INTEGRATED NDC X SDG INSIGHTS
LIBERIA
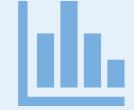
This initiative explores the NDC - SDG impact and leverages data, systems and finance analysis to pinpoint policy accelerators tailored to national context and sustainable development vision.

OBJECTIVES
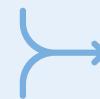
This initiative explores the NDC-SDG connections by leveraging data, systems and finance analysis to pinpoint policy accelerators tailored to national context and a sustainable development vision.

A ROBUST CASE FOR NDC 3.0

Backed by national data and AI-driven tools, to pinpoint where key investments through NDCs can drive progress across national development priorities.

ALIGN POLICY PATHWAYS

Build coherence and common ground to help decision-makers maximize positive outcomes across climate and development goals.

ACT WITH CONFIDENCE
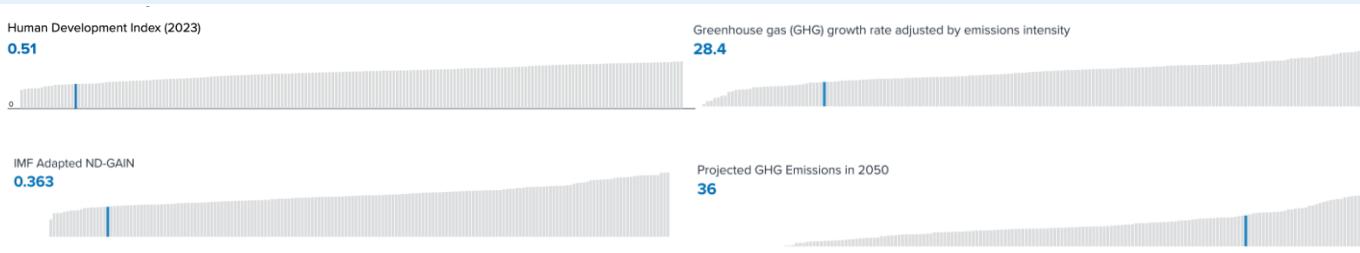
Tailored recommendations on integrated policy approaches, investment strategies, and finance opportunities to implement national strategies that align climate actions with development goals.

HOW TO READ THIS REPORT
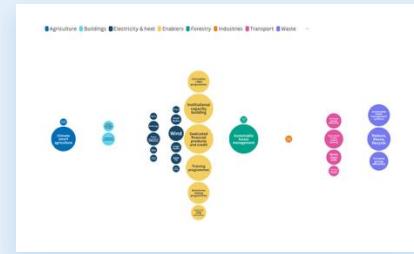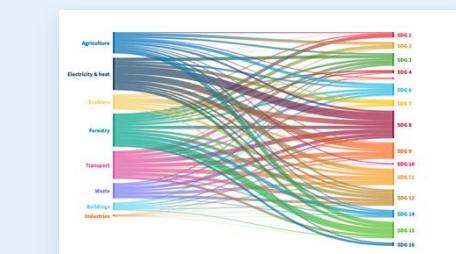
1

NDC x SDG Moment: human progress within planetary boundaries is the next development frontier. This section provides a snapshot of key climate and human development data.

Human Development Index (2023)
0.51

Greenhouse gas (GHG) growth rate adjusted by emissions intensity
28.4

IMF Adapted ND-GAIN
0.363

Projected GHG Emissions in 2050
36
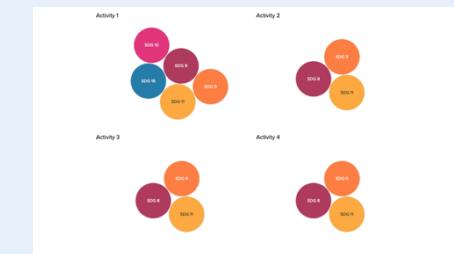
2

NDC x SDG Alignment: maps climate commitments and national development priorities using custom machine learning tool that draws from an SDG vocabulary of 100k terms.
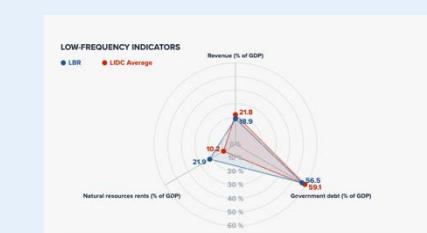
3

NDC x SDG Interlinkages: identifies national-level actions through enhanced NDCs that accelerate SDG achievement and advances a robust development case.

Priority NDC Activities

Activity 1	Activity 2	Activity 3	Activity 4
Promote low-carbon agricultural practices	Develop large solar PV plants	Develop small hydropower plants	Install medium hydropower plants for rural electrification

4

Finance & Stimulus: charts fiscal constraints and stimulus opportunities to ensure climate and development policy choices can be advanced with greatest impact.

LOW-FREQUENCY INDICATORS

NDC X SDG Moment

NDC X SDG MOMENT:

As part of their mitigation measures, Liberia has set a target of reducing emissions by	**15.7 MtCO2e (64%)**

Human activities are causing significant climate change with severe environmental and socio-economic consequences. Integrating climate action for emissions reduction and enhanced resilience into development strategies can **advance human development and provide multiple co-benefits**.

Liberia is in the low human development category (177 out of 193 countries and territories) and the country's IMF Adapted ND-GAIN Index indicates vulnerability to climate disruptions and challenges in leveraging investments to adaptation actions. With a projected emissions score of 36/100 in 2050, Liberia may need additional investments in achieving carbon neutrality. The country's projected Biodiversity Intactness Index indicates a high potential impact on biodiversity in 2050.

