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Climate Change

Regional Climate Challenges Why Climate Change Matters for Investments







Climate Change

'Demmal mo guenne bul dem'

"Go!" is better than "Don't go!"

Wolof Proverb







Context

Africa

- Population 1.4 billion (2022)
- Population 2.5 billion (2050) –
 26% of World's total.
- Urban population 44% (2020) and 60% (2050)
- Medium age 19.7 years (2020)
- Climate Change

Senegal

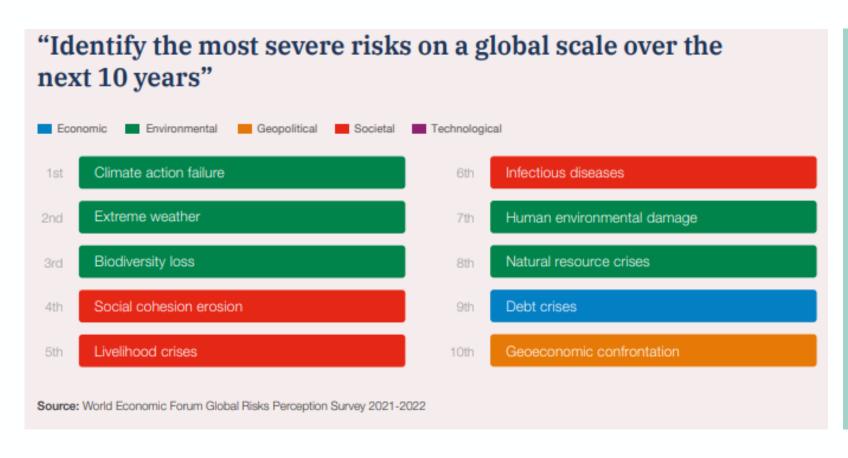
- Population 17 million (2022)
- Population 32 million (2050)
- Urban population 51% (2022) and 67% (2050)
- Medium age 18 years (2022)
 and 23 years (2050)







Global Risks Perception

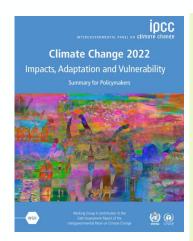


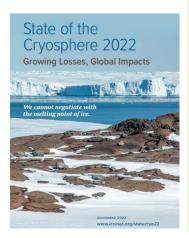
- Top 5 global risks in terms of likelihood are all environmental.
- They include climate action failure, extreme weather, biodiversity loss, human environmental damage and natural resource crises.





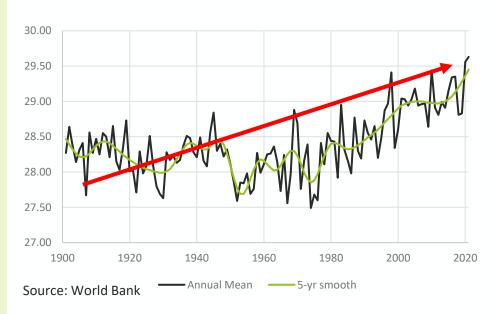
Climate Change – Common Regional Challenges for Africa & Senegal





- Africa is warming up faster than global average
- IPCC (March 2022):
 - Global warming is increasing at a faster rate than we initially thought
 - Effects more adverse at smaller temperature rises.
- State of the Cryosphere (Nov 202) & IPCC (2019)
 - Since 1993, the rate of ocean warming has more than doubled
 - Impacts include extreme and more frequent El Niño and La Niña events; marine bio-diversity loss
 - Sea level rise scenarios in metres:
 - Very Low Emissions (Peak 1.6–1.8°C): 2-3 meters
 - Fulfilment of All 2022 NDCs 2.0°C): 3–6 metres
 - Implemented Policies in 2022 (2.7–3.1°C): 15–20 metres

Observed Temperature for Senegal, 1901–2021



'Our planet's melting ice pays no attention to climate pledges and NDCs. It responds only to the level of CO2 and warming in the atmosphere.' Pam Pearson Director, ICCI





