Needs-based Climate Finance Project

TECHNICAL ASSESSMENT OF CLIMATE FINANCE IN THE WEST AFRICAN COMMUNITY

United Nations
Climate Change

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Abbreviations and acronyms

AF	Adaptation Fund
AfDB	African Development Bank
AFOLU	agriculture, forestry and other land use
BCEAO	Central Bank of West African States
BUR	biennial update report
CBIT	Capacity-building Initiative for Transparency
CDM	clean development mechanism
CER	certified emission reduction
CEXIM	Export–Import Bank of China
CIF	Climate Investment Funds
CILSS	Permanent Interstate Committee for Drought Control in the Sahel
COP	Conference of the Parties
CO2 eq	carbon dioxide equivalent
CPEIR	Climate Public Expenditures and Institutional Review
DTU	Technical University of Denmark
ECOWAS	Economic Community of West African States
GCF	Green Climate Fund
GDP	gross domestic product
GEF	Global Environment Facility
GHC	Ghanaian cedi(s)
GHG	greenhouse gas
IMF	International Monetary Fund
IPPU	industrial processes and product use
IRENA	International Renewable Energy Agency
LDCF	Least Developed Countries Fund
LUCF	land-use change and forestry
LULUCF	land use, land-use change and forestry
MDB	multilateral development bank
NA	not applicable
NAMA	nationally appropriate mitigation action
NAP	national adaptation plan
NAPA	national adaptation programme of action
NC	national communication
NDC	nationally determined contribution
OECD	Organisation for Economic Co-operation and Development
REDD+	reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks (decision 1/CP.16, para. 70)
SCCF	Special Climate Change Fund
SMEs	small and medium-sized enterprises
TAP	technology action plan
TNA	technology needs assessment
UEMOA	West African Economic and Monetary Union
UNCCD	United Nations Convention to Combat Desertification
UNEP	United Nations Environment Programme
WB	World Bank

Executive summary

In response to COP mandate,[1] the Needs-based Climate Finance project was launched to facilitate access to, and the mobilization of, climate finance for the implementation of priority projects and programmes identified by developing country Parties in their key national policies, including NAPs and NDCs.

West Africa is a diverse region that is home to a third of Africa's population but is also directly impacted by climate change affecting agriculture, food security, water resources, health and human settlements including coastal infrastructure. Coupled with development challenges such as trade and tariff barriers, insufficient power, the region also faces transport infrastructure, health system and skills deficiencies. Accessing finance and investment especially for transitioning to low-carbon, resilient economies is therefore extremely important.

Finance needs for implementing the NDCs of the ECOWAS member States total an estimated USD 294 billion up to 2030.[2] Priority sectors for GHG mitigation include energy, AFOLU, IPPU, transport and waste. For adaptation, sectors prioritized include water resources, agriculture, health, coastal protection, livestock, fisheries, energy, forestry and land use, biodiversity and ecosystems, vulnerable groups, human settlements, and tourism. Technology needs include renewable energy, sustainable agriculture and water resources. To enable the effective mobilization of climate finance, ECOWAS member States also require inter alia capacity-building institutional capacity to access funds, project preparation and development capacity, carbon market readiness, and climate finance tracking and reporting.

For adaptation, sectors prioritized include water resources, agriculture, health, coastal protection, livestock, fisheries, energy, forestry and land use, biodiversity and ecosystems, vulnerable groups, human settlements, and tourism.

Finance needs for implementing the NDCs total an estimated USD 294 billion up to 2030.

[1] Decision 6/CP.23, para. 10.

[2] As reported by 13 of the ECOWAS countries.

In 2013–2018, member States of ECOWAS received USD 2.6 billion annually in international public climate finance.

In 2013–2018, member States of ECOWAS – a political and economic union of 15 West African countries – received on average USD 2.6 billion annually in total international public climate finance, mainly from MDBs, followed by bilateral sources and climate funds. The main recipient sectors were energy, AFOLU, transport, and water and sanitation. The region also received an annual average of USD 2.3 billion in renewable energy investments from China over the same period. Domestic public investment and private climate finance flows are unknown owing to a lack of data.

The main barriers to climate finance and investment in the region include a lack of understanding and capacity, investment readiness among entrepreneurs and investees (in part due to the difficulty of obtaining bank financing), the difficulty in accessing climate finance and raising capital coupled with a dynamic policy environment in part due macroeconomic and political stability issues in some countries.

Although flows of climate finance into the region have been increasing over the past decade, they are not commensurate with needs despite countries' successes in applications to climate funds. The full potential of climate finance, including from the private sector is not fully realized.

Considerable effort has been made to include the most up-to-date information available. Owing to a lack of comprehensive data, means to report, measure and a standard approach for tracking and reporting, needs and climate finance, estimates contained herein are to be treated as initial and are subject to change.

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I. Introduction

A. Framing of the mandate

1. In 2017, COP 23, in its decision pertaining to long-term climate finance, requested the secretariat, in collaboration with the operating entities of the Financial Mechanism, United Nations agencies and bilateral, regional and other multilateral channels, to explore ways and means to assist developing country Parties in assessing their climate finance needs and priorities, in a country-driven manner, including technological and capacity-building needs, and to translate these needs into action.[1]

The secretariat had also been requested in earlier decisions of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol to support the CDM Executive Board in facilitating the financing of CDM projects.[2] Collectively, these mandates form the basis for a secretariat-wide initiative called the Needs-based Climate Finance Project (or 'NBF project'). The aim of this project is to facilitate access to and the mobilization of climate finance and investment in response to the needs identified by developing countries for implementing their priority projects and programmes, as outlined in their relevant national policies, strategies, and reports.

2. This technical assessment was conducted by ECOWAS – a political and economic union of 15 West African countries[3] – and the West African Alliance on Carbon Markets and Climate Finance with the support of the secretariat.

B. Aim and purpose

3. The aim of this technical assessment is to provide evidence-based comprehensive information on the regional needs of West African countries, as well as a pipeline of priority projects, to underpin the development of a regional strategy – the West African Climate Finance Mobilization and Access Strategy 2020–2030 – that will enable countries in the region to mobilize and access climate finance for implementing priority mitigation and adaptation actions. The proposed regional strategy will be based on the needs identified by West African countries, in accordance with their goals, as outlined in relevant national policies, strategies and reports. This document, in addition to facilitating the development of the strategy, serves the purpose of identifying gaps and barriers that can be addressed therein. The proposed strategy, once developed, will be endorsed at the highest political level within ECOWAS to ensure its implementation.

C. Methodology and data sources

4. This document is a technical assessment of the climate finance, technology and capacity-building needs and priorities of ECOWAS member States including an overview of climate finance flows – domestic, regional and international into the region. The assessment is desk-based but has been complemented with inputs from stakeholders under the guidance of the ECOWAS Commission, and the West African Alliance on Carbon Markets and Climate Finance.

5. Data from the countries' declaration of their needs and priorities the desk-based assessment was complemented with information provided by ECOWAS

[1] Decision 6/CP.23, para. 10.

[2] Decisions 3/CMP.1, annex, paras. 4(d) and 5(i); 6/CMP.11, para. 8., 3/CMP.12, para 4, 3/CMP.13, para 2.

[3] Benin, Burkina Faso, Cabo Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo.

member State authorities, national, regional and international experts and other relevant stakeholders in workshops and direct communication. The quantified data are expected to be lower-bound values as investments in sectors such as renewable energy and transport are classified under various categories without a detailed breakdown of the exact amount of public investment allocated. The main data sources included country submissions to the UNFCCC, such as BURs, NAPs, NAPAs, NCs, NDCs, GCF country programmes and TNAs (see table 1).

6. Further information from representations made by the ECOWAS members States during a technical workshop on needs-based finance hosted by the ECOWAS Commission in July 2021 have been incorporated.

7. Information for tracking international public climate finance flows from bilateral and multilateral contributions to developing countries was publicly available in the OECD Creditor Reporting System database, which is considered as the most comprehensive source of this information. Sector classifications are based on the sectoral definitions set out in the OECD Development Assistance Committee database, with slight adjustments to ensure that the priority sectors of the countries are reflected.

Table 1
Overview of official country communications to the UNFCCC by year of submission

	NDC	NAP	NAPA	NC1	NC2	NC3	NC4	TNA	TAP	BUR1	BUR2	GCF country programme
Benin	2018	-	2008	2002	2011	2019	-	2020	-	2019	-	-
Burkina Faso	2016	2015	2007	2002	2015	-	-	2017, 2018	2017	-	-	-
Cabo Verde	2021	-	2007	2000	2011	2018	-					
Côte d'Ivoire	2016	-	-	2001	2010	2017	-	2012	-	2018	-	-
Gambia	2016	-	2008	2003	2013	2020	-	2016, 2017	2018	-	-	-
Ghana	2016	-	-	2001	2011	2015	2020	2013	2013	2015	2018	-
Guinea	2016	-	2007	2002	2018	-	-	2020	-	2020	-	2018
Guinea-Bissau	2018	-	2008	2005	2011	2018	-	-	-	-	-	-
Liberia	2018	-	2007	2013	-	-	-	2019	-	-	-	-
Mali	2016	-	2007	2000	2012	2018	-	2012	2012	-	-	2018
Niger	2016	-	2006	2000	2009	2017	-	-	-	-	-	-
Nigeria	2017	-	-	2003	2014	2020	-	-	-	2017	-	-
Senegal	2020	-	2006	1997	2010	2016	-	2012	2012	-	-	-
Sierra Leone	2016	-	2008	2007	2012	2018	-	-	-	-	-	-
Togo	2017	2018	2009	2001	2011	2015	-	2016	2017	2018	-	2018

Source: UNFCCC as at January 2020.

These adjustments include:

(a) Combining energy policy, energy generation (renewable sources) and energy generation (non-renewable sources) into one collective 'energy' sector;

(b) Extracting waste management and disposal from the water supply and sanitation sectoral classification and making 'waste' a stand-alone sector;

(c) Extracting flood prevention and control and biodiversity from general environment protection and making each a stand-alone sector.

8. There is no internationally agreed definition of "climate finance". In determining the amounts to be reported as climate finance, reporting entities rely on their own operational definitions, and differences can affect estimates of overall finance flows. Efforts to harmonize these definitions are ongoing. The core definition adopted by OECD, MDBs and the International Development Finance Club is generally in accordance with that suggested in the 2014 Biennial Assessment and Overview of Climate Finance Flows technical report:[4] "Climate finance aims at reducing emissions and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts". This assessment aims to gather information on needs and flows under this working definition. It should be noted that Article 2, paragraph 1(c), of the Paris Agreement refers to finance flows that are "consistent with", rather than aimed at, a pathway towards low-emission and climate-resilient development.[5]

9. Data with which to track private finance flows to climate-related investments were not available in countries' reporting under the Convention. Some insight was gained from the GCF database, which provides information on project co-financiers where some of the co-financiers are private entities. No comprehensive data were available on the breakdown of investments by financial instrument for the region.

[4] https://unfccc.int/topics/climate-finance/workstreams/transparency-of-support-ex-post/biennial-assessment-and-overview-of-climate-finance-flows/the-second-biennial-assessment-and-overview-of-climate-finance-flows-2014.

[5] As noted in the 2018 Biennial Assessment and Overview of Climate Finance Flows technical report, available at https://unfccc.int/BA-2018.

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II. Regional context

10. In recent years, West African countries belonging to ECOWAS have experienced strong economic growth spurred primarily by the extractive industry (oil drilling, flaring of natural gas and extraction of minerals), resulting in the depletion of natural resources and environmental degradation and pollution. The intense exploitation of resources owing to increasing urbanization and limited urban services, particularly along the coast, has led to soil depletion and deforestation, coastal erosion, increased frequency of droughts and floods, and the encroachment of the Sahara Desert.

Common characteristics include a high population growth rate, a young population, a high (and weakly controlled) urbanization rate and the predominance of the agriculture sector in the national economy.

A. Socioeconomic context

1. Climate vulnerability

11. Of the 15 ECOWAS countries, 11 are among the least developed countries, and many have common features, economies and social conditions that make them all vulnerable to the impacts of climate change. Common characteristics include a high population growth rate, a young population, a high (and weakly controlled) urbanization rate and the predominance of the agriculture sector in the national economy. Crops and livestock account for about 60% of livelihoods and 35% of GDP in a region already facing increasing heat stress and rainfall variability, both of which affect food security and the production of traded commodities, resulting in commodity price fluctuations.

12. Recovery from drought and pandemics and tightening of global financial and liquidity conditions pose significant risks to climate finance mobilization and investment in the region. The region's climate vulnerability is compounded by rain-fed agriculture dependence, rapid population growth, pervasive poverty and inadequate access to safe water and sanitation, all with subsequent transnational climate change impacts on food and water security, health, air quality, transportation and migration. The lingering effects of prolonged civil conflicts attributable to grazing rights or access to water and other natural resources in some countries (i.e. Guinea-Bissau, Liberia and Sierra Leone) further compound the region's challenges.

2. Demographics and employment

13. The West African region is home to an immense diversity of people in terms of culture, language and religion. The legacy of colonialism has resulted in fragmentation of the region into anglophone, francophone and lusophone countries. The total population exceeds 392 million (2019), and average density is 32.4 inhabitants per km^2 (density is highest in Nigeria: 109.3 inhabitants per km^2). The urban population ranges from 20 to 50% and is expected to grow significantly. Around 41–49% of the population is under the age of 15.

14. Most people live below the poverty line (over 60%, compared with 50% for sub-Saharan Africa). The average annual income per inhabitant ranges from USD 200 in Liberia to USD 1,000 in Cabo Verde. Unemployment and underemployment, generational cycles of poverty and the breakdown of social structures have been associated with high levels of crime and violence. Poverty is mainly a rural phenomenon, with nearly three quarters of poor people living in the countryside. Women and children are the more impacted by poverty and have low life expectancy.

15. Most of the region's population (more than 60%) is employed in formal or informal agriculture sector activities, which are considered as the primary sector. A smaller proportion (2–10%) is employed in the secondary sector (manufacturing, mining, energy provision and construction). This sector faces competition from imports and in many countries lacks sufficient infrastructure, notably electricity supply, to remain competitive. The high cost of capital together with a poor business climate hinders business performance and thereby employment opportunities for qualified individuals. Migration is often their only alternative.