The Government of Liberia concluded its next National Development Plan 2025 – 2029, which is the main vehicle for delivery its ARREST Agenda for Inclusive Development. The Plan has identified 6 pillars: Economic transformation, infrastructure development, Rule of law, governance and anti-corruption, environmental sustainability and human capital. The Pillars are central themes guiding public policy and development efforts, providing a framework for integrating and coordinating actions across various sectors to achieve the country's medium-term development objectives.

Liberia commits to reducing its economy-wide greenhouse gas emissions by 64% below the projected business-as-usual level by 2030 with unconditional greenhouse gas reductions of 10% and 90% conditioned on international support. The achievement of these targets is crucial to safeguarding Liberia's future given the high vulnerability to climate change. Significant investments are needed in renewable energy to cut emissions while investments in agriculture and food security are needed to accelerate adaptation actions - If nothing is done, climate change could shrink Liberia's economy by 15 percent and push 1.3 million people into poverty by 2050. Implementing just a few adaptation interventions could boost agricultural productivity and enhance climate resilience of almost 800.000 people (World Bank CCDR-2024).

Human Development

Human Development Index (2023)
0.51

Climate Impact and Adaptation

INFORM Climate Change Risk Index

● Historical (2022) ● RCP 4.5 SSP 1 (2050) ● RCP 8.5 SSP 3 (2050)

5.3　　　　　　　**5.8**　　**6**

IMF-Adapted ND-GAIN (2021)
0.36

Mitigation

Greenhouse gas (GHG) growth rate adjusted by emissions intensity
28.39

Projected GHG Emissions in 2050
36

Biodiversity

Biodiversity Intactness Index

● Historical (2014) ● RCP 2.6 SSP 1 (2050) ● RCP 7.0 SSP 3 (2050)

0.4　　　　　　　**0.72**　**0.74**

NDC X SDG
Alignment

NDC x SDG Alignment
Goal Level

These visuals are generated by analyzing the NDCs and National Development Plans **through the SDG framework at goal level. This analysis shows the most prominent SDGs in each of the two national strategies on climate and development.** This approach helps to **identify areas of common action and potential synergies across national climate and development priorities.**

NATIONALLY DETERMINED CONTRIBUTION

Note: Based on Revised Nationally Determined Contribution (2021)