Why Climate Change Matters for Investments

Nexus between environment and economic growth

Affects poor people most – implications on financial inclusion

Climate change can translate into credit risk

Physical risks have impact on asset values

Transition risks can lead to stranded assets

Liability risks —
People may sue if
they suffer physical
& transitional risks





Decarbonization – Increases Risk of Stranded Assets

US coal mining ratings 2014-2018



COMPANY'S RATING	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	В3	Caa1	Caa2	Caa3	Ca	С
Arch Coal, Inc.*						<u>o</u> —			— 0			Jan	uary 201	6 🔿
Bowie Resource Partners LLC								0-		- 0				
Cloud Peak Energy Resources LLC						0-				<u> </u>	Os	eptembe	er 2016	
Foresight Energy, LLC								0-	- 0			O M	arch 20	16
Murray Energy Corporation**									0-	- 0	Febr	uary 20	16 🔾	
Natural Resource Partners L.P.							0-		— ⊚					
Peabody Energy Corporation***					0-	- 0					N	March 20	16 🔿	
Westmoreland Coal Company****										0-		— ⊚		
RATINGS FROM 2014 - 2018	Cur	rent ratin	ng	OR	ating (as	of Janua	ry 2014)	() Lowes	st rating (i	f differer	nt from cu	ırrent)	

Half of the coal produced is the US is by companies that have declared bankruptcy

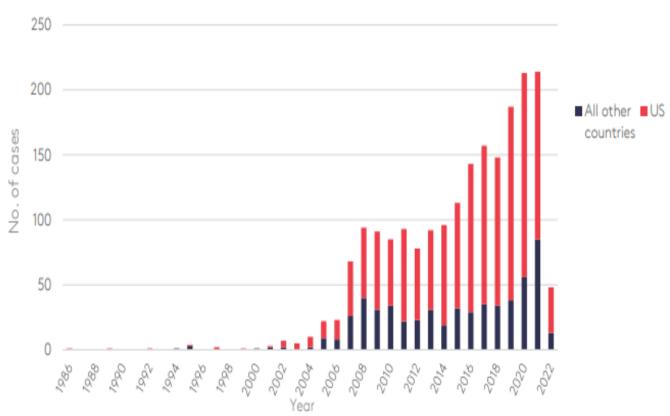




Litigation Risk - Risk of people seeking compensation from physical and transition risks



Total climate change cases over time, US and non-US (up to 31 May 2022)



A 25-year-old took on a \$57 billion super pension fund over climate change and won'. Source -Business Insider, Australia, 5 November 2020

Green Investment Opportunities

Development case Business case







Climate Change – Opportunities for Africa

'If your vision is for a year plant wheat, if your vision is for a decade plant trees, and if your vision is for a lifetime plant people'

African Proverb





Climate Finance – The Opportunity for Africa

Resilience and investment are two sides of the same coin. A sustainable future is only sustainable if it is resilient

The Development Case:

- Africa is a developing continent that is rapidly urbanizing:
 - Significant investment needed in built environment infrastructure, housing, water, power etc
 - We can build in a climate-resilient manner (future-proof investments)
- Environmentally friendly growth can improve access to food, services, create green jobs and boost incomes in new and existing sectors of the economy
- The transition towards carbon-neutrality and environmental sustainability will reduce the negative impacts of climate change, amongst poor communities

The Business Case:

Opportunities for first movers to boost profitability and reduce risks: new clients, products and markets

Africa is connected to global value chains – required to meet high environmental standards.

Opportunities of harnessing natural capital/biodiversity

Financial firms and funds face major risks by not addressing Africa's green challenges

Environmental risks can **impact operations** directly and **impact client profitability**

Compliance with future regulatory requirements may impact profitable business models

Financial Sector Response

Global landscape of climate finance Africa climate finance challenge Capital Markets Instruments Banking & Insurance Instruments Sustainable Bonds – Thematic Bonds







Financial Sector Response

'If you are going to a place where corn grows, take a cutting tool with you.'