3. Agriculture, fisheries and forestry

16. Most food needs (approximately 80%) are met by production within the region but, production is heterogeneous and plagued by drought (rainfall has declined by 25% in the last 50 years) resulting in the lowest per-hectare yield of most crops in the world. Fish catches are on the decline in the waters between Mauritania and Sierra Leone, with around 35% of stocks considered either overfished or threatened by overfishing. The Upper Guinean Forest, which covers six West African nations, is severely threatened by commercial logging, slash-and-burn practices, plantation agriculture, industrial-scale mining and unsustainable bush meat hunting. Civil conflict adds a further strain when refugees turn to the forests for shelter and firewood. The growing interest of national governments in climate change and forest governance initiatives such as REDD+ and Forest Law Enforcement, Governance and Trade[6] is resulting in some rethinking of timber production and land tenure. Governments are seeking best practices and finance for building regional capacity to confront agriculture, fishery, and forestry challenges in the region.

4. Health system

17. Malnutrition, poor hygiene, environmental and water supply contamination and endemic communicable diseases all effect the region. Most notable was the Ebola virus disease epidemic (2013–2016). It was the most widespread outbreak of this viral disease in history, causing major loss of life and socioeconomic disruption (a fiscal shortfall of 5% of combined GDP) in Guinea, Liberia and Sierra Leone. The clearing of forest for commercial use may have affected fruit bat habitat, bringing them into contact with the human population and initiating the epidemic.

18. The epidemic had devastating human costs, but it also catalysed significant investment in the region. At the time of writing the impact of the coronavirus disease 2019 pandemic was not clear.

5. Infrastructure

19. The region faces infrastructure challenges in road, rail, sea and river transport. Estimates indicate that more than 90% of the movement of freight and passengers takes place by road, often over inadequate and insufficient roads – the region has 4.7 km of road per 100 km² versus 6.8 km per 100 km² for the entire continent. West Africa's rail network is also insufficient, with only 10,188 km of track. There are 12 national rail networks, 6 of which operate at different levels of capacity and efficiency each servicing a sub-region. With a few exceptions, railway networks are not interconnected in the region. Sea and river transport capacities are not able to meet ever-growing domestic demand. The region has about 20 seaports and a river network covering the three major navigable rivers in the Gambia, the Niger and Senegal. However, the region's seaports account for less than 1% of global container traffic as they lack the berth and depth capacity to handle larger vessels. Information and communications technology infrastructure also faces challenges, including ageing and deteriorating telephone networks and low Internet penetration (approximately 3% of the population).

6. Tourism

20. The region has a large potential for tourism, but factors such as security concerns in some countries and the coronavirus disease 2019 pandemic has impacted arrivals. Nevertheless, some countries have ambitious plans to boost tourism. For example, tourism is included in Senegal's 2013 Emerging Senegal Plan, Ghana aims to increase the number of arrivals from one to eight million annually by 2027 and to market itself as a tourist destination by increasing internal flights, and expanding or improving infrastructure, including highways and electricity and water supply. The Gambia offers investors free land and a 10-year tax holiday for investing over USD 250,000 in hotels in designated areas.

7. Energy and mining

21. The region has a rich energy generation potential because of its significant deposits of uranium, oil and gas, as well as solar, wind and hydro power potential. Notwithstanding this potential, the energy sector in the region is plagued by the lack of infrastructure and coherent enabling policies. Electricity consumption in the region, at less than 150 kWh per capita, is the lowest in the world (for comparison, the average for sub-Saharan Africa is 500 kWh per capita and for South Asia is 650 kWh per capita).

8. Fuel subsidies

22. Fuel subsidies comprise some 30% of government spending in fuel-dependent ECOWAS countries. For oil exporting countries such as Côte d'Ivoire, Ghana and Nigeria, falling fossil fuel prices reduce government revenue and thereby increase budget deficits, in turn affecting trade balances and current account deficits. Fiscal and monetary mechanisms that blunt the impact of fossil fuel commodity price volatility and by extension address clean energy access and availability are an apparent need.

[6] The aim of this initiative is to reduce illegal logging by strengthening sustainable and legal forest management, improving governance and promoting trade in legally produced timber.

The region is highly exposed, so any regionally coordinated measures could ease inflationary pressures and provide an opportunity for governments to wind down fuel subsidy programmes.

9. Trade and commerce

23. ECOWAS aims for increased intraregional trade and economic integration (the common ECOWAS market). One of the main instruments for establishing ECOWAS as a customs union is the common external tariff, which was adopted in 2006. Progress to date in economic integration has been hampered by economic, institutional, administrative and political obstacles as well as by weak regional productive. Several ECOWAS countries have improved their investment climate and conditions for doing business, but the intensity of intraregional trade among member States remains low at 14% of regional GDP.

24. The African Continental Free Trade Area was established under the African Union and took effect with trading starting 1 January 2021. All ECOWAS countries have signed the African Continental Free Trade Agreement. This free trade area brings together a market of 1.3 billion people with a combined GDP of over USD 3 trillion and, if implemented successfully, is expected to boost intra-African trade and help increase wages and alleviate poverty.

25. Several emerging markets and developing economies, particularly China, maintain strong trade channels within the region. China is Africa's biggest single trading partner and its performance as it transitions from a State-led investment-driven growth economy to a consumption- and services-driven economy therefore affects West African countries. Any slowdown in the Chinese economy weakens demand for the region's commodities (fossil fuels, agricultural products, metals and minerals). A drop in export receipts has negative impacts, including the devaluation of regional currencies.

B. Emission profile

26. The region's GHG emissions represent only 1.8% of global emissions. With 5.26% of the global population, its per capita emissions of 2.2 t CO_2 eq are approximately one third that of the world average. The region's carbon intensity is approximately double that of the world average, with only one country (Cabo Verde) having lower GHG emissions relative to GDP than the world average. Between 1990 and 2016, total regional GHG emissions grew by 39%, more slowly than the world average growth of 49%.

27. Regional GHG emissions are dominated by Nigeria (57%). Ghana follows at 7%, and Burkina Faso, Guinea, Mali and the Niger each account for roughly 5% of regional emissions (see table 2).

Table 2
Annual greenhouse gas emissions of ECOWAS member States, 2016

	Emissions (Mt CO_2 eq)	Per cent global emissions	Population	Per capita emissions (t CO_2 eq)	GDP (USD million)	Emissions (t CO_2 eq) per USD million GDP	Change in emissions 1990–2016 (Mt CO_2 eq)
Benin	26.5	0.06	10 286 712	2.6	8 576	3 093	6.5 (+33%)
Burkina Faso	38.6	0.08	17 585 977	2.1	10 908	3 542	15.8 (+69%)
Cabo Verde	0.9	0.002	526 437	1.8	1 774	522	1.1 (+654%)
Côte d'Ivoire	31.2	0.07	22 531 350	1.4	31 204	999	26.1 (+513%)
Gambia	2.4	0.01	1 917 852	1.2	1 020	2 349	–1.6 (–39%)
Ghana	51.0	0.11	26 962 563	1.9	44 752	1 141	16.7 (+49%)
Guinea	45.6	0.10	11 805 509	3.9	5 254	8 678	18.8 (+70%)
Guinea-Bissau	4.2	0.01	1 725 744	2.4	939	4 486	1.0 (+33%)
Liberia	10.5	0.02	4 390 737	2.4	1 654	6 369	–9.1 (–46%)
Mali	47.5	0.10	16 962 846	2.8	11 972	3 965	24.3 (+104%)
Niger	42.7	0.09	19 148 219	2.2	7 372	5 793	22.3 (+110%)
Nigeria	481.0	1.04	176 460 502	2.7	452 285	1 064	94.6 (+24%)
Senegal	35.0	0.08	14 546 111	2.4	14 838	2 358	13.9 (+66%)
Sierra Leone	13.6	0.03	7 079 162	1.9	3 987	3 408	2.6 (+23%)
Togo	15.4	0.03	7 228 915	2.1	3 840	4 003	4.5 (+41%)
Regional total	**846.1**	**1.83**	**339 158 636**	**2.2**	**600 375**	**11 596**	**237.5 (+39%)**
Global	**46 141.0**	**100.00**	**7 268 986 176**	**6.3**	**73 478 536**	**628**	**15 370 (+49%)**

Source: World Resources Institute Climate Analysis Indicators Tool 2020.

28. In 2016, regional GHG emissions came primarily from the energy, LULUCF and agriculture sectors, which together were responsible for 70% of total emissions (energy, 25%; LULUCF, 24%; and agriculture, 21%). Transport, other fuel combustion and fugitive emissions each contributed approximately 6% to total regional emissions, and electricity, heat, industrial processes and waste each contributed approximately 3%.

29. Energy was the dominant source of GHG emissions for Cabo Verde, Côte d'Ivoire, Ghana and Liberia. Nigeria was the largest energy emitter, responsible for more than half of regional energy emissions (65%), followed by Ghana (9%).

30. LULUCF was the main emitting sector in Benin, Nigeria, Sierra Leone and Togo. Nigeria was the largest emitter of GHGs related to LULUCF (69% of regional LUCF emissions), followed by Guinea (6%) and Benin (4%).

31. Agriculture was the leading source of GHG emissions in Burkina Faso, the Gambia, Guinea, Guinea-Bissau, Mali, the Niger and Senegal. Nigeria was the top agriculture GHG emitter (35% of regional agriculture emissions), followed by Mali (14%) and the Niger (12%).

C. Regional policies

32. The member States of ECOWAS have adopted several regional policies and coordinate with one another on national programmes relevant to climate change. Joint regional goals include increasing the share of renewable energy in the electricity mix, improving energy efficiency to international standards, promoting sustainable and climate-resilient farming and reducing disaster risk. Under the regional policies, ECOWAS countries are jointly mobilizing financial resources for working towards these goals. Such resources have been received from specialized funds, donors, development partners, the private sector and citizens.

1. Strategic plan

33. In 2011, the Heads of State and Government of ECOWAS countries approved the Regional Strategic Plan for 2011–2015, which contained six strategic pillars: peace, security and good governance; cooperation and development; competition and equity; economic and monetary integration; institutional capacity; and global relevance. A review of the plan in 2020 found that although its implementation has achieved some success, the following challenges continue to confront the region: low intraregional trade, which represents less than 14% of regional GDP; poor regional GDP growth, which also has not translated into sufficient jobs to match the number of people, especially young people, entering the job market; low level of added value in industry, resulting in the region's goods largely being exported in their primary form; growing insurgencies and increased flow of illegal small arms into the region; slow progress towards the adoption of a single currency; and limited institutional and financial management capacity.

34. Following the Regional Strategic Plan, the ECOWAS Community Strategic Framework (2016–2020) was adopted by the ECOWAS Council of Ministers in December 2015 in order to address regional goals. All institutions and agencies of ECOWAS countries are expected to draw guidance from the framework to ensure congruence of purpose and consistency in programmes across the region. The framework encompasses five strategic goals to be pursued during its implementation period:

(a) Goal 1. Deepening socioeconomic development in member States. This goal resonates with the first Sustainable Development Goal. The eradication of all forms of poverty across the region is a shared desire of ECOWAS member States and this goal has favourable prospects for being achieved. In this context, the strategic goal is to strengthen existing socioeconomic development institutions, frameworks and policies with a view to ensuring inclusive growth and sustainable development;

(b) Goal 2. Forging and consolidating regional economic and monetary and financial integration including production, trade and labour markets;

(c) Goal 3. Deepening political cohesion and participation within the region on peace. Security frameworks and mechanisms need to be strengthened to adapt to the growing presence of terrorist groups and insurgents. Conflict prevention, management and resolution, democracy and good governance also need to be consolidated;

(d) Goal 4. Mobilizing and sustaining societal and institutional support. Strong institutions and diversified human capital are necessary conditions for achieving the first three goals under the framework;

(e) Goal 5. Expanding and improving facilities within the region to develop its infrastructure base, particularly in energy, information and communications technology, and transport, to positively impact the existing business climate and improve the competitiveness of both public and private sector actors.

2. Climate change

35. A regional action programme on vulnerability reduction and adaptation to climate change in West Africa adopted in 2010 aims to develop and strengthen the resilience and adaptability of the region to climate change and extreme weather events. The specific aims of the programme are to (i) strengthen the scientific and technical capacity of the region to reduce vulnerability to climate change; (ii) promote the integration of climate change aspects into development policies, strategies, programmes and projects at the subregional and national level; and (iii) develop and implement programmes and projects on adaptation to climate change at the subregional and national level.

36. The ECOWAS fuel-efficiency road map, adopted in February 2020, outlines measures for the transition towards more fuel-efficient and electric mobility. The road map requires countries to develop a regionally harmonized framework for vehicle data and labelling. At the same time, countries are required to introduce fiscal incentives to promote cleaner vehicles, including electric vehicles. Countries also agreed to communicate and raise awareness on fuel-saving policies.

3. Environment

37. The ECOWAS environmental policy was adopted by Heads of State and Government in December 2008. Although the issue of climate change is not addressed specifically in this policy, it is included under priority area 1. The ECOWAS Commission's environment-related activities[7] contributed to the region's sustainable development and focused on the three priority areas of the environmental policy, which are (i) enhancing environmental governance and capacity-building through the implementation of conventions, (ii) promoting sustainable resource management for the development of an environment-friendly subregional economy and (iii) enhancing the management of pollution and nuisance and dangerous waste. In early 2020, ministers from ECOWAS countries adopted an environmental action plan and corresponding monitoring and evaluation plan with the aim of establishing an effective monitoring and evaluation system for attaining the strategic objectives of the ECOWAS environmental policy.

38. A forest convergence plan was adopted in 2013. The plan presents a vision, to be achieved by 2025, for the sustainable management of forest and wildlife resources for the benefit of people as well as the environment. Under the plan, seven priorities have been identified: (i) harmonization of forestry policies and legislation; (ii) better knowledge of current forest ecosystem dynamics to create a baseline for future action; (iii) management and reforestation of forest ecosystems; (iv) biodiversity conservation; (v) enhancement of ecosystem goods and services for food security, economic stability and environmental sustainability; (vi) forestry research and development; and (vii) information, education and communication.

39. In 2013, a regional action plan to combat desertification for sustainable land management was adopted. The aim of the plan is to promote partnership among the different actors intervening on issues related to the sustainable management of shared resources in order for these resources to serve present and future generations in their quest for economic and social well-being. The plan has three strategic objectives: (i) improve living conditions and food security in arid and semi-arid zones of West Africa; (ii) improve the state of transboundary and/or shared ecosystems; and (iii) establish efficient partnerships in transboundary and/or shared resources management among subregional, national, local and international partners in order to speed up the implementation of the UNCCD at the national and subregional level.

