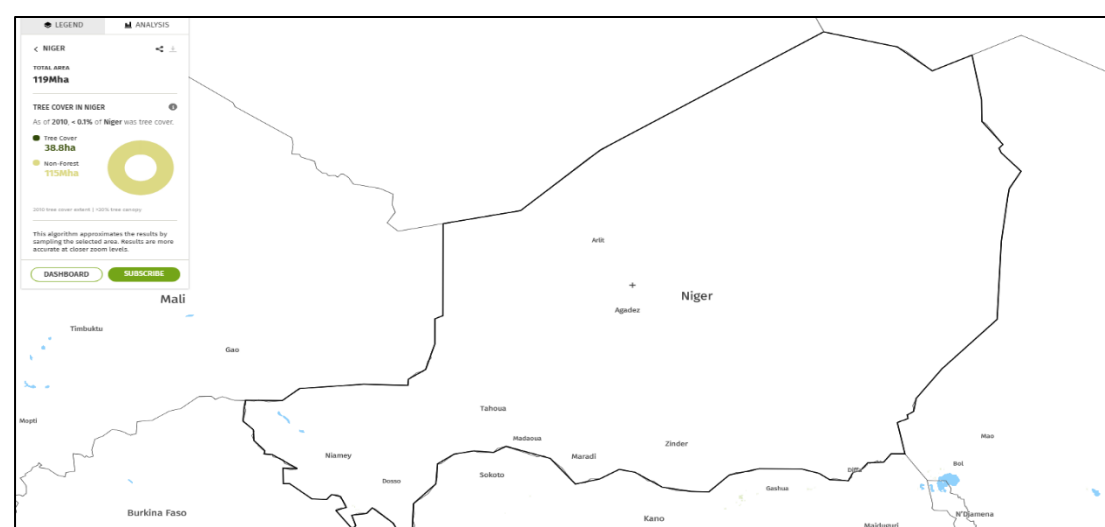


Figure 6: Niger with a 30%+ tree canopy (2010). Data source: Global Forest Watch

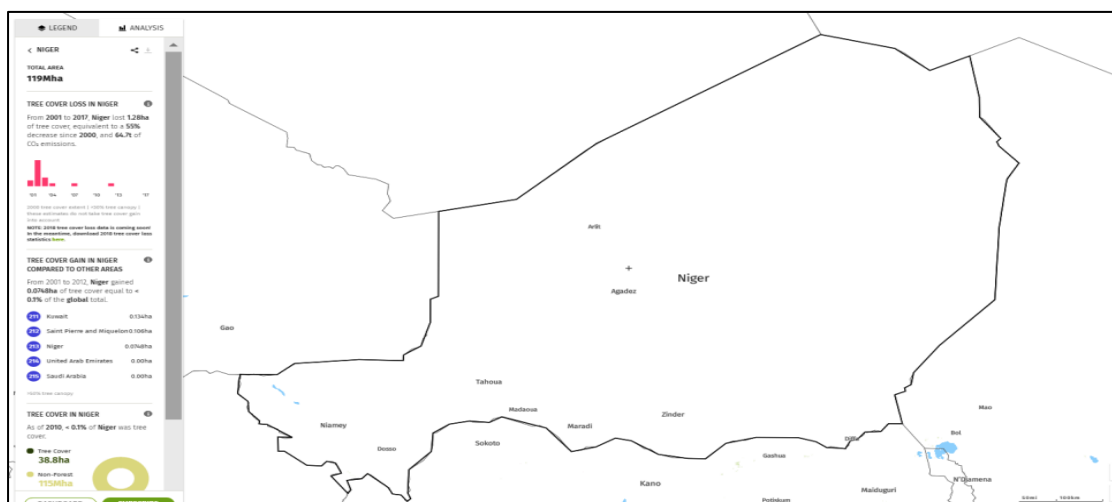


Figure 7: Tree cover loss in Niger 2001-2017. Data source: Global Forest Watch

Encouraging Sustainable Forest Management

The government has put effort into the wise use of the forest resource with emphasis on legal protection. Since 2000, 19.6 per cent of forests have been under some form of legal protection (UN Stats, 2019).

Despite this, the environmental value of forests as measured by above-ground biomass has been declining. For instance, in 2015, the above-ground biomass was 49.91 tonnes/ha down from 51.2 tonnes/ha in 2000 (UN Stats, 2019).

Relevant SDG 15 indicators

- 15.1.1** Forest area as a proportion of total land area
- 15.1.2** Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type
- 15.2.1** Progress towards sustainable forest management
- 15.3.1** Proportion of land that is degraded over total land area
- 15.5.1** Red List Index

The legal framework for forest management includes the Law No. 2004-040 fixing the forest system.