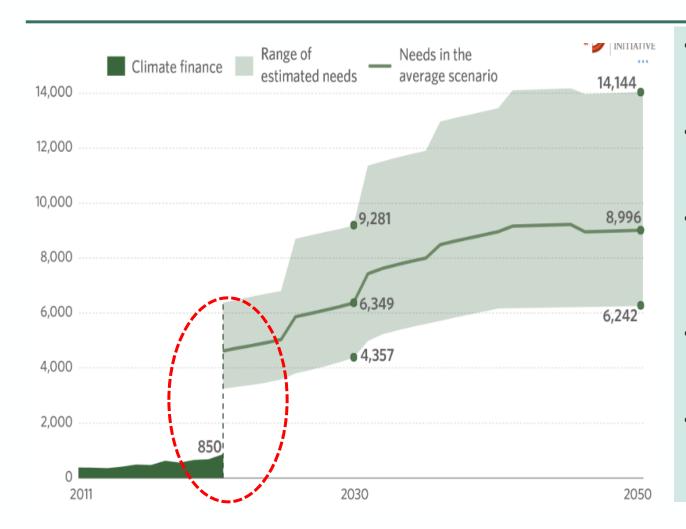


Amharic Proverb

Global Landscape of Climate Finance







- Global climate finance doubled in the last decade – reached \$850 bn in 2021.
- Minimum of US\$ 4.3 trillion p.a. required to meet Net Zero targets.
- Private sector investment is increasing (50% share), but not at the scale and speed necessary for the transition.
- Mitigation finance dominated by renewable energy (70% of total in 10 years).
- Low carbon transport is fastest growing mitigation solution. AFOLU attracts considerably low levels of climate finance.

FSD AFRICA

Climate Finance Challenge in Africa





Climate finance for Africa needs to grow 9x from \$30 billion to \$277 billion

Cost and need to implement NDCs
\$277b pa

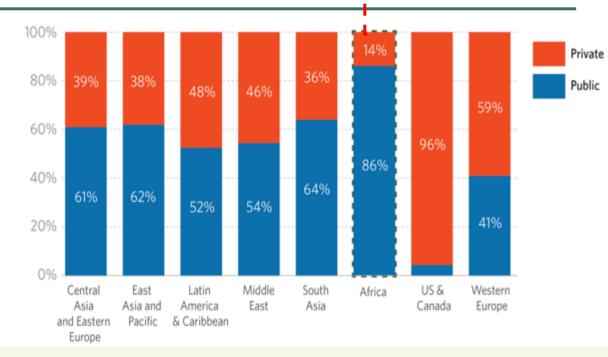
Tracked climate finance in Africa
\$30b pa

Lower share of private finance in Africa compared to other regions

Senegal

\$13 bn

2020-2030

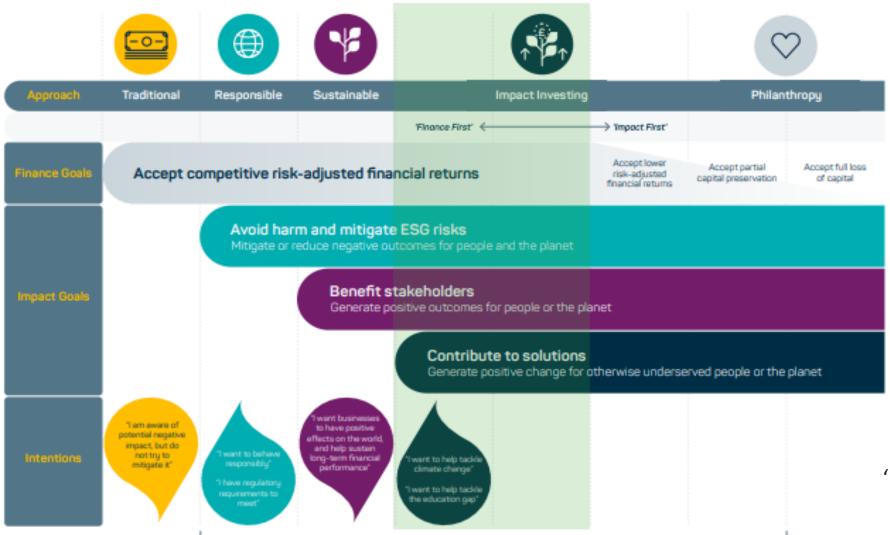


- African NDCs assume 90% of the funding is private sector & international
- Senegal assumes that domestic fund mobilisation of \$4.8 billion is expected, which will cover 37% of the total costs required to meet the NDC commitments. The remaining 67% is expected to come from partners, signalling the country's reliance on external funds





Spectrum of Capital



Sustainable investing is an essential tool to bring the values of the market in line with those of society.

Mark Carney (2021)

'Doing well by doing good'





Selected Instruments for Climate Finance through Capital Markets

The majority of climate finance — 61% (USD 384 billion) — was raised as debt in 2019/2020.