NATIONAL DEVELOPMENT PLAN(S)
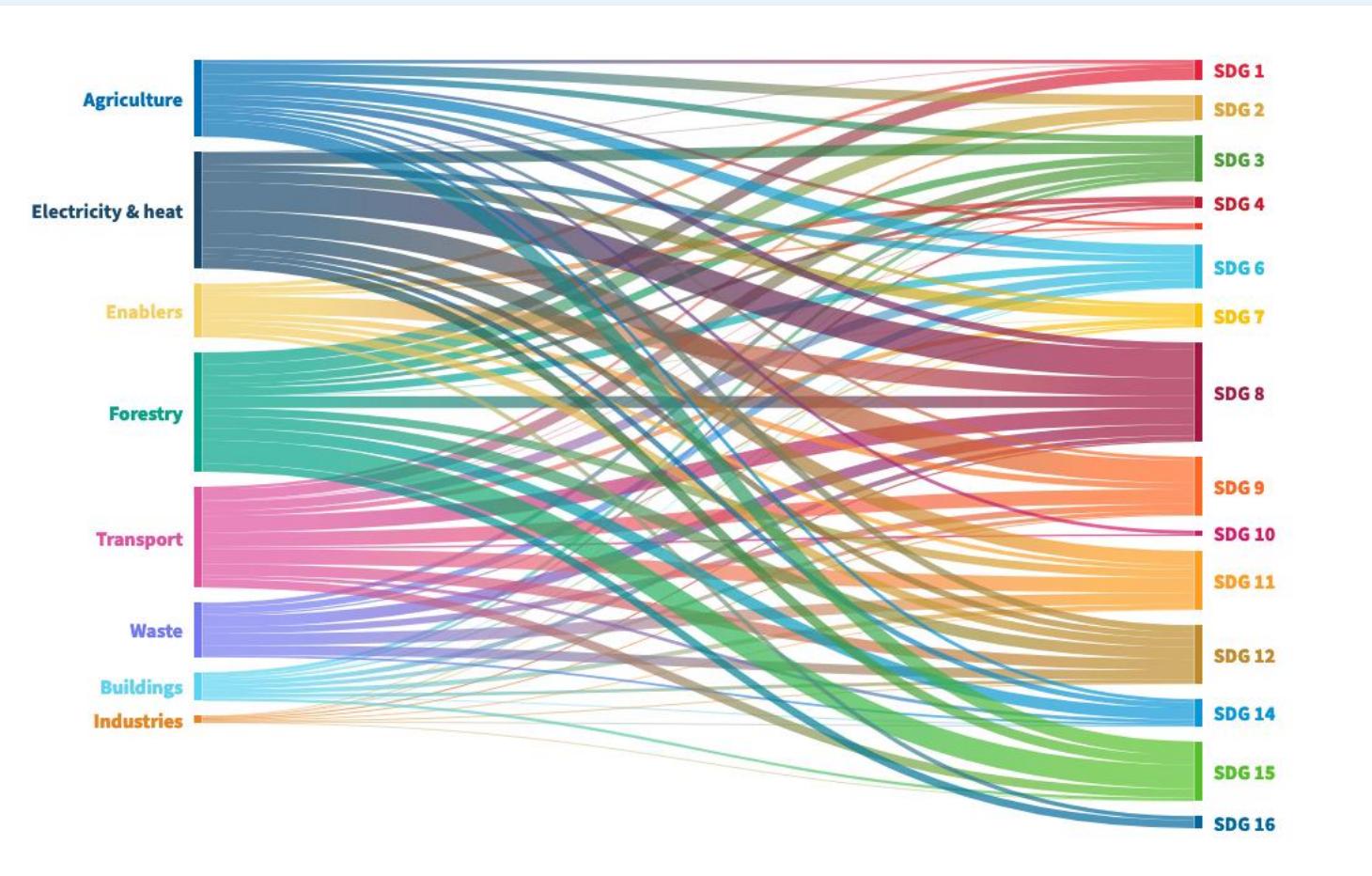
Note: Based on National Development Plan 2025-2029: ARREST Agenda for Inclusive Development (AAID)
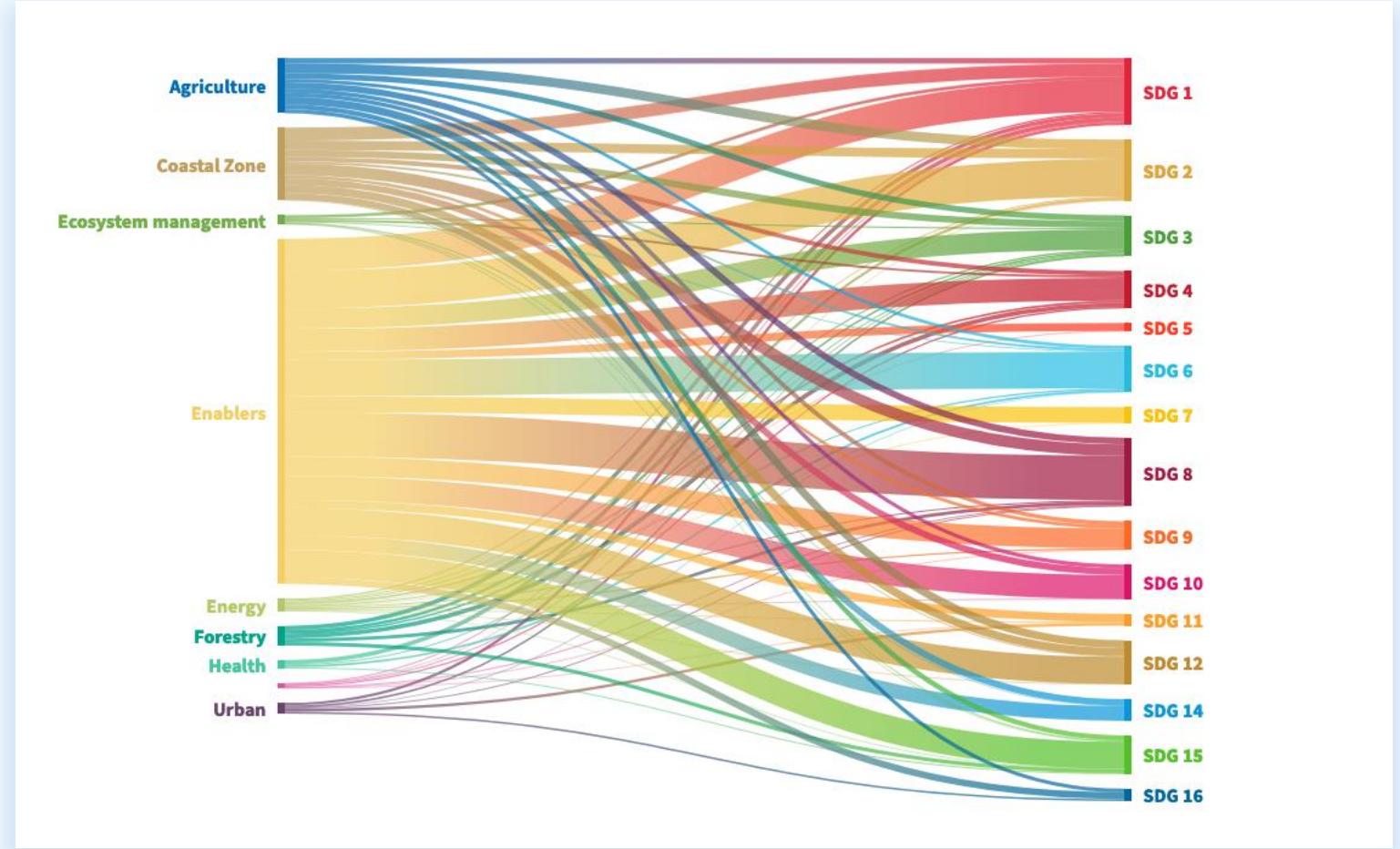
NDC X SDG ALIGNMENT
Target Level

These visuals are generated by analyzing NDC actions through a custom-built AI tool, and categorized using the SCAN tool to surface relevant SDG synergies at the target level. This methodology provides a target level alignment of climate actions (mitigation and adaptation) with impact the SDGs for Liberia.