Protected Areas

Niger's Red List Index, a measure of extinction risk has been relatively stable and between 2000 and 2019 was estimated at 0.93 (UN Stats, 2019). This indicates that most species are of least concern. Country data indicates that 13 mammal species, 13 birds, 4 fish and 4 species of higher plants are threatened (World Bank, 2017).

The proportion of terrestrial biodiversity covered by protected areas has been increasing from 12.41 in 2000 to 25.25 in 2001, 38.11 in 2005 to 46.32 per cent in 2012 where it remained till 2018 (UN Stats, 2019). [Figure 8](#) highlights some of this analysis.

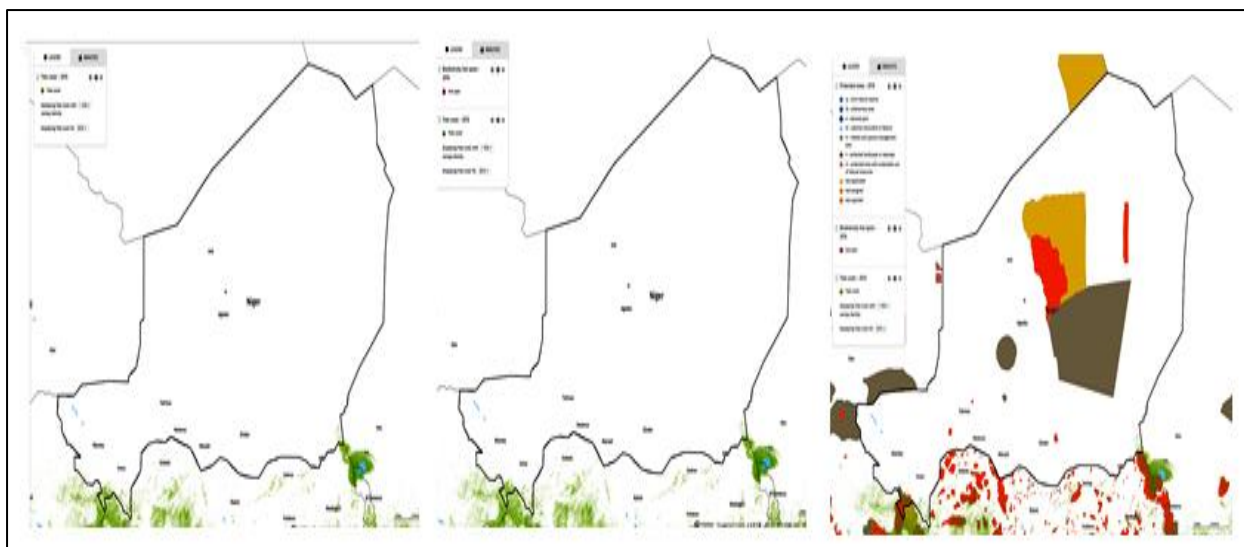


Figure 8: From left to right– Niger with a 10%+ tree canopy cover (2010), then with hotspots (2016) and then protected areas (2018) Data source: Global Forest Watch



The Addax (*Addax nasomaculatus*) is critically endangered in Niger. Photo credit: © Fondation IGF P.Chardonnet.

Emerging Environmental Challenges

Waste Production and Management

Niger produces between 0.5 kg of solid waste per person per day and 0.2 kg of e-waste per person per annum.

Niger acceded to the Basel on the Control of Transboundary Movements of Hazardous Wastes and their Disposal in 1998 and acceded to both the Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and the Stockholm Convention on Persistent Organic Pollutants in 2006. In terms of compliance, the country is estimated to be compliant with the required process obligations under

Relevant SDG 12 indicators

12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment

12.5.1 National recycling rate, tons of material

the treaties as follows: 16.66 per cent with the Basel Convention, 82.35 per cent with the Rotterdam Convention and 33.33 per cent for the Stockholm convention (UN Stats, 2019).

Climate Change

Niger ratified the United Nations Framework Convention on Climate Change and the Kyoto Protocol in 1995 and 2004 respectively. The institutional framework for the management of climate change includes the National Council for the Environment for Sustainable Development. The legal and policy framework includes the National Climate Change Policy 2013. Other relevant documents include the National Adaptation Programme of Action (NAPA) in 2006, National Strategy and Plan of Action for Climate and Variability (SNPA-CVC) revised in 2014 and Intended Nationally Determined Contributions (INDC) 2015 and the Implementation Plan of the National Framework for Climate Services of Niger, 2016.

Relevant SDG 13 indicators

13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other

13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula

13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions

Financing Natural Resources Management

Between 2002 and 2016, the highest amount of official development assistance received has been US \$ 63.58 million in 2014 but the amount has fluctuated quite a bit as shown in [Figure 9](#) (UN Stats, 2019).