Equity investments, the next-largest category after debt, came to 33% of total climate finance, up from 29% during the previous period.

Grant finance comprised 6% of total flows (compared to 5% in 2017/2018).

CPI (2021)

Debt Instruments

Green Bonds
Sustainability Bonds
Sustainability-linked Bonds
Structured Bonds,
Green Securitizations,
Project bonds,
Green Debt Funds
Debt Guarantees

Equity Instruments

ESG/Sustainability Indices
Green Islamic/Ethical Funds,
Green REITs,
Green Property Funds,
Ethical/Green Funds
Green ETFs

Outcomes Based Financing

Payment for Ecological Services

Development Impact Bonds (e.g.

Zebra Bonds)

Debt-for-climate swaps Carbon Markets

Carbon-Secured Sustainability-Linked Bonds





Selected Instruments for Climate Finance through Credit & Risk Markets

Banks/Credit Markets

Green Loans,
Sustainability-linked loans,
Sustainability-improvement loans,
ESG indexed loans
Green credit guarantees & credit
enhancements

Insurance Markets

Green credit guarantees

Parametric weather insurance Catastrophic (CAT) bonds

Resilience bonds

Green bond Underwriting

Green contingent credit

Green Bonds







Green bonds are regulated instruments subject to the same capital market and financial regulation as other listed fixed income securities.

The proceeds will be exclusively applied to eligible environmental and/or social projects.

Green Bond principles and standards:

Covers 4 areas:

- -Use of Proceeds
- -Project Selection & Evaluation
- -Management of Proceeds
- -Reporting

External review:

- -Second Party Opinion
- -Verification
- -Certification
- -Scoring/Rating

Green Bonds Taxonomy

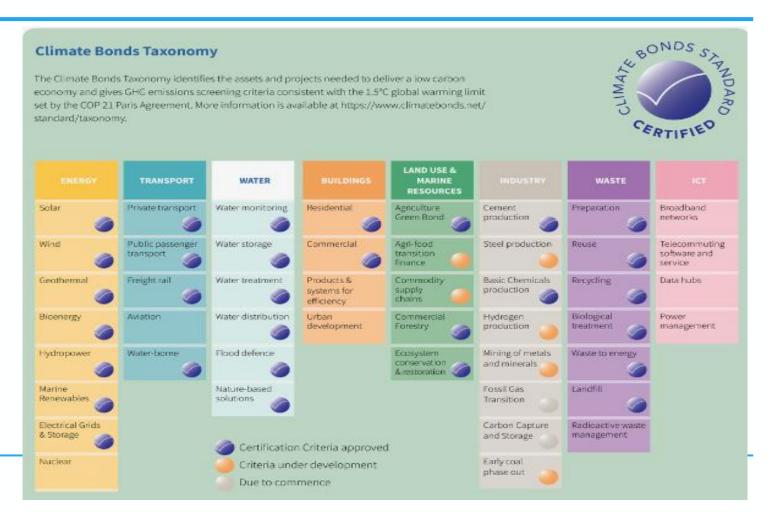




Green bonds taxonomy covers many sectors:

Implications

- Wide opportunities for adaptation and mitigation investments e.g infrastructure: energy, transport, utilities, natural resources
- Strong alignment with SDGs
- Given nascent nature of African markets opportunities for building African markets sustainably







Gender Bonds



Financial Inclusion

Geography: Mostly emerging and frontier markets

Goal: Closing the financing gap for women, women-owned businesses and female entrepreneurs

Use of proceeds:

- Companies with good corporate policies regarding gender
- Lending to women
- Lending to women-owned SMEs
- Lending to women-run and womenowned companies
- Companies that sell goods and services that disproportionately benefit women
- Women in the supply chain

Gender Bond:

- The proceeds of the issuance are used <u>"in line" with gender equality and women's empowerment goals;</u>
- The Bond results in a <u>benefit for</u> women;
- However, unlike Green and Social bonds, there are no universally accepted standards
- Most bonds issued to date are "use of proceeds" bonds and aligned with the Social Bond Principles



Corporate behaviour bonds

Geography: Mostly issued in the Global North

Goal: Equality and opportunity in the workplace

Use of proceeds:

- Loans to companies that meet specific gender equality targets (women in leadership)
- Not restricted for use on a specific activity
- Often lean on existing principles and ratings to select companies for investment (e.g Equileap)





How big is the market? Who is issuing Gender Bonds?