MITIGATION NDCs

ADAPTATION NDCs

For additional information on the NDC-SDG mapping, please visit: **https://ambitiontoaction.net/scan_tool/**
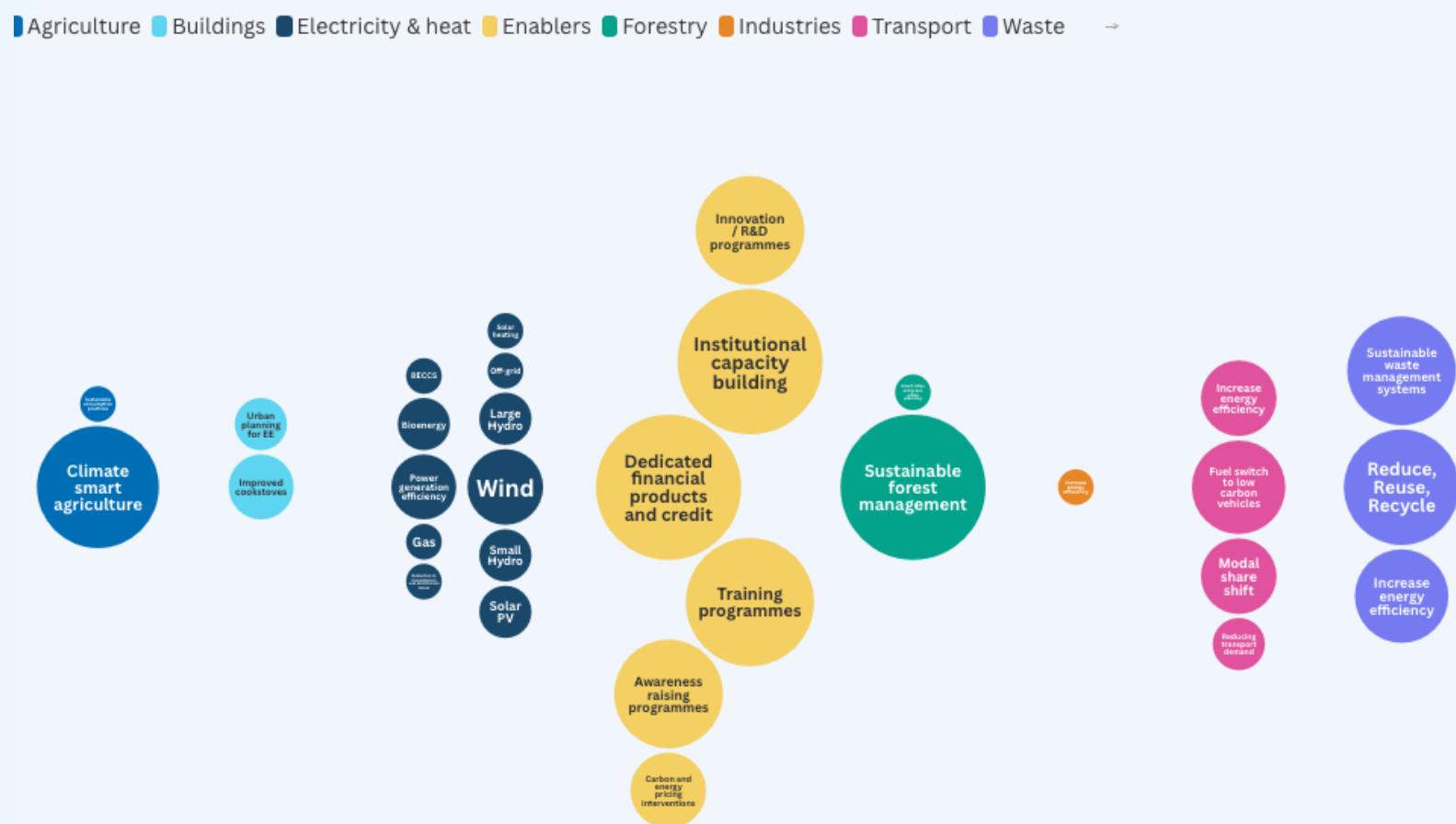
NDC X SDG ALIGNMENT
Action Level
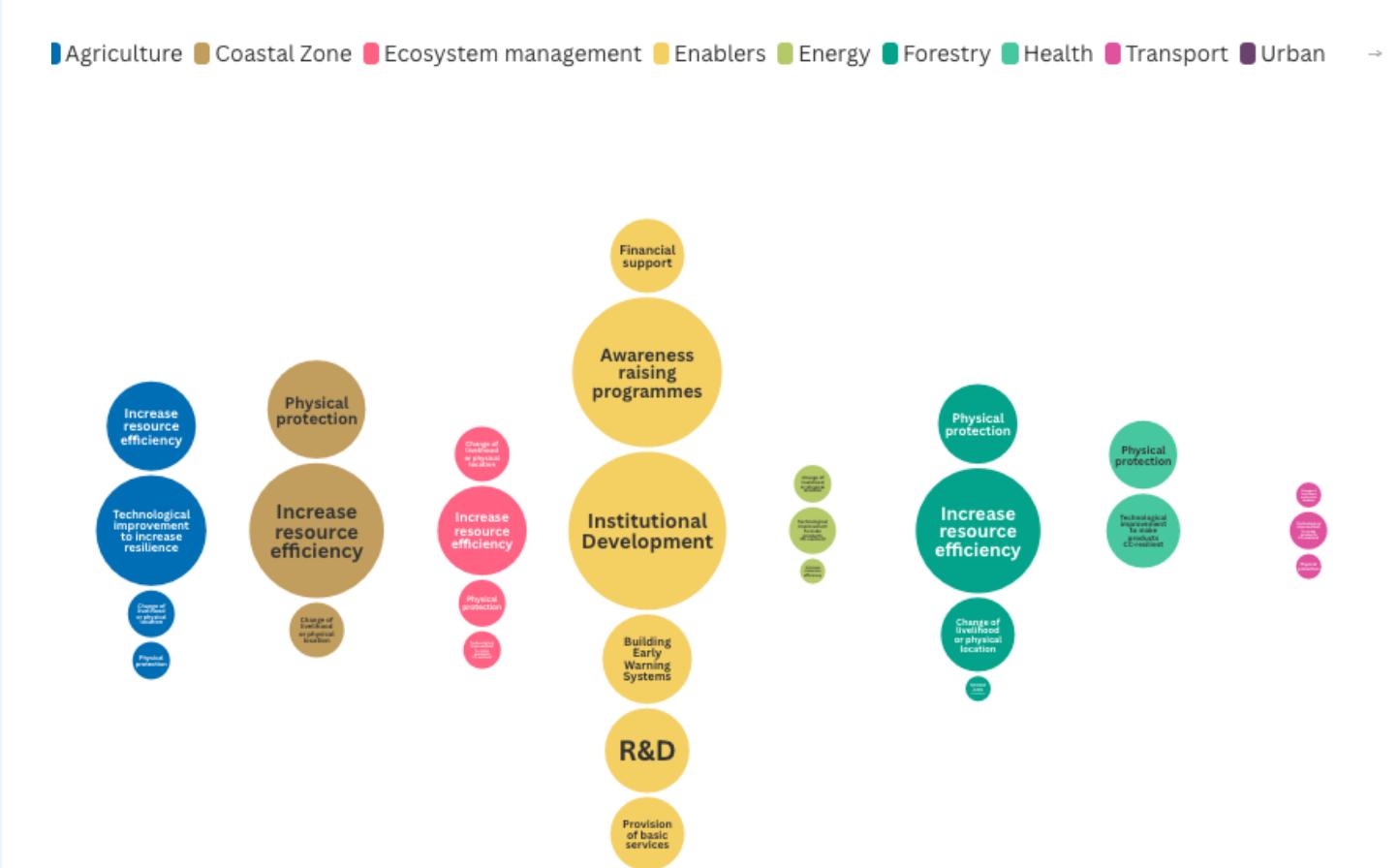
This visual unpacks the NDC categories into the specific actions committed in Liberia. The size of the bubbles reflects the number of NDC actions identified under each category, to identify NDC x SDG accelerators with precision.