40. In addition to these strategic objectives, four operational objectives underpin the areas of intervention of the action plan to combat desertification: (i) efficiently integrate desertification, land degradation and drought issues into subregional and national priorities in West Africa, and influence the international community and subregional and national stakeholders to address these issues more efficiently; (ii) work at creating in the subregion a generally conducive environment for finding sustainable, efficient solutions to combat desertification and land degradation and mitigate the effects of drought; (iii) establish an efficient system for strengthening capacity and managing subregional knowledge on desertification, land degradation and drought; and (iv) support financial and technological resource mobilization for implementing the UNCCD in West Africa.

4. Energy system

41. About 52.3% of the ECOWAS population has access to electricity. Users pay among the highest electricity prices in the world, and more than double those of consumers in East Africa. Owing to operational deficiencies, electricity services are unreliable, with an average of 44 hours of outages per month. Medium and large hydropower plants contribute approximately 27.6% of electricity generated from around 5 GW installed capacity, while grid-connected renewable energy installations (small hydropower, solar photovoltaic, wind and biomass) contribute 1.8% of installed capacity. The ECOWAS Centre for Renewable Energy and Energy Efficiency believes there is a strong case for promoting the deployment of more off-grid systems such as mini-grids and stand-alone technologies, which it claims will help attain the ECOWAS target of 65% access to electricity.

42. Over the past decade, almost all ECOWAS countries have been working towards a fully integrated power market via the West African Power Pool. The power pool is an association of public and private power entities and as a specialized agency of ECOWAS is co-funded by donors. With the development and approval of a standardized baseline grid emission factor for the West African Power Pool[8] the region is well equipped to calculate emission reductions from renewable and energy efficiency projects (measures or plants in participating countries), which can then be monetized and sold on the international or voluntary carbon market.

[7] For more information, see the report available at https://www.ecowas.int/wp-content/uploads/2017/11/Annual-Report-2016_English-Fina_Final.pdf.

[8] https://cdm.unfccc.int/methodologies/standard_base/2015/sb102.html. The standardized baseline is applicable to power plants that are connected through transmission and distribution lines to supply electricity to the power pool. These include power plants in nine ECOWAS countries: Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, Niger, Nigeria, Senegal and Togo.

43. The WB's West Africa Regional Energy Trade Development Policy Financing Program supports a policy reform programme covering Burkina Faso, Côte d'Ivoire, Guinea, Liberia, Mali and Sierra Leone that facilitates cross-border trade in cleaner, low-cost electricity generated from gas as well as hydropower and other renewable energy sources. The reform programme seeks to remove barriers to electricity trade to lower electricity costs for consumers, support the competitiveness of firms and improve the resilience and reliability of supply. In mid-2020, the WB provided to the above countries USD 300 million International Development Association credits and grants to (i) increase the enforcement of commercial power arrangements in addressing the creditworthiness of national power utilities and (ii) implement least-cost investment decision-making that considers regional options such as technical losses,[9] promotes competition and supports transparency by providing market information on key investment decisions that impact demand and supply.

5. Renewable energy

44. In 2015 ECOWAS approved a renewable energy policy, the targets of which include (i) increasing the share of renewable energy (including large hydropower plants) in the region's overall electricity mix to 35% by 2020 and 48% by 2030, and (ii) increasing the share of the rural population served by decentralized renewable electricity to 22% by 2020 and 25% by 2030. Complementing the policy is the ECOWAS energy efficiency policy, the aim of which is to improve energy efficiency in the region to international standards.

6. Energy efficiency

45. Within the region, efforts are under way to improve institutional and legislative frameworks under which energy efficiency can be increased. These efforts cover the domestic sector (promoting energy-efficient lighting and electrical appliances), the public sector (improving energy efficiency in public buildings), the industrial sector (improving energy efficiency in industrial processes) and the electricity sector (reducing losses in transmission and distribution networks). Increasing the market share of efficient lighting in the region has played a significant role in achieving energy savings and some countries are implementing mini-grids (see box). Over one million efficient on-grid lights and thousands of efficient public lights have been sold and distributed in the region. Some ECOWAS countries are not able to provide quantitative data (e.g. the number of people served by stand-alone renewable energy systems) on their actions as the relevant processes for collecting and accessing the penetration rate of energy-efficient lighting and improved cookstoves are not yet in place.

Mini grids

As the name suggests, mini-grids are small, isolated versions of larger power grids. They increasingly use solar power as an energy source, with support from batteries or diesel generators. Because the cost of solar power has fallen drastically over the last decade, mini-grids have become much cheaper than installing long-distance transmission lines from a central electricity grid. About 5,500 mini-grids are in operation across 12 countries in Africa and Asia, which could meet the needs of half the people who still need access to electricity in those regions.

Universal power access will require USD 128 billion of spending, but the world is on track to spend only about USD 63 billion on mini-grids over the next decade. Plugging the gap would cost less than USD 600 per target household reached. The international Mini-Grids Partnership, which includes the WB and other development agencies from rich countries, has approved USD 2 billion in awards since 2012, but has only disbursed 13% of the money, with many projects stuck because of policy uncertainties.

Countries in which mini-grids will be most useful, such as India, the Philippines and Uganda, suffer from corruption, bad policies, weak regulatory enforcement or red tape – or a combination of all four. Nigeria, Africa's most populous country, struggles to provide electricity to its 200 million people. Only 55% of the country has access to electricity, and even in those areas, people suffer from power cuts lasting between 4 and 15 hours every day. As a result, the country spends more than USD 16 billion annually to power diesel generators. In 2017, the country passed a law to help mini-grid development, which streamlines the online application process, offers USD 350 in government subsidies per user once grids with more than 30 users are up and running, and provides compensation if the main power grid eventually arrives in an area served by a mini-grid. Developers in Nigeria now have simpler processes and clearer guidelines to follow. The benefit is that mini-grids have become a much more attractive investment. This offshoot of the clean energy revolution has three benefits: mini-grids can help provide access to electricity to those who lack it and do so in a cleaner and cheaper way.

Source: The State of the Global Mini-grids Market Report 2020 by Sustainable Energy for All.

[9] As electricity generation capacity increases, reducing technical losses in transmission and distribution networks becomes increasingly important. Although network losses in the region have been declining, they remain a burden on the financial viability of utilities and undermine the development, maintenance and expansion of regional power transmission networks. The weighted percentage of non-technical losses in the region amount to 12.9% (2,554 GWh) of power produced.

7. Agriculture

46. In 2016, ECOWAS endorsed the 2016–2020 Regional Agricultural Investment Plan, which builds on an in-depth assessment of the 2005 ECOWAS regional agricultural policy. The plan addresses both climate change mitigation and adaptation in agricultural, pastoral, forestry and fishery systems.

47. Five activities are to be implemented under the investment plan to achieve mitigation and adaptation results, namely (i) supporting the West Africa Climate-Smart Agriculture Alliance and intervention framework, (ii) supporting the diversification and security of agricultural systems, (iii) promoting pastoral and agropastoral livestock systems, (iv) conserving forest areas and promoting sustainable farming techniques and (v) promoting responsible maritime and continental fisheries and aquaculture development.

8. Disaster risk reduction

48. The ECOWAS policy for disaster risk reduction (2016) and the ECOWAS guidelines for the establishment and strengthening of national platforms for disaster risk reduction in West Africa (2010) look at managing disaster risk as a development challenge to be addressed by development interventions. Hence, their recommendations cover actions in sustainable development that have the aim of strengthening the regional capacity for disaster risk management. The policy addresses disasters triggered by natural hazards that may be exacerbated by conflict but does not contain explicit interventions on conflicts. Priorities for action under the policy include (i) supporting development and subregional networking of national platforms for disaster reduction, (ii) promoting expansion of the various early warning systems in operation and facilitating their coordination and harmonization, (iii) raising public awareness and supporting advocacy of disaster reduction, (iv) integrating disaster risk reduction principles into the ECOWAS regional agricultural policy and national development policies and (v) developing subregional disaster response capability based on the ECOWAS Standby Force and the ECOWAS Emergency Response Team.

49. Experience has shown that inadequate financial resources undermine the efficient and sustainable operation of disaster management mechanisms, particularly during emergencies. Consequently, the policy for disaster risk reduction establishes a disaster management window under the ECOWAS Peace Fund to provide core financial resources for implementing its programmes and activities. The Peace Fund serves as a principal source of financing for the policy and as seed funding to attract donor support. Other sources of financing include complementary co-financing of related areas, such as conflict monitoring, desertification and agriculture; and funding from States, development partners and the private sector. The policy encourages innovative approaches that allow citizen contributions to risk reduction services such as participatory approaches that promote intergroup partnerships in implementation at the national and community level. The policy calls for an active strategy of resource mobilization and partnerships with role players, particularly the private sector, civil society and international development partners, and for agreement on key partnership principles and arrangements for North-South and South-South, as well as intra-ECOWAS, cooperation.

50. In 2017, ECOWAS signed a memorandum of understanding with the African Risk Capacity Group, a specialized agency of the African Union, to further address climate risk finance.

9. Natural resources

51. The responsibility for the Regional Program for the Integrated Development of the Fouta Djallon Highlands was transferred from the African Union to ECOWAS in 2017. The highlands extend from Guinea into Guinea-Bissau, Mali, Mauritania, Senegal and Sierra Leone, and the source for major rivers in West Africa are located within them. The ecosystems and agro-silvopastoral production of the highlands have been negatively impacted by climate variability. A regional integrated project with a total cost of USD 44 million, co-funded by UNEP and the GEF, has been under implementation since 2008.

52. The West African water resources policy was adopted in 2007. The overarching objective of this policy is to contribute to poverty reduction and sustainable development in the region by advising ECOWAS and its member States on water resources management, reconciling economic development, social equity and environmental protection. The specific aims of the policy are to (i) foster the development of community guidelines in terms of water management, (ii) support the harmonization and integration of national and regional water-related policies and (iii) encourage governments to develop frameworks for water management nationally and in transboundary basins.

10. Other regional climate change related plans

53. The Climate Commission for the Sahel Region was launched in November 2016 in Marrakech on the margins of COP 22, along with two other regional commissions: the Congo Basin Commission and the Africa Island States Climate Commission.

54. The Heads of State and Government of the 11 Sahelian countries (Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Djibouti, Equatorial Guinea, Mali, Mauritania, Niger and Sudan) and the experts of the Climate Commission for the Sahel Region adopted a climate investment plan for the Sahel region for 2019–2030, which has an estimated total cost of USD 393 billion. A strong

call was made to partners, particularly AfDB, for sustained support in mobilizing finance for implementing the plan. The Climate Commission also validated a regional priority programme, which is estimated to cost USD 1.32 billion, and decided on its immediate implementation, with a financial contribution from member countries of around 10%.

55. The Programme for Integrated Development and Climate Change Adaptation in the Niger Basin, supported by AfDB, the GCF and State funding, has the aim of reducing silting of the Niger River, whose basin is shared by nine West and Central African States (Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Guinea, Mali, Niger and Nigeria). Since 2006, pilot projects under the programme have been financed in Burkina Faso, Mali and the Niger. The cost of the current programme is approximately USD 205 million and it will be implemented over six years (2019–2024).

D. National policies

56. Several ECOWAS countries have national plans, strategies and policies, some at the sectoral level, to address climate change. Most ECOWAS countries do not have a climate finance strategy in place, with the exceptions being Côte d'Ivoire, which has a climate financing strategy, Guinea Bissau, which has a financing strategy for adaptation, and Mali, which has an environmental financing strategy.

E. Regional organizations

57. The West African Economic and Monetary Union (commonly known by its French acronym, UEMOA) is an organization of eight West African States that are also members of ECOWAS (Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo). The Union was established to promote economic integration among countries that share the CFA franc as a common currency. The CFA franc (formerly Franc of the French Colonies in Africa) is the collective name of two currencies: the West African CFA franc (currency code XOF), used in eight countries, and the Central African CFA franc (currency code XAF), used in six countries. Although separate, the two currencies share parity and are interchangeable. Both are guaranteed by the French treasury, and both have a fixed exchange rate to the euro.[10] In December 2019, it was announced that the CFA franc would be replaced by the 'eco'.

58. The West African Monetary Zone, established in 2000, comprises six member States (Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone) that do not belong to UEMOA. Member States of the zone aim for economic integration and introduction of the common independent currency (the eco).

59. Several regional bodies address climate change in their mandates: CILSS; AGRHYMET Regional Centre ('AGRHYMET' denotes agriculture, hydrology and meteorology), a specialized agency of CILSS;[11] West African Science Service Centre on Climate Change and Adapted Land Use;[12] Sahara and Sahel Observatory; Abidjan Convention secretariat; and several transboundary river basin organizations, including the Senegal River Basin Development Organization, the Niger Basin Authority and the Lake Chad Basin Commission.

F. Economic landscape

1. Outlook

60. The main barriers to climate investment in the region include a lack of investment readiness among entrepreneurs and investees (in part due to the difficulty of obtaining bank financing), unpredictable policy environments, the difficulty of raising capital locally (among fund managers) compared with global standards, few exit examples, and macroeconomic and political instability. While the region has recently seen strong growth and investment in market actors such as incubators, accelerators, associations and technical assistance providers, the investment is not scaled to service the needs of the region. An additional hindrance to climate investing in West Africa is perception: there is scepticism among investors in the region surrounding new investment platforms. The lack of understanding of and trust in the potential and aims of climate finance and investment is driving problems with its credibility.

61. Amidst a challenging external environment, prior to the coronavirus disease 2019 pandemic, West Africa's real GDP growth was expected to slow to 3.1% in 2020

While the region has recently seen strong growth and investment in market actors such as incubators, accelerators, associations and technical assistance providers, the investment is not scaled to service the needs of the region.

[10] 100 CFA francs = 1 former French (nouveau) franc = 0.152449 euro; or 1 euro = 6.55957 former French (nouveau) francs = 655.957 CFA francs.

[11] Established in 1974, with international status, and headquartered in Niamey, the Niger. The 13 member countries are Benin, Burkina Faso, Cabo Verde, Chad, Côte d'Ivoire, the Gambia, Guinea, Guinea-Bissau, Mali, Mauritania, the Niger, Senegal and Togo.