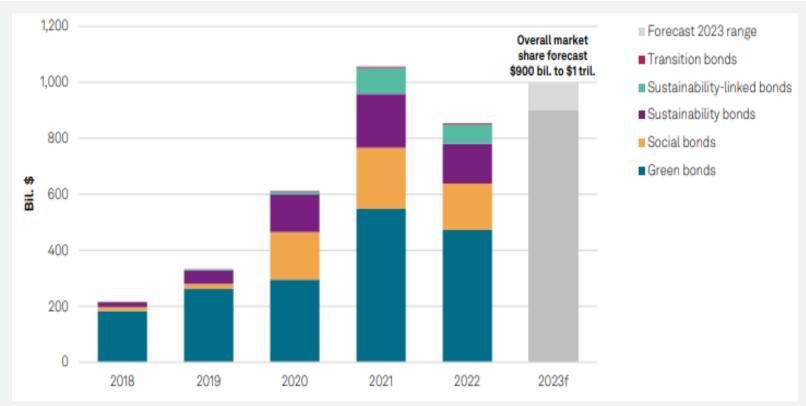
Over USD 2 billion across 12 labelled Gender Bonds* in the market today, which have been issued all over the world, USD 3.3bn if we include MDBs and DFIs



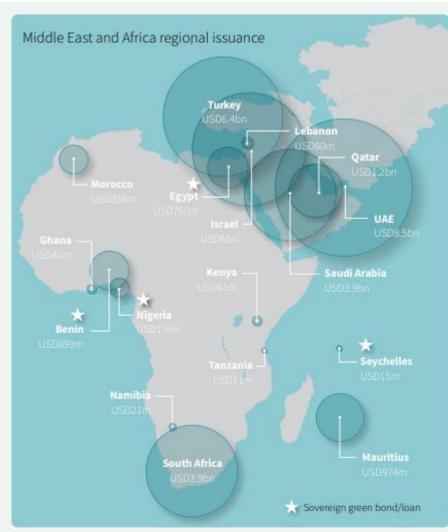








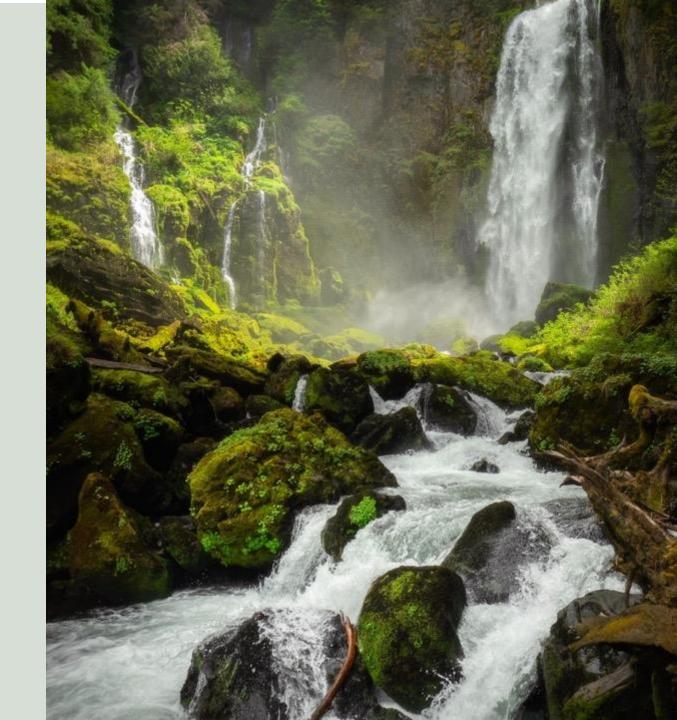
- Significant growth in green bond market but still small part (2%) of global bond market – but market share increasing (2022 – 13%).
- Green bond market picking up in Africa but still small (issued since 2006 \$4.7bn)



FSD AFRICA, 2020

FSD Africa Green Initiatives

FSD Africa Capital Markets Footprint Gender Bonds Initiatives Green Finance Initiatives Ground-Breaking Issuances