Liberia 's NDC includes actions in these sectors:

Mitigation

Agriculture ▮ Buildings ▮ Electricity & heat ▮ Enablers ▮ Forestry ▮ Industries ▮ Transport ▮ Waste →

Adaptation

Agriculture ▮ Coastal Zone ▮ Ecosystem management ▮ Enablers ▮ Energy ▮ Forestry ▮ Health ▮ Transport ▮ Urban →
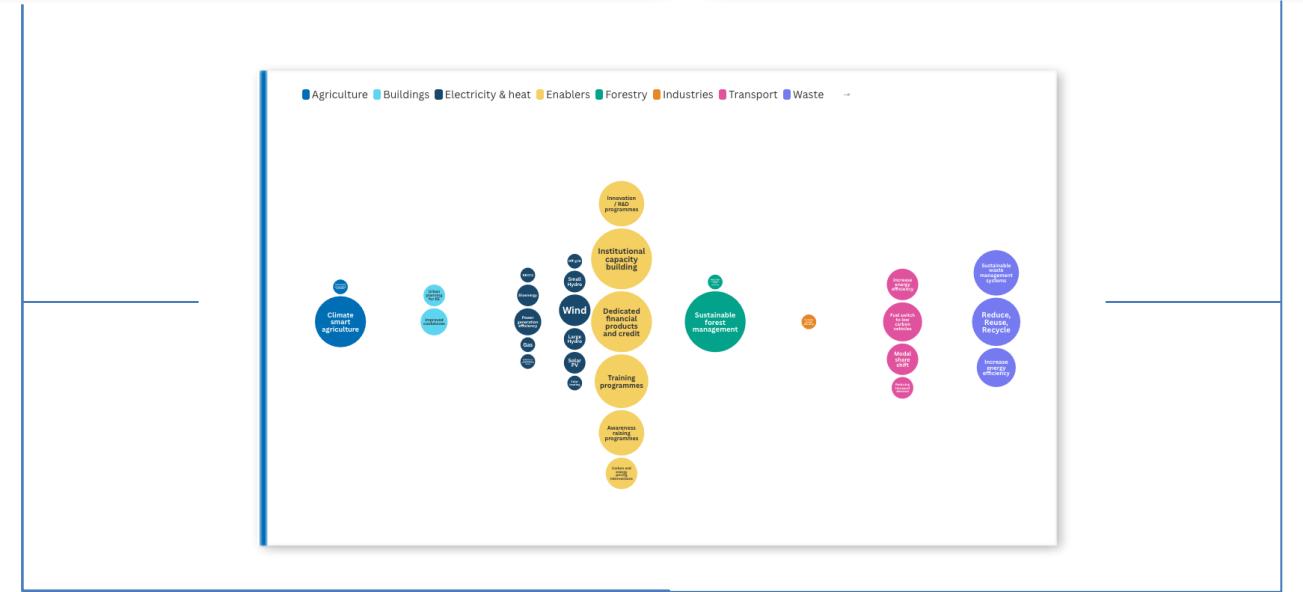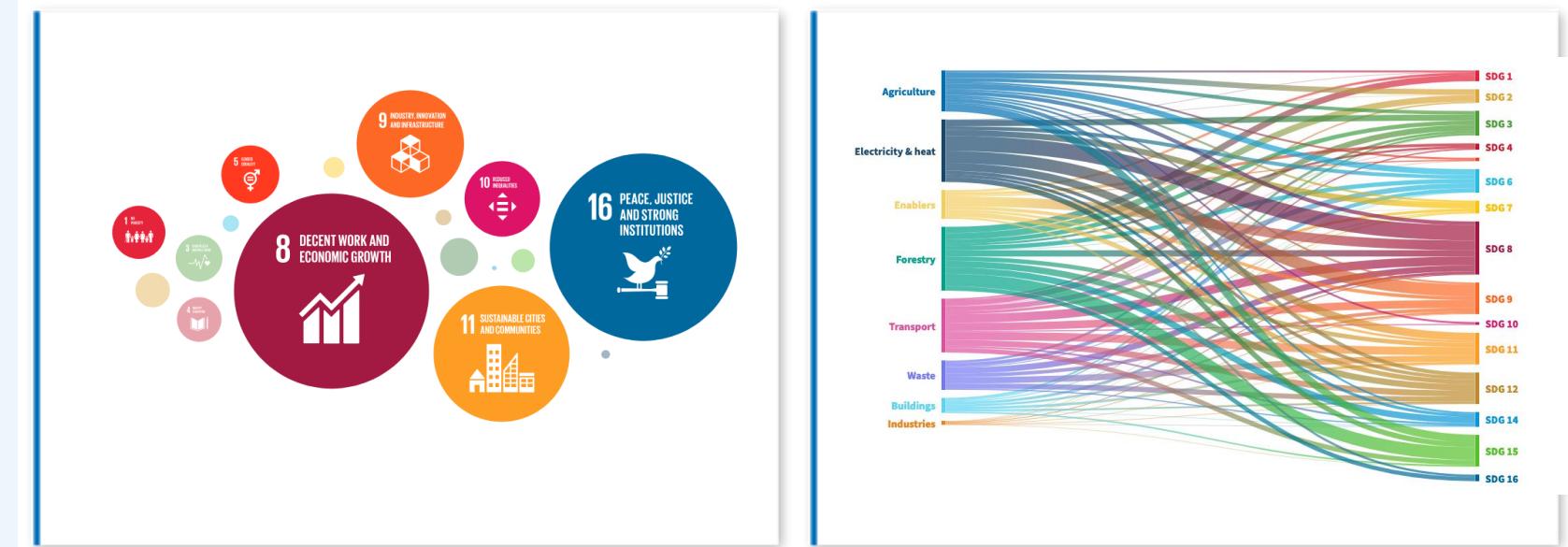
# NDC x SDG INTERLINKAGES Overview
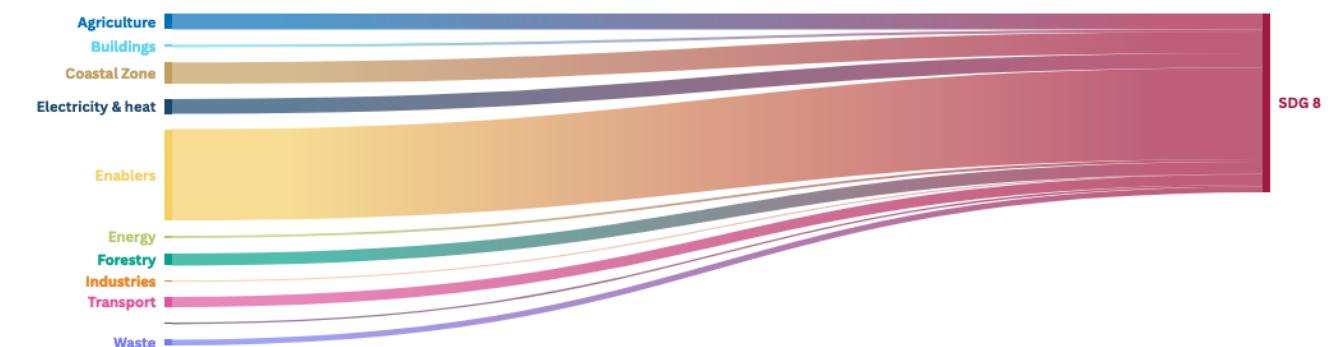
NDC-SDG interlinkages reveal how climate actions can impact SDG progress. Uncovering and understanding these interactions can help Liberia to achieve the 2030 Agenda while fulfilling its climate ambitions and navigating trade-offs.