[12] A large-scale research-focused climate service centre designed to help tackle challenges and thereby enhance the resilience of human and environmental systems to climate change and increased climate variability. It does this by strengthening research infrastructure and capacity in West Africa related to climate change and by pooling the expertise of 10 West African countries and Germany. Funded by the German Federal Ministry of Education and Research, the centre is implemented as a collaborative effort by West African partners and Germany.

from 3.8% in the previous year, while averaging 3.9% over 2020–2024. With the pandemic, the outlook is likely to be considerably worse. The slowdown is largely explained by lacklustre growth in Nigeria, which accounts for two thirds of West Africa's GDP. The main downside risks stem from the considerable uncertainty in the global economy, with slowing growth in most advanced economies and escalating trade protectionism. Impacts on oil prices and trade could have a substantial impact on West Africa.

62. SMEs are at the core of West African economies. Yet these firms struggle to access finance, as banks consider lending to them to be highly risky and allocate a significant portion of their investment to government assets. The UEMOA banking sector remains aided by the entry into force of the Basel III capital requirements; however, a long-term domestic credit/savings mismatch impedes lending to SMEs in UEMOA countries. Elsewhere in West Africa, the proportion of non-performing loans on banks' balance sheets remains high, even though asset quality is improving. Improvements in regulation and the recent clean-up of the financial sector is expected to improve the situation in the medium term.

2. Public debt

63. Public debt funds most investment in the region. Public debt is projected to increase from 36.6% of GDP in 2018 to 42.1% by 2024. The debt-to-GDP ratio exceeds 50% of GDP in 11 ECOWAS countries (averaging 62% across UEMOA countries), ranging from 39% (Guinea) to 128% (Cabo Verde). According to the IMF's most recent debt sustainability assessments, nine countries in West Africa are at moderate risk of debt distress (Benin, Burkina Faso, Côte d'Ivoire, Guinea, Guinea-Bissau, Liberia, Mali, Niger and Togo), whereas four are at high risk (Cabo Verde, Ghana, Mauritania and Sierra Leone). The Gambia is already in debt distress while Senegal has been assessed as being at low risk of debt distress. Nigeria has a relatively low debt-to-GDP ratio (28.4%), well below the average for sub-Saharan Africa. The IMF has assessed Nigeria's debt levels as sustainable. However, its ability to mobilize finance is weaker than many other countries in the region, and debt servicing is projected to become unsustainable by 2022 should the trajectory not change. Eleven ECOWAS countries are supported by the IMF and Guinea-Bissau and Senegal have expressed an interest in IMF support.

3. Development finance institutions

64. There are 45 impact investors active in the region – 14 development finance institutions and 31 others. Investment by development finance institutions has increased at a compound annual growth rate of 18%, from USD 190 million in 2005 to USD 852 million in 2014. These institutions have deployed about 97% of West Africa's total impact investing capital. Nigeria and Ghana dominate impact investing in the region, with Nigeria, which accounts for 80% of the region's GDP, accounting for 29% and Ghana 25%. Investment in Nigeria may be held back in part because of security concerns surrounding the country's ongoing conflict with the terrorist group Boko Haram. Political stability and economic growth in Côte d'Ivoire and Senegal are likely to see them receive more private sector investment attention.

4. Banks

65. The banking system in the ECOWAS region is characterized by two main banking markets: UEMOA States and West African Monetary Zone States. The market in UEMOA member States (who share a common currency) is regulated by BCEAO. The countries of the West African Monetary Zone do not have a common currency and central bank yet, but they established the West African Monetary Institute in 2001 to make technical preparations for establishing a common West African central bank and launching the common currency (the eco).

66. BCEAO is an international public institution headquartered in Dakar, Senegal. The UEMOA banking sector continues to expand, and at the end of 2018, it had 142 authorized institutions (compared with 138 in 2017). The banking network similarly expanded in 2018 in a favourable economic environment. At the end of 2018, there were 3,396 branches (a 14.1% year-on-year increase) and 2,976 automated teller machines (a 9.9% year-on-year increase). The sector's total assets in the eight member countries rose by 6.8% year-on-year in 2018 to EUR 57.6 billion. The UEMOA banking sector, at the end of 2018, included 29 banking groups with international or regional ownership. Banking activity is dominated by these entities, which account for 86.8% of banking assets and 83.4% of customer bank accounts. In terms of market share, Ecobank and BMCE Bank of Africa groups held 13.2 and 10.1% of total assets, respectively (see figure 1).

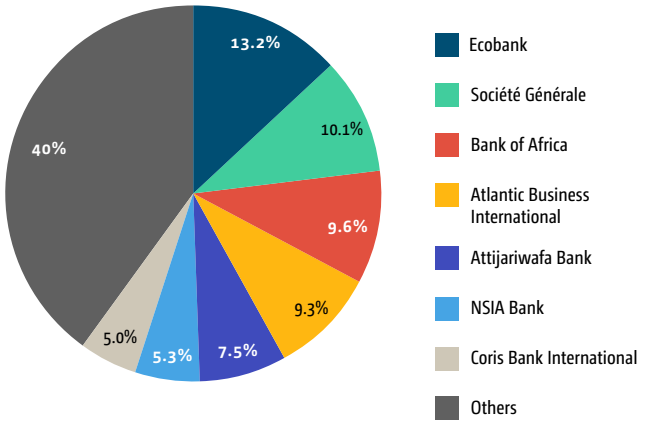
5. Finance for small and medium-sized enterprises

67. Access to finance is a constraint for ECOWAS market participants. Although most businesses have a bank account, few have accessed a bank loan (i.e. made use of bank lending). According to the WB Enterprise Surveys, over half of businesses in West Africa perceive access to finance as a major constraint. This problem is most acute in UEMOA countries, where 57% of firms are concerned about financing, compared with 42% in other West African countries.

68. Demand-side constraints, such as pervasive informality among SMEs, limit access to finance. The AfDB[13] highlighted that over 1.5 million informal

[13] African Economic Outlook, AfDB 2018.

Figure 1
Market shares of the main banking groups in the West African Economic and Monetary Union



Source: UEMOA Banking Commission (2018).

enterprises are in the main economic capitals of the UEMOA region. When businesses do manage to get a loan, the funds are usually used to support short-term needs. As a result, almost 80% of businesses rely on their own resources and retained earnings for investment capital.

69. Banks in the region rank businesses as risky and consequently require a significant amount of collateral. This amount is, on average, twice the value of the loan, which is challenging for small businesses to put together.

70. Supply-side challenges include the strong incentive banks must invest in safe government assets and the lack of complementary financial sector infrastructure. Government securities provide higher rates of return than the private sector, particularly small firms, can provide. In Sierra Leone, for instance, loans are less than 30% of total deposits, with most assets invested instead in treasury bills, which are high-yielding and perceived as carrying zero risk.

71. Furthermore, poor credit bureau coverage (less than 3% of the adult population) makes it difficult for banks to assess the risk of their clients. According to the WB Enterprise Surveys, almost a quarter of small companies in the region were not formally registered when they began their operations. A lack of formal, audited accounts (only 41% of companies in the region have external auditors reviewing their financial accounts) hampers competitiveness and access to financial markets.

72. There is a strong need for financing for SMEs, which, for the most part, lack awareness of financing options, struggle to meet bank and investor requirements, lack professional operational and governance mechanisms, and lack knowledge and technical expertise. All of these factors generally result in high operation costs and hampered profitability.

6. Interest rates and inflation

73. UEMOA countries, having a common currency and central bank (BCEAO), operate within a macroeconomic environment that is markedly different from that of the other countries in the ECOWAS region. For instance, UEMOA countries face lower inflation and interest rates. The average inflation rate between 2009 and 2014 was approximately 1% for UEMOA countries and 9% for non-UEMOA countries. While variation among UEMOA countries was small, non-UEMOA countries' inflation rates varied widely – from a 2009–2014 average of 2% in Cabo Verde to 13% in Guinea. Interest rates paint a similar picture. The average UEMOA interbank rate between 2009 and 2014 was approximately 4%, compared with 18% for non-UEMOA countries. While it is difficult to generalize, it is fair to say that UEMOA countries face a more consistent and stable macroeconomic climate but lower growth. The average real GDP growth between 2010 and 2014 was 2–5% for UEMOA countries and 1–9% for non-UEMOA countries.

7. Ease of doing business

74. The region's average rank in the WB's Doing Business index, which ranks 189 countries in various categories related to the ease of business operations, is 152. These poor results are primarily driven by problems with paying taxes (including high taxation rates and administrative burdens related to paying taxes), accessing electricity, obtaining construction permits and registering property, as well as by policy uncertainty and ambiguity, which makes it difficult to know which regulations apply to investors and when they will change. All ECOWAS countries have seen improvements in their ease of doing business scores between 2010 and 2020, with the average score for the region improving from 42.9 to 53.4 (on a scale from 0 to 100, where 0 represents the worst and 100 the best performance).

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III. Climate finance needs and priorities

75. All ECOWAS countries are Parties to the Convention and have ratified the Kyoto Protocol and the Paris Agreement.[14] Most ECOWAS countries have prepared and submitted to the secretariat NCs, except for Liberia, which has prepared one, Burkina Faso and Guinea, which have prepared two, and Ghana, which has prepared four. Burkina Faso and Togo[15] have submitted NAPs and Mali has submitted a NAMA.

These and other UNFCCC documents outline each country's mitigation and adaptation priority sectors and often quantify climate finance needs. The following section outlines the priority finance needs, including those for technology and capacity-building, of ECOWAS member States. There has been no attempt to determine the presence of or resolve any potential double counting of needs in the data. In some cases, quantitative figures from separate documents (BUR, NAPA, NC, NDC, TAP, etc.) may contain the same data. To avoid reporting misleading figures, amounts from different reports have not been added up.

76. ECOWAS countries stated in their NDCs priority needs related to conditional and unconditional emission reduction targets. Commitments were made through various types of targets[16] and actions[17] or a mixture of the two. For example, Benin, Cabo Verde, the Gambia, Mali and Sierra Leone committed to GHG targets and actions; Guinea-Bissau committed to non-GHG targets and actions; and Burkina Faso, Côte d'Ivoire, Ghana, Guinea, Liberia, the Niger, Nigeria, Senegal and Togo committed to GHG and non-GHG targets and actions.

77. Countries attached conditions such as the availability of finance to their current NDC mitigation commitments (see table 3). Côte d'Ivoire and Liberia made only conditional commitments; Benin, Cabo Verde and Senegal made both unconditional and conditional commitments; Guinea-Bissau made an unconditional commitment; and remaining countries specified their commitments as (un)conditional. Commitments ranged between approximately 1 and 45% of GHG emissions. All countries except Guinea-Bissau and Sierra Leone set 2030 as the year for achieving their target and all referred to 'business as usual' as the baseline scenario. Some countries (e.g. the Niger) should have reduced emissions by up to a quarter of their 'business as usual' scenario with the support of the international community by the end of 2020.

[14] All ECOWAS countries have also ratified the Convention on Biological Diversity and the UNCCD.

[15] Available at https://www4.unfccc.int/sites/NAPC/Pages/national-adaptation-plans.aspx.

[16] A 'target' represents the intention of a country to achieve a specific result within a given time frame. Targets can be 'GHG' or 'non-GHG'. A non-GHG target is a pledge framed in terms of technology goals or a mitigation action. For example, Cabo Verde committed to increasing renewable energy uptake in electricity to 100% by 2025 or reducing overall energy demand by 10% in relation to the baseline scenario by 2030.

[17] An 'action' represents the intention of a country to implement specific means of achieving GHG reductions through, for example, policies, plans and projects.

Table 3
Overview of emission reduction targets and quantifiable activity-related targets of the ECOWAS member States

	Emission reduction – unconditional	Emission reduction – conditional on support from the international community
Benin	Excluding LULUCF: reduce GHG emissions by 3.63% from 2021 to 2030 compared with the 'business as usual' scenario Including LULUCF: reduce an additional 1.4% GHG emissions for LULUCF from 2021 to 2030 by reducing the annual deforestation rate and increasing cumulative sequestration capacity	Excluding LULUCF: reduce GHG emissions by an additional 12.55% to 2030 compared with the 'business as usual' scenario Including LULUCF: reduce GHG emissions from LULUCF by an additional 4.3% (total 5.7%)
Burkina Faso	Reduce GHG emissions by 7.8 Mt CO_2 eq per year or 6.6% by 2030 compared with the 'business as usual' scenario	Reduce GHG emissions by 13.76 Mt CO_2 eq per year or 11.6% by 2030 compared with the 'business as usual' scenario with investments of USD 756,032,667 from international sources
Cabo Verde	Reduce GHG emissions by at least 20% from 2021 to 2030 compared with the 'business as usual' scenario Renewable energy: achieve 17% grid access by 2017 and a 30% renewable energy penetration rate for the electricity grid by 2025 Energy efficiency: reduce overall energy demand by 10% in relation to the baseline scenario by 2030	Reduce GHG emissions by up to 30% below the 'business as usual' level Renewable energy: increase renewable energy uptake in electricity to 100% by 2025 Energy efficiency: reduce overall energy demand by 20% in relation to the baseline scenario by 2030, with best efforts to achieve this indicative reduction by 2025 through NAMAs in sectors such as forestry, waste and transport
Côte d'Ivoire	-	28% reduction in GHG emissions by 2030 compared with the 'business as usual' scenario
Gambia	-	44.4% reduction in GHG emissions by 2025 and 45.4% reduction by 2030 compared with the 'business as usual' scenario in those years (LULUCF excluded)
Ghana	15% reduction in GHG emissions by 2030 compared with the 'business as usual' scenario	45% reduction in GHG emissions by 2030 compared with the 'business as usual' scenario
Guinea	-	13% reduction in GHG emissions by 2030 compared with the 'business as usual' scenario (LULUCF excluded) Four urgent cross-sectoral measures must be implemented with support from the international community: (1) meet the significant needs for robust, accessible data, cross-sectoral medium-term strategic planning documents and monitoring of natural resources; (2) promote the inclusion of climate change issues, especially regarding adaptation, in planning and budgeting at the local, sectoral and national level; (3) take into account gender issues in all development programmes and projects; and (4) make information on environmental law and the causes and impacts of climate change widely available and accessible so as to raise public awareness and educate the Guinean population as a whole

Table 3 (continued)
Overview of emission reduction targets and quantifiable activity-related targets of the ECOWAS member States

	Emission reduction – unconditional	Emission reduction – conditional on support from the international community
Guinea-Bissau	No commitments expressed in terms of GHG emission reductions; however, the country commits to achieving specific actions that are conditioned upon the receipt of technical and financial support from the international community	
Liberia	-	15% reduction in total GHG emissions by 2030 compared with the 'business as usual' level (5.30 Mt CO_2 eq) if all four mitigation scenarios are implemented Scenario 1: 30% renewable energy (5.16 Mt CO_2 eq) Scenario 2: firewood cookstove distribution (4.87 Mt CO_2 eq) Scenario 3: 5% biofuel use (4.82 Mt CO_2 eq) Scenario 4: Monrovia landfill gas recovery (4.5 Mt CO_2 eq)
Mali	-	27% reduction in total GHG emissions by 2030 compared with the 'business as usual' level Reduction in GHG emissions of 31% in the energy sector, 29% in the agriculture sector and 21% in the LUCF sector
Niger	2.5% reduction in total GHG emissions by 2020 compared with the 'business as usual' level 3.5% reduction in total GHG emissions by 2030 compared with the 'business as usual' level	25% reduction in total GHG emissions by 2020 compared with the 'business as usual' level 34.6% reduction in total GHG emissions by 2030 compared with the 'business as usual' level or a reduction of 33.4 Mt CO_2 eq by 2030
Nigeria	20% reduction in total GHG emissions by 2030 compared with the 'business as usual' level	45% reduction in total GHG emissions by 2030 compared with the 'business as usual' level
Senegal	5 and 7% reduction in total GHG emissions by 2025 and 2030, respectively, compared with 'business as usual' levels	23 and 29% reduction in total GHG emissions by 2025 and 2030, respectively, compared with 'business as usual' levels
Sierra Leone	-	Maintain the emission level relatively low (close to the world average of 7.58 Mt CO_2 eq) by 2035 or become neutral by 2050 by reducing the country's footprint and by following green growth pathways in all economic sectors
Togo	Reduce GHG emissions by 11.14% by 2030 compared with 'business as usual' emissions	Reduce GHG emissions by 31.14% by 2030 compared with 'business as usual' emissions

Source: NDCs of ECOWAS member States as at January 2020.