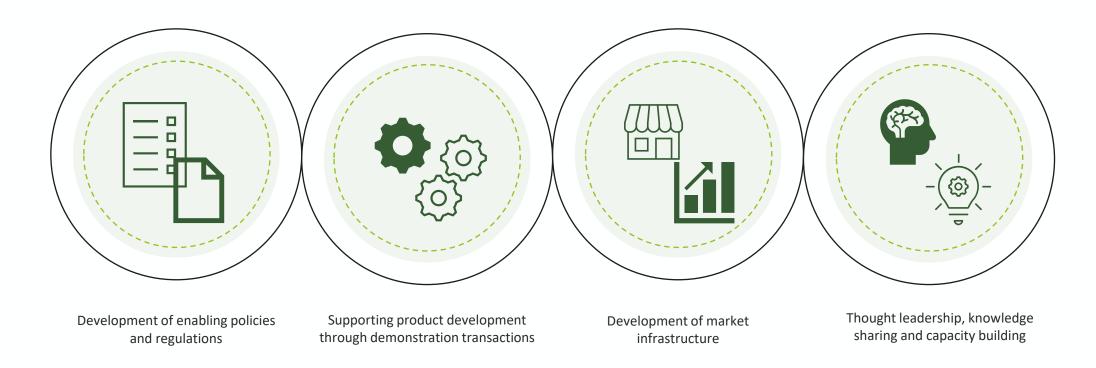


Our Capital Markets Development Approach





We develop Africa's capital markets to increase the availability of long-term finance for economic development, to achieve a sustainable future for Africa's people.



"FSD Africa is different because we are an African, neutral, nimble, risk-bearing, hands-on delivery partner"



fsoeffseafric ukaid from the British people

How we do it

We support our partners by drawing on a range of market development instruments.

Tools and instruments

Non-financial

Grants

With no expectation of a financial return, grants are reserved for high-potential, but higher risk, commercial projects that have the potential to system-wide impact.

Technical assistance

We tackle challenges that require specific solutions, our team works with and advise a range of our public and private sector partners.

Returnable grants

With the expectation that most are repaid in full, we support high-risk commercial projects that build value for our partners and for FSD Africa.

Thought leadership

From our non-partisan, credible position and using our deep African networks and understanding, we advocate purposefully to influence policy and change in practices.

Investment capital

Through our investment arm, we directly invest in high-risk businesses and funds operating in the financial sector that have the potential to change the way financial markets operate.

Networks

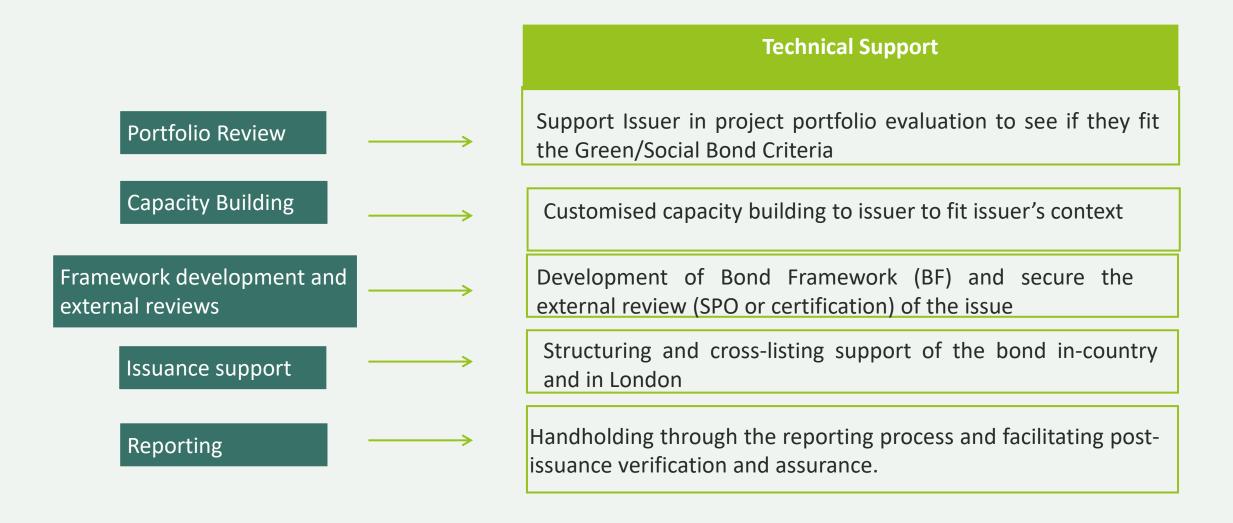
To overcome the negative effects of market fragmentation, we use our deep networks across the continent to create opportunities for learning transfer and collaboration within and between countries, and beyond Africa.