Building from the NDC actions and SDG priorities, the following integrated SDG pathways reflect NDC actions with the most potential to accelerate the SDGs for Liberia.

- **SDG Target 8.4:** Improve resource efficiency in consumption and production
- **SDG Target 8.5:** Full employment and decent work with equal pay

ACCELERATION PATHWAYS

NDC X SDG Interlinkages

INTERLINKAGES

SDG 8.4 — Improve resource efficiency in consumption and production

Liberia, home to over 5 million people, remains among the world's least developed nations, with its Human Development Index improving modestly from 0.42 in 2003 to 0.49 in 2022. Unemployment remains at 3.7% as of 2023, while economic growth is projected at 5.2% in 2024 and 6.2% in 2025, driven by services, agriculture, and mining. The government prioritizes economic growth and job creation to reduce poverty and boost development, viewing the energy sector as vital to agriculture, health, and tourism.

Liberia's current energy landscape relies heavily on petroleum, with a goal to shift towards affordable renewable energy to fuel agricultural productivity and economic expansion.

Environmental concerns highlighted in Liberia's State of Environment Report include deforestation, river pollution, and waste management challenges. Sustainable development, supported by enforcing the Environmental Protection and Management Law, will be essential to balance growth with environmental health, protecting vulnerable populations, especially women and youth.

Priority NDC Activities

Activity 1 — Promote low-carbon agricultural practices

Activity 2 — Develop large solar PV plants

Activity 3 — Develop small hydropower plants

Activity 4 — Install medium hydropower plants for rural electrification

Activity 1: SDG 10, SDG 8, SDG 16, SDG 11, SDG 9

Activity 2: SDG 9, SDG 8, SDG 11

Activity 3: SDG 9, SDG 8, SDG 11

Activity 4: SDG 9, SDG 8, SDG 11
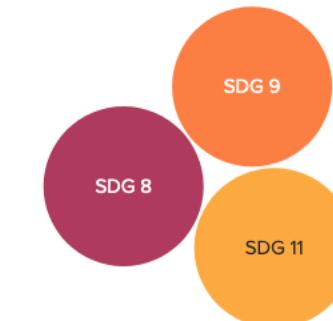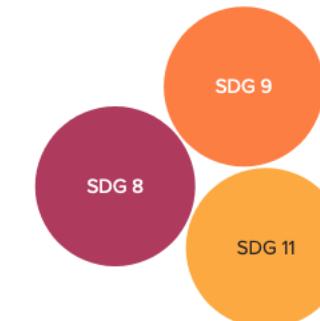
INTERLINKAGES

## SDG 8.5 — Full employment and decent work with equal pay

Unemployment and extreme poverty are widespread challenges in Liberia. The country's NDC interventions in agriculture (SDG 2) and energy (SDG 7) are crucial to reversing these trends. Agriculture remains the primary livelihood source, while the energy sector, vital to economic growth, holds potential for scaling up MSMEs. Targeted investments in these sectors can stimulate job creation, particularly for women (SDG 5.5) and youth, who make up the majority. However, without these investments, Liberia risks ongoing environmental degradation, pollution, and heightened vulnerability to climate disasters, impeding poverty reduction and sustainable development goals.