A. Mitigation needs

1. Mitigation finance

78. ECOWAS countries require climate finance to carry out their part in mitigating global GHG emissions. Table 4 shows the total NDC implementation cost (financial need) of all NDC climate actions, followed by the cost of mitigation broken down into the amounts needed

ECOWAS countries have estimated they collectively require USD 294 billion (before 2030) to implement their current NDCs.

Table 4
Estimated costs for full nationally determined contribution implementation and for nationally determined contribution mitigation for ECOWAS member States

Country	Per capita emissions (t CO_2 eq)	GDP (USD million)	Emissions (t CO_2 eq) per USD million GDP	Change in emissions 1990–2016 (Mt CO_2 eq)
Benin	11.6 (domestic and international)	6.042 (domestic and international)	2.135	3.907
Burkina Faso	7.69 (domestic and international)	1.88 (domestic and international)	1.12	0.76
Cabo Verde	2.3 (international)	1.15	-	1.15
Côte d'Ivoire	20.7	-	-	-
Gambia	-	-	-	-
Ghana	6.3 (domestic) 16.3 (international)	9.81 (domestic and international)	2.02	7.79
Guinea	10.8–11.8	6.5 (domestic and international)[a]	-	-
Guinea-Bissau	0.7	-	-	-
Liberia	-	-	-	-
Mali	48.26	34.68	-	-
Niger	8.67	7.06 (domestic and international)	0.83	6.23
Nigeria	142	-	-	-
Senegal	13	8.7 (domestic and international)	3.4	5.3
Sierra Leone	0.9	-	-	-
Togo	3.54	1.1	-	-
Total for region	**293.76**	**76.992**	**9.505**	**25.137**

Source: NDCs of ECOWAS member States as at January 2020.
[a] For the energy sector only.

from both domestic and international sources. For Cabo Verde, the Gambia and Liberia, no quantitative data were available, and for Guinea-Bissau, Nigeria and Sierra Leone, only total NDC implementation costs were provided.

79. ECOWAS countries have estimated they collectively require USD 294 billion before 2030) to implement their current NDCs. Approximately USD 77 billion is required for mitigation targets, of which USD 10 billion is to be provided from domestic sources and USD 25 billion from international sources (equivalent to the conditional portion of all NDC mitigation commitments). Approximately 25% of total financial needs are mitigation-related (based on all data for NDC implementation).

80. In addition to the needs expressed in NDCs, the Gambia and Mali are seeking international preparatory support for NAMAs – the Gambia for one (rural electrification with renewable energy) with an estimated cost of USD 60,000, and Mali for two (renewable energy and energy efficiency, and forestry) with estimated costs of USD 840,000 and 200,000, respectively. Cabo Verde has already received funding via the NAMA facility for an electric mobility project that started in June 2020.

2. Priority mitigation sectors

81. As shown in table 5, five sectors are considered by ECOWAS countries as priority: energy, AFOLU,[18] IPPU, transport and waste. All countries consider the energy sector as key except for Liberia, and AFOLU is a priority sector for all countries. Just over half of the countries (Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Liberia, Senegal and Sierra Leone) consider transport as a priority while IPPU is a priority for four countries (Gambia, Ghana, Senegal and Sierra Leone) and waste is for five (Cabo Verde, Gambia, Ghana, Liberia and Nigeria).

Five sectors are considered by ECOWAS countries as priority: energy, AFOLU, IPPU, transport and waste. All countries consider the energy sector as key except for Liberia, and AFOLU is a priority sector for all countries.

Table 5
Priority mitigation sectors for ECOWAS member States

	Energy	AFOLU	IPPU	Transport	Waste
Benin	✓	✓			
Burkina Faso	✓	✓			
Cabo Verde	✓	✓		✓	✓
Côte d'Ivoire	✓	✓		✓	
Gambia	✓	✓	✓	✓	✓
Ghana	✓	✓	✓	✓	✓
Guinea	✓	✓			
Guinea-Bissau	✓	✓			
Liberia		✓		✓	✓
Mali	✓	✓			
Niger	✓	✓			
Nigeria	✓	✓			✓
Senegal	✓	✓	✓	✓	
Sierra Leone	✓	✓	✓	✓	
Togo	✓	✓			

Source: NDCs of ECOWAS member States as at January 2020.

[18] For the Gambia encompasses only agriculture and for Guinea-Bissau only forestry.

B. Adaptation needs

1. Adaptation finance

82. ECOWAS countries are already facing adverse effects of climate change (coastal erosion, floods, prolonged droughts, strong winds, etc.). They have made strong commitments to adaptation in relevant national policy documents. The finance needed for implementing these commitments has been outlined in NDCs and TAPs in varying degrees of detail (see table 6).

Table 6
Estimated costs for ECOWAS member States to implement adaptation commitments outlined in technology action plans and nationally determined contributions
(USD million)

	TAP adaptation measures	NDC adaptation measures	Finance from domestic sources	Finance from international sources
Benin	-	5.59 (domestic and international)	1.44	4.15
Burkina Faso	0.63	5.88	-	-
Cabo Verde	-	1.15	-	1.15
Côte d'Ivoire	-	1.76	-	-
Gambia	0.029	-	-	-
Ghana	0.054	12.79 (domestic and international)	4.21	8.29
Guinea	-	1.7	-	-
Guinea-Bissau	-	0.042	-	-
Liberia	-	-	-	-
Mali	0.05	13.7	-	-
Niger	-	1.61 (domestic and international)	0.34	1.27
Nigeria	-	-	-	-
Senegal	0.67	4.3 (domestic and international)	1.4	2.9
Sierra Leone	-	-	-	-
Togo	-	1.54	-	-
Total	**1.433**	**50.062**	**7.39**	**17.76**

Source: NDCs and TAPs of ECOWAS member States as at January 2020.

83. Climate finance needed for adaptation amounts to USD 50 billion based on NDC estimates and USD 1.4 billion based on TAPs. Approximately 35% of the finance is expected to come from international sources.

2. Priority adaptation sectors

84. The priority adaptation needs identified in NDCs align well with those in NAPs and include several sectors: water resources, agriculture, health, coastal protection, livestock, fisheries, energy, forestry and land use, biodiversity and ecosystems, vulnerable groups, human settlements, and tourism. Some countries identified other specific priority areas in terms of adaptation, such as industry, transport and commerce (Nigeria), gender and vulnerable groups (Ghana), agro-silvopastoral production (Cabo Verde and Guinea), flood protection (Senegal), extreme climatic events (Burkina Faso) and management of rangeland and pastures (Sierra Leone). The priority adaptation sectors identified in the assessment are shown in table 7.

C. Technology needs

85. Of the 12 member States that have conducted a TNA six prepared TAPs, which included details of estimated costs and timelines of priority technology-related actions (see table 8). Although the TAPs were prepared primarily for adaptation one country (Togo) prepared a TAP for mitigation.

Climate finance needed for adaptation amounts to USD 50 billion based on NDC estimates and USD 1.4 billion based on TAPs. Approximately 35% of the finance is expected to come from international sources.

Table 7
Priority adaptation sectors for ECOWAS member States

	Agriculture	Biodiversity and ecosystems	Water resources	Forestry and land use	Coastal protection	Livestock	Energy	Health	Vulnerable groups	Fisheries	Human settlements	Tourism
Benin	✓		✓	✓	✓		✓	✓				✓
Burkina Faso	✓		✓	✓		✓	✓	✓			✓	
Cabo Verde	✓	✓	✓		✓		✓	✓				✓
Côte d'Ivoire	✓		✓	✓		✓	✓	✓		✓		
Gambia												
Ghana	✓		✓	✓				✓	✓	✓	✓	
Guinea	✓		✓		✓	✓		✓				
Guinea-Bissau	✓	✓	✓	✓		✓	✓	✓		✓		
Liberia	✓			✓	✓		✓	✓				
Mali	✓		✓	✓		✓	✓		✓			
Niger	✓		✓	✓		✓		✓				
Nigeria	✓			✓			✓		✓			
Senegal	✓	✓	✓		✓	✓		✓		✓		
Sierra Leone	✓		✓	✓	✓	✓		✓		✓	✓	✓
Togo	✓		✓	✓	✓		✓	✓			✓	✓

Source: NDCs, NAPs, NCs (NC2 or NC3) as at January 2020.

86. Based on TNAs, TAPs and NDCs the key sectors for technology needs include energy, AFOLU, water, waste and transport (see table 9) as detailed below:

Energy:

(a) Renewable energy technologies: Benin, Burkina Faso, Cabo Verde, Ghana, Guinea, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo;

(b) Energy-efficient technologies: Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo;

(c) Improved cookstoves: Benin, Burkina Faso, Cabo Verde, Ghana, Guinea, Liberia, Mali, Niger and Togo;

Agriculture and forestry:

(d) Organic farming: Benin, Ghana, Mali, Niger, Senegal and Togo;

(e) Drip irrigation: Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Mali, Niger, Nigeria and Senegal;

(f) Agroforestry and sustainable forest management: Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Ghana, Liberia, Mali, Niger, Sierra Leone and Togo;

Water:

(g) Rainwater harvesting: Benin, Gambia, Ghana, Niger and Sierra Leone;

(h) Sustainable water management: Benin, Cabo Verde, Côte d'Ivoire, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo;

(i) Groundwater recharging: Côte d'Ivoire, Gambia, Niger, Nigeria, Sierra Leone and Togo;

(j) Desalination technologies: Cabo Verde, Ghana and Senegal;

Waste:

(k) Biodigester technologies: Burkina Faso, Gambia, Mali and Niger;

(l) Methane capture: Côte d'Ivoire, Ghana, Nigeria and Sierra Leone;

Transport:

(m) Sustainable transport: Burkina Faso, Gambia, Nigeria and Togo.

Table 8
Mitigation actions, with associated cost, identified in the technology action plan of Togo
(USD million)

Mitigation sector	Mitigation action/ technology	Estimated cost
Energy	High-power hydroelectric power plant	9.71
	Solar photovoltaic grid connection	
	Small or mini hydroelectric power plant	
Transport	Enhancement of road infrastructure to relieve congestion in urban centres	9.77
	Development of public transport (buses)	
	Implementation of climate-friendly public transport regulations	
	Total cost	**19.48**

Source: UNFCCC as at January 2020.

Based on TNAs, TAPs and NDCs the key sectors for technology needs include energy, AFOLU, water, waste and transport.

Table 9
Adaptation actions, with associated cost, identified in the technology action plans of ECOWAS member States
(USD million)

	Adaptation sector	Adaptation action/technology	Estimated cost	Total cost
Burkina Faso	Agriculture	Biodigesters	32.3	180.8
		Natural Assisted Regeneration, Stony land, Zai[19]	15.6	
		Land restoration	112.5	
		Rainwater harvesting	20.4	
	Forestry	Improved cookstoves	72.9	464.5
		Land management	98.2	
		Land conservation	293.4	
Gambia	Agriculture	Conservation agriculture	0.7	3.7
		Tidal irrigation	1.2	
		Aquaculture and fish farming technology	1.9	
	Coastal protection	Sustainable sand management	1.0	5.6
		Breakwater system	4.2	
		Groyne system	0.5	
	Water resources	Water conservation	9.1	11.8
		Aquifer recharge	2.6	
	Energy	Wind turbine	3.2	3.2
	Transport	Direct fuel injection	5.3	5.3
	Waste	Landfill waste management	23.8	23.8
Ghana	Water	Rainwater collection	22.2	31.2
		Water system management	9.0	
	Agriculture	Integrated nutrient management	9.3	22.3
		Community-based extension agent	13.0	

[19] Regionally utilized agricultural technologies to protect crops, see TNA on adaptation of Burkina Faso.

Table 9 (continued)
Adaptation actions, with associated cost, identified in the technology action plans of ECOWAS member States
(USD million)

	Adaptation sector	Adaptation action/technology	Estimated cost	Total cost
Mali	Agriculture	Drought resistant fodder crops	0.4	2.2
		Contour land management	0.3	
		Agro-meteorological technology	0.4	
		Improved (resilient to climate change) millet, rice, maize, and sorghum varieties	1.1	
	Water resources	Well drilling	18.1	48.0
		Small dams	1.5	
		Addressing overcrowding of ponds	12.1	
		Modern wells (wells with large diameter)	16.3	
Senegal	Agriculture	Improved seed bank	17.0	29.5
		Corridor cultivation	2.5	
		Fodder reserve development and conservation	5.0	
		Assisted natural regeneration	5.0	
	Water resources	Flow reducer technology	12.0	651.8
		Drip irrigation technology	73.0	
		Desalination technology	465.8	
		Wastewater treatment technology	101.0	

Source: UNFCCC as at January 2020.