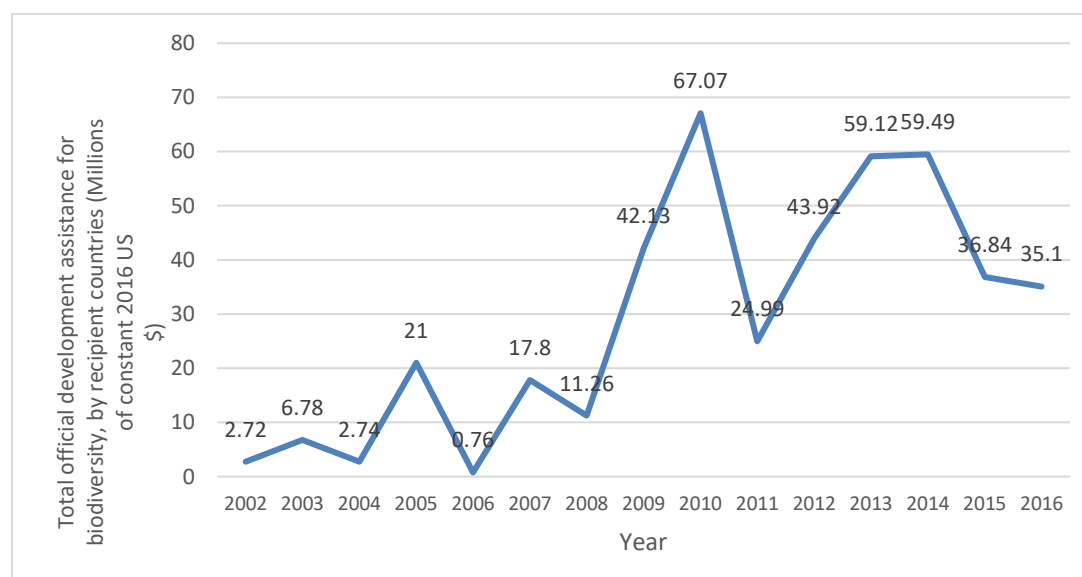


Figure 9: Total official development assistance for biodiversity (millions of constant 2016 US \$) 2002-2016 (UN Stats, 2019)

Relevant SDG 15 indicators

15.a.1 and **15.b.1** Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems

15.c.1 and **15.7.1** Proportion of traded wildlife that was poached or illicitly trafficked

Supporting Actions to End Hunger

Relevant SDG 15 indicators

15.4.1 Coverage by protected areas of important sites for mountain biodiversity

Sustainable Management of Mountain Ecosystems

Gazetted areas for the protection covered 99.99 per cent of mountain key biodiversity areas by 2018 (UN Stats, 2019). The Air et Ténéré natural reserve covering an area of 7.7 million ha is the largest protected area in Africa (Thorsell & Hamilton, 2002). The Air Mountains have unique plant and animal species as well as unique topography. The area also supports many pastoral and farming communities, and is thus important for food security.



The Bagzane Plateau, home to the highest point in Niger: Mont Idoukal-n-Taghes. Photo credit - [NASA](#)

Sustainable Management of Biodiversity

Niger ratified the International Treaty on the Plant Genetic Resources for Food and Agriculture in 2004. The institutional framework includes the Institut National de la Recherche Agronomique du Niger.

The Global Invasive Species Database lists 17 alien species in Niger (GISD, 2005).

The National Biodiversity Strategy and Action Plan 2014 was guided by the objectives of the Strategic Plan for Biodiversity (2011-2020) and the National Plan for Social and Economic Development (2012-2015). The national biodiversity targets have been mapped with the Aichi Biodiversity Targets.

Relevant SDG 15 indicators

15.6.1 Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits

15.8.1 Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species

15.9.1 Progress towards national targets established in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011-2020

Integrated Water Resources Management

The Water Code 2010 includes some of the principles of Integrated Water Resources Management, and is being further updated. So far, on a scale of 0-100, the degree at which Integrated Water Resources Management (IWRM) is undertaken is 50 (UN Stats, 2019). The Niger Water Heritage Company is responsible for the management of water resources. A National Action Plan for Integrated Water Resources Management is being developed.

Relevant SDG 6 indicators

6.5.1 Degree of integrated water resources management implementation (0-100)

6.5.2 Proportion of transboundary basin area with an operational arrangement for water cooperation

Transboundary Water Resources Management

Niger has a number of transboundary water bodies including Lake Chad basin, the Niger River and the Iullemeden aquifer system which is shared by Mali, Niger and Nigeria. It is made up of main sedimentary aquifers: the Continental Intercalaire and the Continental Terminal.

The Niger Basin Authority has 9 member countries and was established in 1980. The Lake Chad Basin Commission of 1964 includes amongst its members Cameroon, Niger, Nigeria, Central African Republic, Libya and Sudan. Countries with observer status include Algeria, Egypt, Republic of Congo and Democratic Republic of Congo.

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