Historically, Liberian women and girls have faced systemic discrimination, with limited access to equal employment opportunities and lower wages, earning about 14% less than men for similar work. Addressing gender inequality, improving labour conditions, and promoting decent work are essential to achieving sustainable growth. A focus on inclusive economic development, alongside environmental sustainability, will be key to reducing poverty and ensuring equitable progress.

Priority NDC Activities

Activity 1	Activity 2	Activity 3	Activity 4
Promote low-carbon agricultural practices	Develop large solar PV plants	Develop small hydropower plants	Install medium hydropower plants for rural electrification

Activity 1
- SDG 10
- SDG 8
- SDG 16
- SDG 9
- SDG 11

Activity 2
- SDG 9
- SDG 8
- SDG 11

Activity 3
- SDG 9
- SDG 8
- SDG 11

Activity 4
- SDG 9
- SDG 8
- SDG 11

Finance & Stimulus

FINANCE & STIMULUS

Many countries are facing reduced fiscal space, high debt levels, rising interest rates and downgrades on credit ratings. Fiscal and financial constraints tend to slow or even reverse SDG progress.
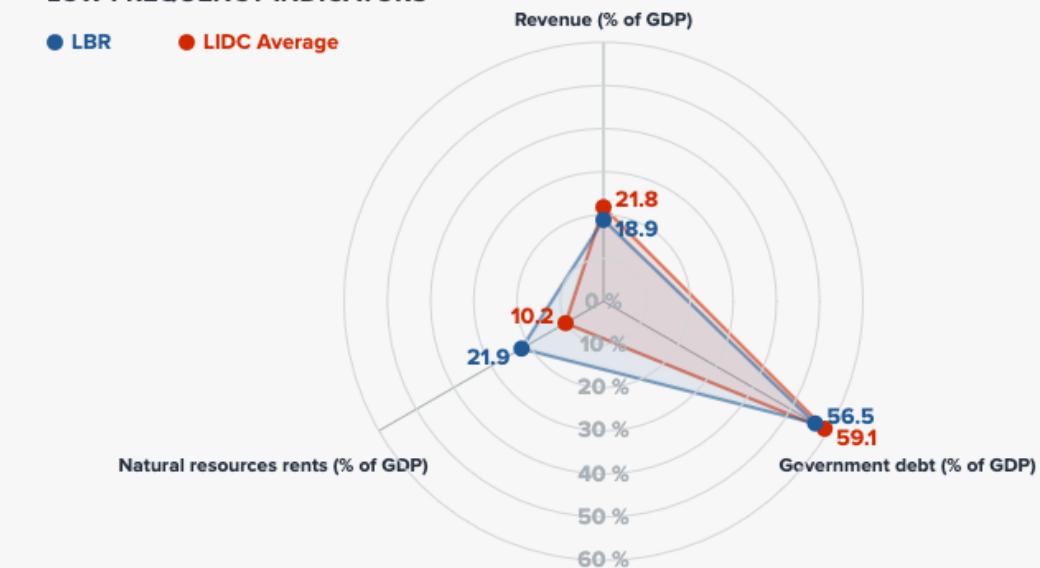
The radar diagram shows low frequency data points linked to government revenue, debt and natural resources rents as a proportion of GDP. The financial indicator graphs show external debt servicing relative to revenue and the country's latest Debt Sustainability Assessment (DSA) risk rating.

Liberia's gross government debt is expected at 56.5% of GDP in 2025, which is 2.6 percentage points (pp) below the low-income developing countries (LIDC) average of 59.1%. The country is expected to collect 18.9% of GDP in revenue this year, thus slightly below the LIDC average of 21.8%.

Liberia's external debt servicing this year is expected to reach 7.5% of revenue, which is 6 pp below the LIDC average of 14.1%. Given that multilateral lenders hold more than 90% of Liberia' external debt at highly concessional terms, the latest World Bank and IMF DSA rated the country as only 'in moderate risk of debt distress'.

LOW-FREQUENCY INDICATORS

● LBR   ● LIDC Average

Revenue (% of GDP)

21.8
18.9

10.2
21.9

0 %
10 %
20 %
30 %
40 %
50 %
60 %

56.5
59.1

Natural resources rents (% of GDP)   Government debt (% of GDP)
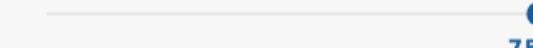
FINANCIAL INDICATORS

● LBR   ● LIDC Average

Total external debt servicing (% of revenue)

7.5   15.3

DSA Rating

● ● ● ●
MODERATE

Notes: External debt covers public and publicly guaranteed debt. The LIDC average of resource revenue (% of revenue) only includes the 58 countries that reported data for that indicator.

Sources: WDI (natural resources rents, data from 2021). UNU-WIDER GRD (resource revenue, data from 2015). IMF WEO April 2025 (debt and revenue, forecasts for 2025). IMF/World Bank (DSA Rating as of Dec 2024). IDS (external debt, data from 2024).