87. The total technology needs amount to USD 1.5 billion for adaptation and USD 19.48 million for mitigation. Depending on the sector most countries have outlined a time frame ranging from six months to six years for implementing their priority actions.

D. Capacity-building needs

88. Capacity-building is important for all ECOWAS member States including building capacity to enable private sector climate finance and investment. A lack of capacity is also considered by all countries to be a major barrier to achievement of NDC emission reduction targets and implementation of adaptation actions. Countries use different approaches to underscore their requests for capacity-building. An assessment of NDCs, NCs and TNAs identified the priority needs for capacity-building support and barriers to be addressed shown in table 10.

A lack of capacity is also considered by all countries to be a major barrier to achievement of NDC emission reduction targets and implementation of adaptation actions.

Table 10
Capacity-building needs identified by ECOWAS member States

Area	Build capacity of national institutions to…
Transparency	Enhance the transparency of reporting and tracking of NDC action implementation and GHG inventory processes
	Track and report on support needed and received
	Develop measurement, reporting and verification systems at the national level
	Acquire, analyse, manage and disseminate data, enhancing the accuracy of data gathered and reducing data uncertainties
	Track and report on domestic and international private finance flows
Institutional capacity	Strengthen institutional frameworks and coordination among national institutions
	Develop regulatory frameworks, including legislation and policy frameworks, as well as baseline studies and scenarios
Access to funds	Accreditation processes for various funds
	Enhance understanding of access requirements and procedures of climate funds
Project development	Conduct opportunity mapping
	Conduct project assessment
	Conduct cost assessment
	Develop bankable project proposals
Carbon pricing	Develop carbon market capacity
	Establish and operationalize carbon taxation
Private sector	Develop or establish linkages with the private sector to promote the transfer of technology and finance
	Engagement to promote investment in climate action
	Enhance the use of private finance and public–private partnerships
Other	Mainstream gender considerations and best practices in climate-related issues
	Develop the English language skills of negotiators and project proposal developers
	Develop climate-related communication strategies to raise awareness on climate change issues in the population and among specific relevant stakeholders

Source: UNFCCC as at October 2020.

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IV. Climate finance gap

89. As noted in paragraph 79 above, ECOWAS countries have reported the estimated cost of implementing their NDCs in 2016–2030 at USD 294 billion. This equates to approximately USD 20 billion per annum needed in climate finance for both adaptation and mitigation from all sources – international and domestic, public and private to 2030.

ECOWAS countries have reported the estimated cost of implementing their NDCs in 2016–2030 at USD 294 billion.

90. The inflow from public international sources averaged USD 4.9 billion annually over 2013–2018. Although the time periods are not directly comparable and discounting that private and domestic funding is not accounted it could be broadly conferred that the region lacks up to four times the annual funding required for needs expressed in countries' NDCs.

91. By comparison the AfDB's 2018 *Gap Analysis Report*, Africa is expected to bear the highest adaptation costs per unit GDP in the world, with these costs, depending on the climate change mitigation scenario, expected to rise steeply to an estimated USD 50–95 billion per year by 2050.[20] In a below 2 °C world, adaptation costs represent less than 1% of GDP, but they increased sixfold under a 4 °C scenario. Even if all cost-effective adaptation is realized, the residual damage due to, for example, the reversal of development gains is estimated to double the cost of adaptation.

92. A comparison of needs versus flows is helpful to show the performance of specialized funds in addressing specific needs. An example is the LDCF, which is mandated to finance the implementation of NAPAs. Most ECOWAS countries are among the least developed countries, and as such, they are eligible for LDCF funding.

The inflow from public international sources averaged USD 4.9 billion annually over 2013–2018.

93. Table 11 shows the needs for priority project financing, as expressed by countries in their NAPAs, and LDCF funding received.[21] The comparison shows that as of September 2020, total LDCF funding approved (USD 1.7 billion, including co-financing) had exceeded the needs expressed in NAPAs (USD 270 million) by ECOWAS member States. The total funding disbursed to completed projects (USD 330 million, including co-financing) also had exceeded total needs expressed. However, at the national level, roughly 13 years after the finalization of their NAPAs, only Burkina Faso, Cabo Verde and Guinea had completed projects with a total value matching their expressed needs. This indicates that while the LDCF is fulfilling its mandate, the completion of projects takes a long time.

The region lacks up to four times the annual funding required for needs expressed in countries' NDCs.

[20] Gap Analysis Report: African Nationally Determined Contributions, 2018.

[21] Funding received for the development of NAPAs is excluded. Aside from the projects prioritized in NAPAs, some LDCF funding may have gone towards capacity-building initiatives.

Table 11
Needs expressed in national adaptation programmes of action versus funding received from the Least Developed Countries Fund for ECOWAS member States
(USD million)

	Estimated implementation cost of NAPA priority projects	Completed projects		Approved projects		Total LDC	
		LDCF funding	Total project financing	LDCF funding	Total project financing	LDCF funding	Total project financing
Benin	16	3	11	24	167	27	179
Burkina Faso	6	3	23	19	155	22	178
Cabo Verde[a]	17	3	67	-		3	67
Côte d'Ivoire	-	-		-		-	
Gambia	15	-		24	123	24	124
Ghana	-	-		-		-	
Guinea	8	3	166	17	193	20	359
Guinea-Bissau	6	-		16	94	16	95
Liberia	68	5	10	11	31	16	41
Mali	52	2	11	19	106	21	116
Niger	-	4	14	23	185	27	199
Nigeria	-	-		-		-	
Senegal	29	5	15	16	87	21	103
Sierra Leone	30	3	11	21	112	24	123
Togo	23	-	-	14	116	14	116
Total	**270**	**31**	**328**	**1 385**		**237**	**1 713**

Source: UNFCCC and the GEF as at October 2020.
[a] Cabo Verde graduated from the status of least developed country in 2007 and is therefore no longer eligible for LDCF funding.

V. Climate finance flows

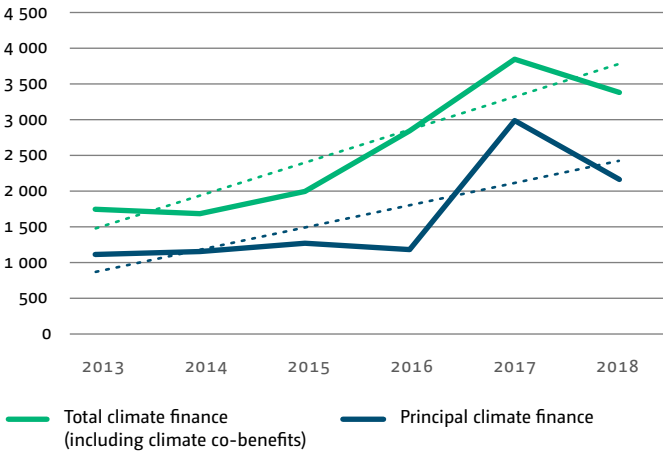
A. Public international climate finance

94. In 2013–2018, ECOWAS countries received on average USD 2.6 billion annually in total climate finance from bilateral sources, MDBs and climate funds reporting to the OECD Creditor Reporting System and an annual average of USD 2.3 billion in renewable energy investments from China over the same period, according to the China Global Investment Tracker.

95. According to the OECD Creditor Reporting System database, a total of USD 15.5 billion in public international climate finance from OECD member countries was attributed to the ECOWAS region in 2013–2018. As shown in figure 2, public international climate finance had an overall positive trend in this period, with the total amount increasing from USD 1.7 billion in 2013 to USD 3.4 billion in 2018. The spike in inflows in 2017 can largely be explained by contributions to Senegal from the WB, France and AfDB for mitigation projects in the transport sector.

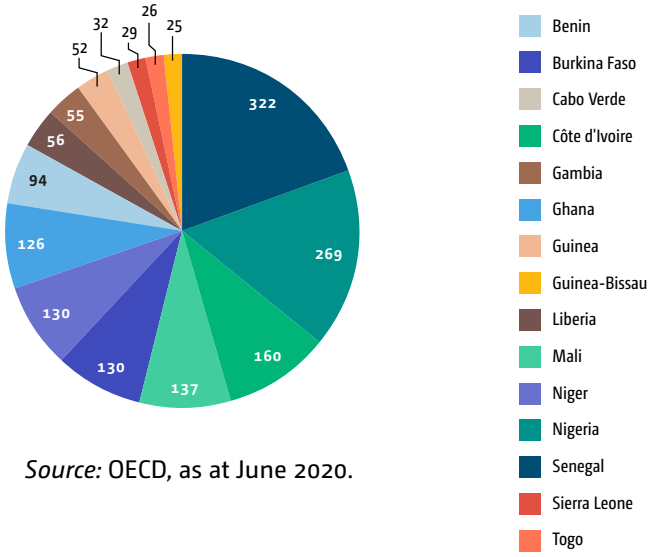
96. Especially for climate funds, the reported amounts reflect those approved in the reporting year. The transfer of these amounts may not have been finalized in the same year of approval but rather over a longer project implementation period. The total climate finance includes 'significant climate finance' – funding that goes towards projects for which climate is not the principle objective, but which claim significant climate co-benefits. For funding of projects with climate as the principal objective, the average annual inflow to the region in 2013–2018 was USD 1.6 billion. This funding increased over time, with the highest inflow, approximately USD 3 billion, being received in 2017. The following analysis further breaks down the data on principal climate finance, excluding significant climate finance.

Figure 2
International public climate finance flows to the ECOWAS region
(USD million)



Source: OECD, as at June 2020.

Figure 3
Distribution and annual average of international public climate finance by country
(USD million)

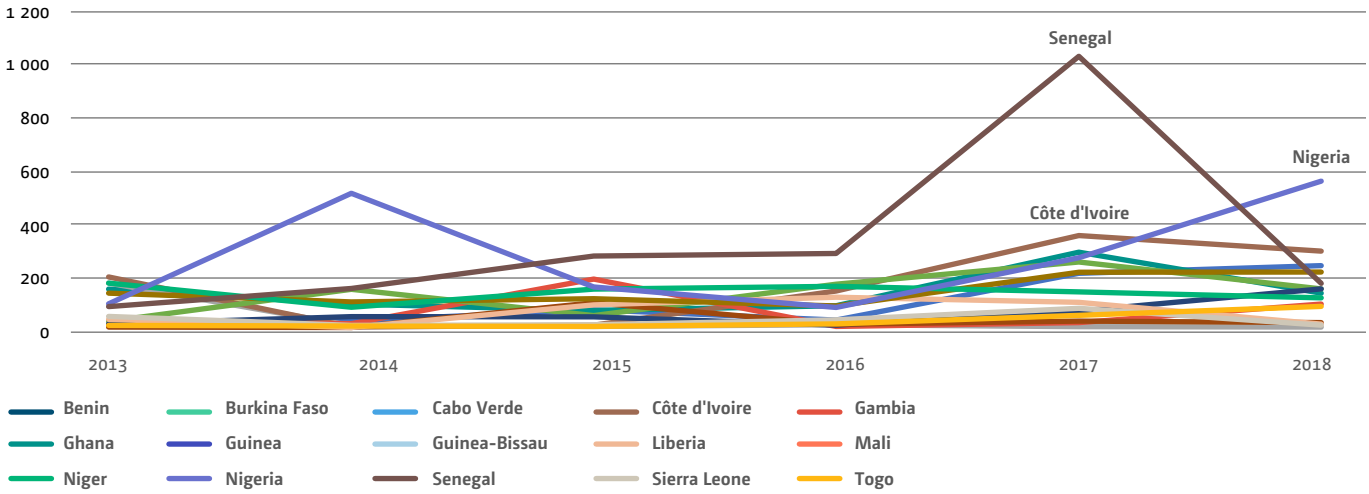


Source: OECD, as at June 2020.

97. Figure 3 shows the distribution of public international climate finance in the ECOWAS region between 2013 and 2018. The main recipients were Senegal and Nigeria, followed by Côte d'Ivoire, Mali, Burkina Faso, the Niger and Ghana, all of which received comparable amounts. These countries received more than the sub-Saharan African annual average of USD 108 million, while the amounts received by (in descending order) Benin, Liberia, the Gambia, Guinea, Cabo Verde, Sierra Leone, Togo and Guinea-Bissau were below average.

98. Figure 4 breaks down the inflow of principal climate finance by country. The positive trend observed for the region (see figure 2) is not as evident for all countries. In 2018, the main recipients were Nigeria and Côte d'Ivoire, which received USD 0.5 billion and USD 0.3 billion, respectively, while Cabo Verde, Sierra Leone and Liberia received comparably low amounts – between USD 2 and 13 million.

Figure 4
International public climate finance flows to ECOWAS member States
(USD million)

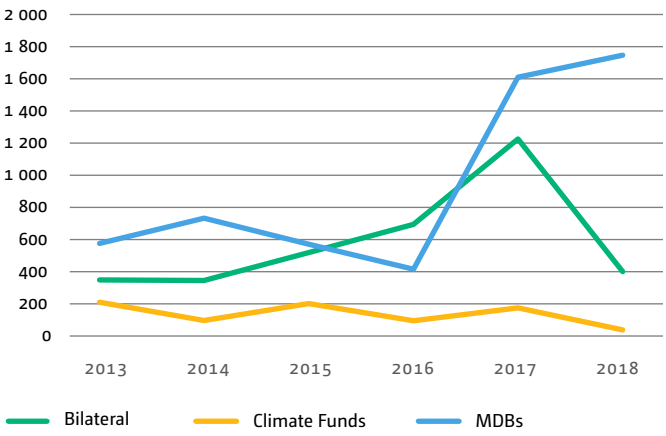


Source: OECD, as at June 2020.

1. Funding channels

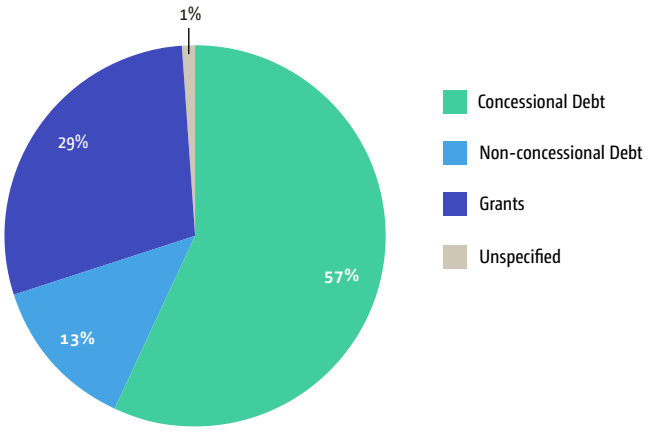
99. Three funding provider types were considered in the assessment: bilateral, climate fund and MDB. The majority (57%) of public international climate finance was provided by MDBs. Approximately 35% came from bilateral sources and the remaining 8% from climate funds. Of the MDBs, the WB provided in 2013–2018 the largest share of finance (over USD 3.5 billion) followed by AfDB (USD 1.3 billion). Other MDBs providing funding included the European Investment Bank, the International Finance Corporation and the Islamic Development Bank. The main bilateral providers of climate finance to the region in the same period were France (USD 1.3 billion), the European Union (USD 0.6 billion) and Germany (USD 0.5 billion), with the United States of America, Japan and Norway also providing funding. The primary climate funds included the operating entities of the Financial Mechanism (i.e. the GCF and the GEF) and the AF. Figure 5 shows the contributions of climate finance over time by channel.

Figure 5
Contributors of international public climate finance to the ECOWAS region, 2013-2018
(USD million)



Source: OECD, as at June 2020.

Figure 6
International public climate finance to the ECOWAS region by share of instruments, 2013-2018



Source: OECD, as at June 2020.

100. Different funding channels were used by ECOWAS countries. Some countries, namely Côte d'Ivoire, the Gambia, Guinea, Guinea-Bissau, the Niger and Sierra Leone, received over 80% of their climate finance from multilateral sources, while Cabo Verde, Ghana, Liberia and Mali received the majority of their climate finance from bilateral sources.

2. Financial instruments

101. International public climate finance was provided primarily using debt instruments (70%), of which 81% was concessional debt. The remainder (30%) was provided through grants (global average is 18%). Equity plays a negligible role in climate finance for the ECOWAS region. The increase in climate finance in 2013–2018 can be attributed to an increase in the provision of concessional loans (see figure 6).

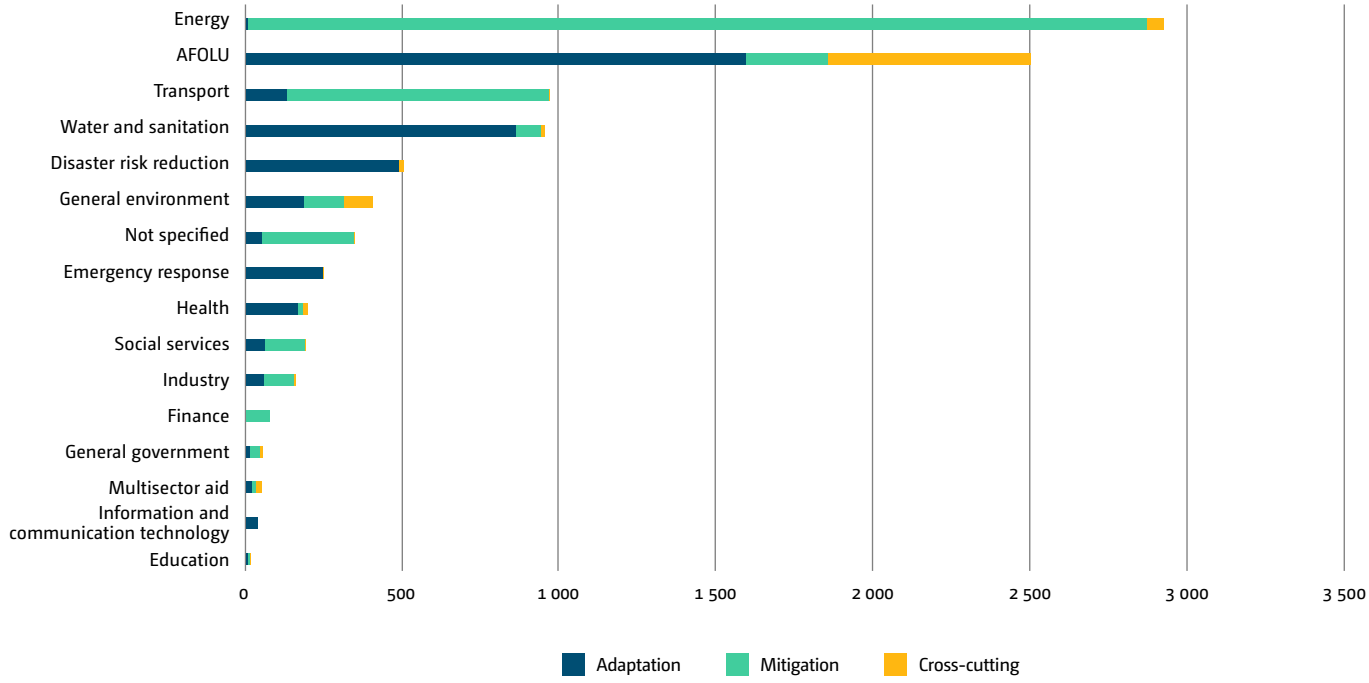
102. Provider types differed greatly in the types of instruments they used, with MDBs providing 95% of their climate finance via (mostly concessional) debt instruments, while bilateral providers and climate funds mainly used grants, which made up 59 and 69%, respectively, of their climate finance.

3. Sectors and themes

103. As shown in figure 7, the sectors primarily benefitting from climate finance in the region were energy (30% of total climate finance, almost exclusively for mitigation projects) and AFOLU (26%, mainly for adaptation projects), with the transport sector and the water and sanitation sector following at 10% each.

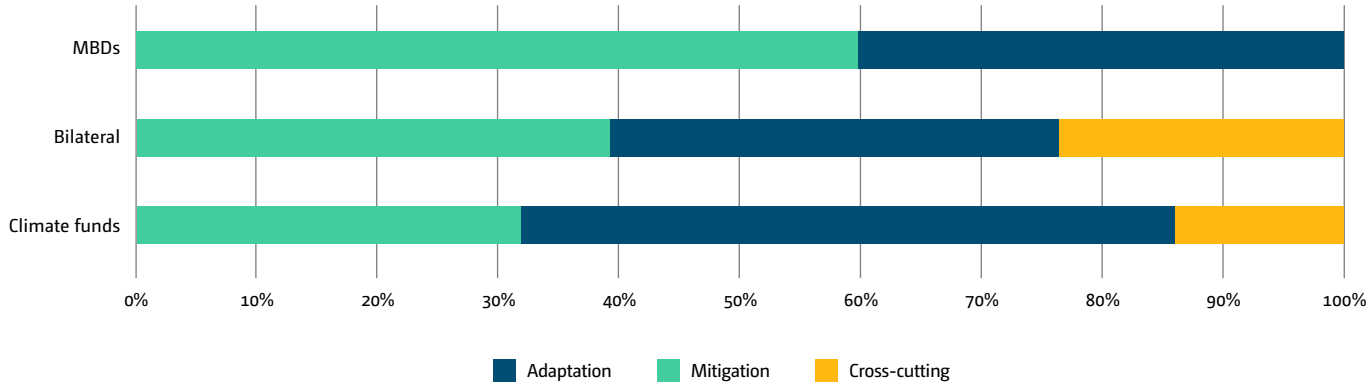
104. Figure 8 shows the split between finance provided to mitigation and adaptation projects (and cross-cutting projects) for each provider type. While MDBs provided finance mostly for mitigation projects, bilateral providers were more balanced. Climate funds provided the largest share of finance for adaptation projects.

Figure 7
International public climate finance to the ECOWAS region by sector and theme, 2013-2018
(USD million)



Source: OECD, as at June 2020.

Figure 8
Mitigation and adaptation shares in international public climate finance to the ECOWAS region by provider type, 2013-2018



Source: OECD, as at June 2020.

B. Climate funds

105. The funding of needs can be covered through international public sources (including bilateral sources and multilateral development funds and climate funds), domestic public sources (including ecotaxes or carbon taxes, national funds, and green or climate bonds), and international and domestic private investments. Scaling up private climate finance is frequently stressed as a priority in increasing the funding for climate projects.

106. According to the data made available by AF, CIF, GCF and GEF, the total amount of climate finance from these climate funds approved to date for national projects is USD 1.7 billion. According to the OECD Creditor Reporting System database, the region received USD 0.8 billion from climate funds over 2013–2018. The lower amount reported in the OECD database can be explained by large contributions in 2019, which have not yet been added to that database, as well as by measures to avoid double counting (e.g. funding from climate funds disbursed through MDBs may be registered under the provider type MDB in the OECD database).

107. The total climate finance to date including co-financing going to the ECOWAS member States, as reported by all climate funds, amounts to USD 9.3 billion. Additionally, ECOWAS countries were involved in regional projects co-funded by the GCF and the GEF that represent a total value of USD 6.6 billion.

108. Contributions from climate funds reported by OECD and the climate funds themselves represent approved amounts. These funds will be disbursed over the respective periods of project implementation and therefore may not yet have been disbursed to countries in full. The status report on the GCF's portfolio provides an insight into current disbursement levels on a global scale: across all projects under implementation, 27% of funds have been disbursed.[22]

109. According to an ECOWAS Commission study,[23] most climate finance flows to multi-country projects, often with partner countries outside the region, making it difficult to ascertain implementation. This study recommends a rethink on the funding strategy for these types of project, wherein priority would be given to regional (or subregional) projects, countries sharing similar circumstances and challenges would be covered, and a clear, transparent distribution of resources would be ensured.

110. The following sections describe in detail the flows of climate finance going to the ECOWAS region from the main climate funds.

1. Green Climate Fund

111. Only three ECOWAS countries (Guinea, Mali and Togo) have finalized the GCF country programming process. All three country programmes were published in 2018.

112. Table 12 provides an overview of the national projects in the ECOWAS region for which the GCF has provided funding. As at June 2020, the ECOWAS region had received a total of USD 0.8 billion for national projects, with 37% of this funding coming from the GCF directly and 63% from co-financing. In 2019 alone, six national projects were approved for the ECOWAS region, with a total project value of USD 553 million (USD 167 million GCF funding, USD 386 million co-financing).

113. Further, ECOWAS member States are among the beneficiaries of the nine multi-country projects shown in table 13. The total value of these projects amounts to USD 3.2 billion.

[22] GCF Board document GCF/B.25/Inf.06. Available at https://www.greenclimate.fund/sites/default/files/document/gcf-b25-inf06.pdf.

[23] ECOWAS-CILSS, in press.

Table 12
National projects of ECOWAS member States funded by the Green Climate Fund

	Total project value (USD million)	GCF funding (%)	Co-financing (%)	Theme	Sector(s)	Accredited entity	Status
Benin	10.0	90.0	10.0	Adaptation	Ecosystems	UNEP	Under implementation
Burkina Faso	58.6	45.8	54.2	Mitigation	Energy	AfDB	Approved
	25.0	90.0	10.0	Adaptation	Water, health	WB	Under implementation
Cabo Verde	-	-	-	-	-	-	-
Côte d'Ivoire	-	-	-	-	-	-	-
Gambia	25.5	80.5	19.5	Adaptation	AFOLU	UNEP	Under implementation
Ghana	25.6	78.1	21.9	Cross-cutting	AFOLU	AfDB	Approved
Guinea	-	-	-	-	-	-	-
Guinea-Bissau	-	-	-	-	-	-	-
Mali	37.8	75.8	24.2	Mitigation	Energy		Approved
	31.0	73.4	26.6	Adaptation	Water, health	WB	Under implementation
Niger	12.7	74.1	25.9	Cross-cutting	Finance, AFOLU	International Fund for Agricultural Development	Approved
Nigeria	467.0	21.4	78.6	Mitigation	Energy	Africa Finance Corporation	Approved
Senegal	10.0	100.0	0.0	Adaptation	Water, health	World Food Programme	Under implementation
	78.4	21.1	78.9	Adaptation	Water, health	French Development Agency	Under implementation
	8.2	93.3	6.7	Adaptation	AFOLU	Centre de Suivi Écologique	Under implementation
Sierra Leone	-	-	-	-	-	-	-
Togo	-	-	-	-	-	-	-
Total	**789.8**	**37.0**	**63.0**				

Source: GCF, as at June 2020.

Table 13
Multi-country projects with ECOWAS member State involvement funded by the Green Climate Fund

	Total project value (USD million)	GCF funding (%)	Co-financing (%)	Theme	Sector(s)	Accredited entity	Status
Benin, Burkina Faso, Guinea-Bissau, Mali, Niger, Togo	134.7	50.0	50.0	Mitigation	Energy	West African Development Bank	Under implementation
Benin, United Republic of Tanzania, Namibia, Kenya, Nigeria, Ethiopia, Uganda	301.6	26.5	73.5	Mitigation	Energy	Deutsche Bank	Approved
Benin, Burkina Faso, Côte d'Ivoire, Guinea, Mali, Niger, Nigeria, Cameroon, Chad	209.9	67.7	32.3	Cross-cutting	AFOLU	AfDB	Approved
Morocco, Benin, Cameroon, Côte d'Ivoire, Egypt, Kenya, Mauritius, Namibia, Nigeria, South Africa, Tanzania, Togo, Uganda, Ecuador, Senegal, Burkina Faso, Madagascar	720.8	36.8	63.2	Cross-cutting	Finance, energy	French Development Agency	Under implementation
35 countries, global	765.0	34.6	65.4	Mitigation	Energy	European Investment Bank	Approved

Table 13 (continued)
Multi-country projects with ECOWAS member State involvement funded by the Green Climate Fund

	Total project value (USD million)	GCF funding (%)	Co-financing (%)	Theme	Sector(s)	Accredited entity	Status
Ghana, Sierra Leone, Uganda, Ethiopia, grapguay, Ecuador, Peru	200.0	12.5	87.5	Mitigation	AFOLU	MUFG Bank	Approved
Uganda, Ghana, Nigeria, Kenya	56.0	46.4	53.6	Adaptation	AFOLU	Acumen Fund	Under implementation
Malawi, Nigeria, Uganda, Madagascar, Djibouti, Morocco, Kenya, Mongolia, Cameroon, Burundi, Indonesia	821.5	12.2	87.8	Mitigation	Energy	Dutch Development Bank	Under implementation
Kenya, Senegal	26.2	69.7	30.3	Mitigation	Cookstoves	German Agency for International Cooperation	Under implementation
Total	**3 235.7**	**31.0**	**69.0**				

Source: GCF, as at June 2020.