PUBLIC FINANCE

Financing needs

SDGs: Over 15-20 million USD per annum in capital investment is required to reach growth targets necessary for achieving the SDGs in Liberia

NDC: Estimated 2.5-3 billion USD total by 2030.
- 1.8 billion USD for mitigation efforts
- 0.6 billion USD for adaptation strategies
- 0.1 billion USD for capacity-building actions

Financing strategy

Financing strategy under ARREST Agenda for Inclusive Development and NDCs to achieve:
- Middle Income Status by 2030
- Carbon Neutrality by 2050

Sources: Financing Needs for SDGs data from Sustainable Devleopment Report 2024 and Liberia Project Dashboard. Financing Strategy from National Development Plan 2025-2029

Expenditures & budgets

Budgetary expenditure amounted to USD 2.56 billion with climate change expenditure accounting for US$292m over 2012-17, or US$58.6m/year on CC; Infrastructure 64%, Energy & Environment 24%, Agriculture 10%. Climate change expenditure represents roughly 1.8% of GDP during this period.

From 2012 to 2017 the actual domestic budgetary expenditure amounted to USD 2.56 billion with climate change expenditure accounting for USD 292.8 million. Compared to the average Liberia GDP of USD 3.2 billion, the climate change expenditure represents roughly 1.8% of GDP

Debt instruments and Development Assistance:

Total development finance to Liberia between 2002-2018 totalled USD 13.4 billion (AidAtlas 2021). This was drawn from a combination of bilateral and multilateral sources. Total committed development finance targeting climate change over the same period totalled USD 371 million, or less than 3% of total Liberian development finance. In terms of financial instruments, 100% of bilateral funding took the form of grants, while only 46% of multilateral funding were grants, the balance (54%) being loans, including concessional finance.

International climate finance

Liberia's NDC costs for 2021-2025 are estimated at USD 490.6 million, or USD 98.1 million per year. Approximately 82% or USD 400.5 million of these costs are for mitigation activities, with approximately 18% or USD 90 million for adaptation measures. International climate finance mobilized since 2018 is estimated at 493.48m, out of which 157.19 have been disbursed as of Q3 2024. This includes GCF 25.6m, GEF 20.4m, Norway-36.7m

PRIVATE FINANCE & ECONOMY

Policy & Regulatory Measures:

	Established	In Progress	Not initiated	Comment
Blended Finance Mechanisms		■		Development partners are supporting infrastructure and energy projects.
Carbon Market Development		■		Liberia has initiated cross-sectoral consultations on carbon policy
Diaspora Investment Framework		■		Liberia seeks to engage its diaspora for investment in social and economic development initiatives. Example: remittance-driven programs.
Green and Blue Bonds		■		Liberia is exploring opportunities for green financing, particularly for climate resilience projects. Example: potential hydropower and reforestation projects. No official bond issued yet.
Incentives for Green Investment		■		Taxonomy exists but no private bonds issued to date
Public-Private Partnerships (PPPs)	■			Liberia has a PPP framework, with projects in infrastructure, energy, and agriculture. Example: partnerships in ports and roads development.

Innovative Instruments

In addition to its National budget, Liberia has accessed several climate financing instruments to support its climate change mitigation and adaptation efforts, notably Green Climate Fund, Global Environment Facility, Climate Investment Funds, and International Climate Finance.

There are also climate financing instruments that Liberia may be eligible to access but is not currently accessing: Examples include: Green Bonds, Climate-Resilient Bonds, Sustainable Development Bonds, Blue Bonds, Climate Venture Capital, Impact Investing, and Carbon Credits.

While Liberia continues to explore many of these climate finance instruments, creating a sort of public pipeline would help. A climate finance pipeline is a critical tool for countries to identify, develop, and finance climate-friendly projects. Inline with the National Development Plan, the pipeline could be around: Renewable energy, sustainable agriculture, forestry and land use, climate-resilient infrastructure and disaster risk reduction.

International Investment

Liberia's economy is market-based and largely dependent on natural resources, foreign aid, and foreign direct investment (FDI). FDI constitutes 88% (mining and agriculture), while SMEs, MSMEs, Informal Sector account for 12% of GDP. Foreign direct investment, net inflows (% of GDP) in Liberia was reported at 17.19 % in 2023, according to the World Bank.

Domestic Investment

Liberia's domestic private investment is evolving, with a focus on strengthening financial services and fostering green entrepreneurship. However, limited capital access and underdeveloped markets highlight the need for stronger financial infrastructure and private sector support. For example, despite the agriculture sector representing approximately 70% of Liberia's GDP, Central Bank of Liberia (CBL) data shows that less than 4% of Liberian commercial bank's loans are to the sector

METHODOLOGY

NDC X SDG MOMENT

Methodology
Assesses challenges and opportunities in national growth trajectories with insights on environmental sustainability.

Data Sources
- UNDP 2024 (Human Development Index)
- European Commission 2023 (INFORM Climate Change Risk Index),
- IMF 2022 (IMF-Adapted ND-GAIN Index);
- Environmental Performance Index 2024 (GHG growth rate adjusted by emissions intensity & Projected Emissions in 2050);
- Helen Phillips; Adriana De Palma; Ricardo E Gonzalez; Sara Contu et al. 2021 (Biodiversity Intactness Index).

ALIGNMENT & INTERLINKAGES

Methodology
NDC activities from Liberia's NDC submission are extracted. These are mapped with Mitigation or Adaptation Actions defined by SCAN-Tool initiative, which finds interlinkages between these Actions and the SDGs. Accordingly, synergies and trade-offs between NDC activities and the SDGs are identified.

Data Source
NDC activities data are from NDC-SDG Connections(Connecting climate action to the Sustainable Development Goals | NDC-SDG Connections (idos-research.de)); Mitigation or Adaptation Actions are defined by SCAN-Tool (Scan tool - Ambition To Action).

FINANCE & STIMULUS

Methodology
Provides an overview of the financing options for NDC implementation.

Data Source
TBD