114. As of June 2020, GCF co-financing in the ECOWAS region was 63% for national projects and 69% for multi-country projects, levels which lie below the global average of 78% co-financing.[24] In general, co-financing levels can be expected to be lower in low-income countries than in emerging economies.[25]

115. ECOWAS member States have made use of the GCF Readiness Programme, which is designed to strengthen institutional capacity to effectively engage with the GCF. A total of 37 readiness activities have been implemented in the region, providing over USD 25 million in support (see table 14).

2. Global Environment Facility

116. All 15 ECOWAS countries have accessed GEF funding, mainly directly through the GEF Trust Fund, followed by through the LDCF. A few countries have completed or approved projects under the CBIT, while only Ghana has accessed the SCCF.

117. The main recipient of GEF funding in the region is Nigeria (USD 100 million grant funding, USD 1.6 billion including co-financing), followed by Ghana and Senegal. In total, the region has mobilized USD 6.8 billion of climate finance with GEF involvement, made up of USD 0.9 billion in GEF grants and USD 5.9 billion in co-financing. Co-financing for GEF projects, which makes up 87% of total average project value, is higher than for GCF projects (63%) in the region.

118. In addition to the national projects listed in table 14, ECOWAS countries have been involved in 75 regional projects supported by the GEF, some of which solely benefit the region, and some of which include other African countries. These regional projects amount to USD 433 million in GEF grants and USD 2.9 billion in co-financing. Further, ECOWAS member States have been beneficiaries of 51 global projects totalling USD 5.8 billion. Estimates of amounts going to the individual countries are not available.

Table 14
Green Climate Fund Readiness Programme activities implemented in ECOWAS member States

	Number of readiness activities	Support approved (USD million)
Benin	2	2.00
Burkina Faso	3	1.00
Côte d'Ivoire	4	3.00
Cabo Verde	-	-
Gambia	1	0.30
Ghana	3	4.00
Guinea	2	2.00
Guinea-Bissau	1	0.30
Liberia	3	3.00
Mali	5	1.00
Niger	2	3.00
Nigeria	2	3.00
Senegal	6	2.00
Sierra Leone	1	0.33
Togo	2	0.54
Total	**37**	**25.47**

Source: GCF, as at June 2020.

[24] According to data retrieved from the GCF Project Portfolio Dashboard (https://www.greenclimate.fund/projects/dashboard) on 25 June 2020.

[25] Lianbiao, Cui & Sun, Yi & Song, Malin & Zhu, Lei. 2019. Co-financing in the Green Climate Fund: Lessons from the Global Environment Facility. Climate Policy.

Table 15
Funding received by ECOWAS member States from the Global Environment Facility

	GEF Trust Fund (USD million)	LDCF (USD million)	CBIT (USD million)	SCCF (USD million)	Co-financing (USD million)	Total finance (USD million)	Co-financing (%)
Benin	43	27	-	-	407	477	85
Burkina Faso	46	18	1	-	364	429	85
Cabo Verde	27	3	-	-	195	225	87
Côte d'Ivoire	37	-	1	-	241	279	86
Gambia	26	24	-	-	178	228	78
Ghana	83	-	1	4	542	631	86
Guinea	35	20	-	-	496	551	90
Guinea-Bissau	17	16	-	-	161	194	83
Liberia	17	16	1	-	108	142	76
Mali	47	21	-	-	385	453	85
Niger	45	18	-	-	411	473	87
Nigeria	100	-	-	-	1 551	1 651	94
Senegal	71	24	-	-	487	582	84
Sierra Leone	12	24	1	-	161	198	81
Togo	19	14	1	-	177	212	84
Total	**625**	**225**	**6**	**4**	**5 864**	**6 725**	**87**

Source: GEF, as at June 2020.

119. A further 18 proposals from 11 ECOWAS countries have been approved, totalling USD 98 million in grant financing from GEF and USD 648 million in co-financing (see table 15).

Table 16
ECOWAS member State proposals approved for funding by the Global Environment Facility
(USD million)

	GEF Trust Fund	LDCF	Total grant financing	Co-financing
Benin	1	-	1	0
Burkina Faso	5	9	14	67
Cabo Verde	-	-	-	-
Côte d'Ivoire	-	-	-	-
Gambia	-	11	11	20
Ghana	7	-	7	77
Guinea	-	9	9	27
Guinea-Bissau	3	6	9	47
Liberia	-	-	-	-
Mali	15	-	15	90
Niger	6	9	15	173
Nigeria	3	-	3	83
Senegal	-	-	-	-
Sierra Leone	5	-	5	18
Togo	-	9	9	46
Total	**45**	**53**	**98**	**648**

Source: GEF, as at June 2020.

3. Adaptation Fund

120. As of June 2020, only Ghana, Mali and Senegal have implemented projects with AF funding; support for these projects totals USD 27 million (see table 17).

Table 17
ECOWAS member State proposals approved for funding by the Adaptation Fund
(USD million)

Country	Status	Sector	Finance
Benin	-	-	-
Burkina Faso	-	-	-
Cabo Verde	-	-	-
Côte d'Ivoire	-	-	-
Gambia	-	-	-
Ghana	Under implementation	Water management	8
Guinea	-	-	-
Guinea-Bissau	-	-	-
Liberia	-	-	-
Mali	Under implementation	Multisector	9
Niger	-	-	-
Nigeria	-	-	-
Senegal	Completed	Coastal management	9
	Under implementation	Coastal management	1
Sierra Leone	-	-	-
Togo	-	-	-
Total			**27**

Source: AF, as at June 2020.

121. ECOWAS countries have received a total of USD 0.4 million in readiness funding from the AF (see table 18). Burkina Faso, Côte d'Ivoire, the Gambia, Ghana, Guinea-Bissau, Liberia and Nigeria have not accessed readiness funding.

4. Climate Investment Funds

122. According to the CIF country pages,[26] as at June 2020, 25 climate change projects in the ECOWAS region had been supported with a total of USD 491 million in CIF financing and USD 1.2 billion in co-financing.

C. Domestic public climate finance

1. Measurement and reporting

123. The accounting and tracking of domestic public climate finance is challenging as data are sparse. None of the ECOWAS countries has completed a CPEIR. Data sources on domestic public expenditure, where available, are fragmented. The Gambia is establishing a climate change budget code to help integrate and track climate expenditure within its national budget.

124. Under the Ghanaian Climate Change Learning Strategy, published in 2015, the Ministry of Finance and Economic Planning has put in place a climate change finance tracking tool for the oversight and coordination of public climate finance[27] and to conduct a CPEIR.[28] According to an Overseas Development Institute study published 2015, the budget allocation for climate change for the period of 2014 to 2019 was GHC 637 million (approximately USD 210 million), provided for accomplishing the objectives of the National Climate Change Policy. According to the 2020 Programme Based Budgeting Estimates of the Ministry of Energy, GHC 153 million (approximately USD 27 million) has been budgeted for renewable energy development annually for 2020–2023. According to the Ministry of Food and Agriculture it has budgeted GHC 70,000–92,000 (approximately USD 14,800) annually for 2020–2023 for implementing a climate change mitigation and resilience scheme.

125. As part of the Government of Benin's action programme Revealing Benin 2016–2021, the country has planned publicly funded investments in projects that develop renewable energy (EUR 213 million) and projects that improve energy efficiency (EUR 13 million), as well as in other projects with mitigation and adaptation aspects, such as rainwater sanitation (EUR 114 million).[29]

Table 18
Readiness funding received from ECOWAS member States from the Adaptation Fund

	Finance (USD)
Benin	20 000
Burkina Faso	-
Côte d'Ivoire	47 449
Cabo Verde	50 000
Gambia	-
Ghana	-
Guinea	47 449
Guinea-Bissau	-
Liberia	-
Mali	97 449
Niger	47 449
Nigeria	-
Senegal	28 000
Sierra Leone	47 449
Togo	50 000
Total	**435 245**

Source: AF, as at June 2020.

[26] http://www.climateinvestmentfunds.org/country.

[27] http://www.mofep.gov.gh/sites/default/files/docs/Climate-Change-Tracking-Tool.pdf.

[28] Climate Change Learning Strategy Ghana, Background Report 2015. https://www.uncclearn.org/wp-content/uploads/2020/11/cc_learning_in_ghana_background_report_final_draft_1.pdf.

[29] For more information, see http://revealingbenin.com/programme-dactions/programme.

2. National funds

126. The Gambia and Senegal are in the process of establishing national climate funds while some countries already have one:

(a) Benin established its National Fund for Environment and Climate in 2017 by the adoption of statutes approved by the Government. The present fund succeeded the National Environment Fund and is financed from domestic sources, mainly environmental taxes. It is accredited with both the GCF and the AF;

(b) Guinea-Bissau has created a national environment fund through a decree in 2017 which is not yet operational;

(c) Mali has a climate fund that was created by a memorandum of understanding between its Government and the Multi-Partner Trust Fund Office of the United Nations Development Programme in 2012. The fund is financed by Norway and Sweden (through the Swedish International Development Cooperation Agency). The Government of Mali is also a contributor;

(d) The Niger commenced the process of establishing a national environment and climate fund but did not complete it. However, the country established the Food and Nutritional Security Investment Fund in 2017, the aim of which is to promote public and private investment in food and nutritional security and sustainable agricultural development.

(e) Togo created a national environment fund in 2008 through the framework Law on the Environment but it remained non-operational. In 2017, it was replaced by the National Climate and Development Investment Fund;

127. In countries where carbon taxes have been established, national funds could serve as recipients of these taxes, enabling distribution of revenues to adaptation and mitigation activities in the form of, for example, grants, subsidies, loans, loan guarantees, equity investments and payments for results-based finance.

3. Green bonds

128. Nigeria has successfully conducted two issuances of its Sovereign Green Bonds, which are a domestic source of finance for implementing its NDC.

129. Cabo Verde is developing a project that will be tasked with (i) evaluating the potential opportunities and risks of issuing Cabo Verde Green Bonds on the national and international financial markets and (ii) developing the legal, regulatory and institutional framework under which the Cabo Verde Green Bond market can be implemented.

4. Carbon markets and pricing

130. Carbon pricing can unlock additional sources of climate finance from the private and public sectors. Carbon pricing consists of setting a price on GHG emissions (expressed in a monetary unit per t CO_2 eq), typically through either emissions trading or carbon taxation. The two elements generally required for carbon pricing are (1) the quantification of emissions (measurement, reporting and verification) and (2) a price setting mechanism. West African countries are sharing their experience with carbon pricing via the Regional Dialogue on Carbon Pricing under the Collaborative Instruments for Ambitious Climate Action initiative of the UNFCCC. The West African Alliance on Carbon Markets and Climate Finance supports carbon market initiatives, including operationalization of Article 6 of the Paris Agreement, through capacity-building and knowledge-sharing.

131. Senegal is establishing a carbon tax and Côte d'Ivoire is planning to do so. Togo is experiencing challenges with operationalizing an ecotax. Burkina Faso has identified establishing a framework for carbon pricing as a priority need.

132. Several ECOWAS countries are gaining experience with carbon pricing. For example, Mali and Senegal are using results-based finance and blending of instruments, including carbon finance, to promote energy access projects.

133. The region is preparing for the transition from the CDM to the new mechanisms under Article 6 of the Paris Agreement. Nigeria and Togo have created Article 6 readiness platforms. Senegal has piloted a new market mechanism called the standardized crediting framework, which has the aim of increasing private sector involvement in climate investment and streamlining the country's crediting mechanism. As at November 2020, UNEP DTU had listed eight projects from the region in its Article 6 pipeline: three from Senegal (on biogas, rural electrification and waste management); one each from Burkina Faso (biogas), Ghana (solar energy), Mali (rural electrification) and Nigeria (renewable energy mini grids); and one multi-country project involving Côte d'Ivoire and Nigeria together with two countries outside the region (Ethiopia and Uganda) (on energy and water).

134. In terms of carbon markets, under the CDM, 56 projects or programmes of action in ECOWAS countries had been registered as of September 2020, of which 21 reported a total capital investment of USD 3.7 billion (see table 18). Eighteen of these projects issued just over six million CERs, of which 3.7 million were monetized (cancelled or forwarded). Annual average CER prices have ranged between EUR 4 and 25 on the European Union Emissions Trading System market.

Table 19
Clean development mechanism projects registered in ECOWAS member States as at September 2020

	Number of projects	Total capital investment (USD million)	Total CERs issued
Benin	-	-	-
Burkina Faso	2	-	19 119
Cabo Verde	1	150	306 172
Côte d'Ivoire	7	6	484 419
Gambia	-	-	-
Ghana	8	1 462	611
Guinea	-	-	-
Guinea-Bissau	-	-	-
Liberia	1	1	-
Mali	2	-	-
Niger	1	-	152 583
Nigeria	16	1 303	3 549 064
Senegal	10	269	134 225
Sierra Leone	1	362	-
Togo	1	-	-
ECOWAS regional Programmes of Activities	6	110	1 431 277
Total	**56**	**3 662**	**6 077 470**

Source: UNFCCC, as at June 2020.

5. Fiscal and monetary governance

135. The Central Banks and Supervisors Network for Greening the Financial System is a voluntary group whose members (including BCEAO, a core member) contribute to the development of environment and climate risk management in the financial sector and promote best practices developed in close collaboration with ministries of finance. The Network has shown that mainstreaming NDCs in national public financial management systems ensures that economic and fiscal externalities of the climate agenda are factored into growth and development strategies. Ministries of finance can deploy tools such as public financial management laws and regulations to drive climate action in a coordinated way (e.g. via annual budgeting and macroeconomic forecasting). The challenges associated with fiscal and financial domestic constraints require coordination with and a clear connection to national policy priorities, as well as strong leadership, to be overcome. The role of ministries of finance includes analysing procurement policies, investment plans and fiscal policies and determining how these enable or prevent the attainment of NDCs. The climate alignment of ministries of finance needs to evolve iteratively over time in a learning-by-doing process, assisted by inter-agency collaboration, peer learning and international support (from, for example, the GCF).

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