UKaio from the British peop

fsdafrica

FSD Africa's Technical Assistance Thematic Bonds Toolkit





FSD Africa Capital Markets Footprint

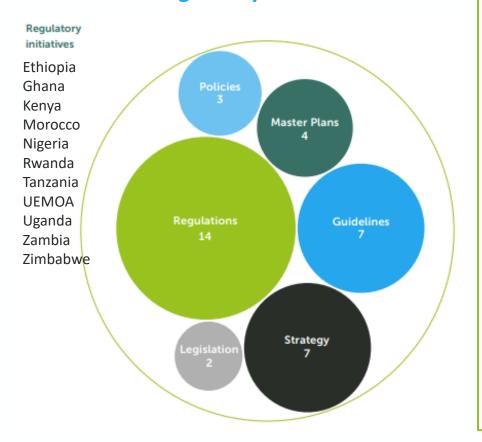
Our Portfolio

Implementing over 60 projects in 33 countries across Africa



Key achievements

Regulatory Initiatives



Demonstration Transactions

Green Bonds/Products

- Nigeria US\$162mn
- Kenya US\$109mn
- Morocco US\$95mn
- Rwanda –US\$3.3mn

Gender Bonds

- Morocco US\$21mn
- Tanzania US\$33mn

Total – US\$423mn



FSD Africa Gender Bonds Support

Regulatory Support – Case Studies

Supported the Morocco capital market regulator, AMMC, in the development of its gender bond issuance guidelines.

Provided technical assistance to develop green bonds and social bonds guidelines in Ghana.

Provided technical assistance to develop green bonds and social bonds guidelines in Tanzania.

The social bond guidelines are being referenced in the further development of thematic bonds issuances across the continent.

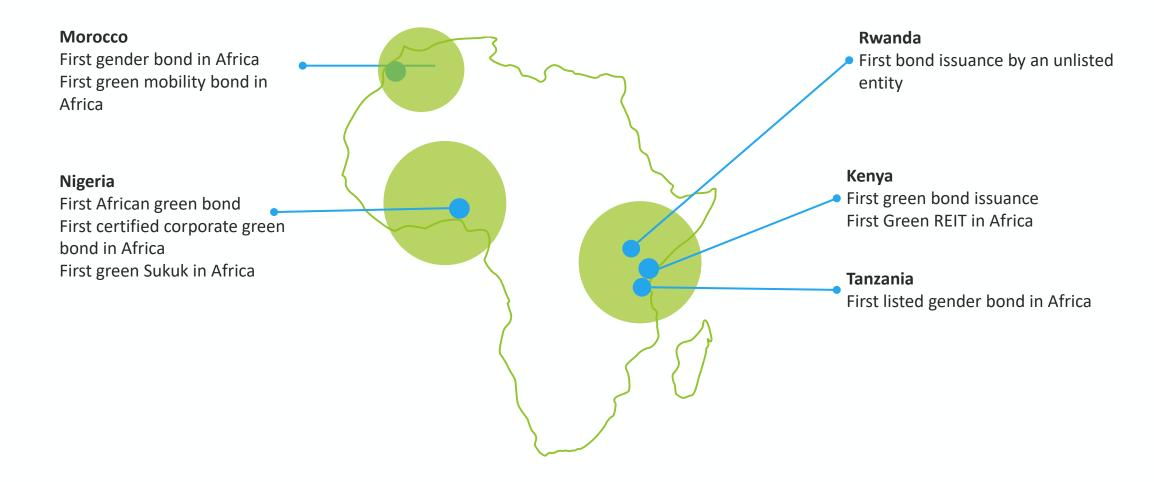
Transactions – Case Study

Issuer	NMB Bank Plc
Date of issue	February 2022
Country of issue	Tanzania
Amount raised	TZS 73.8bn (\$30 million)
Tenor	3 years
Coupon rate	8.5% per annum
Use of proceeds	Lending to women-led or women-owned MSMEs or to MSMEs that manufacture goods that disproportionately benefit women
Listing authority	Dar es Salaam & Luxembourg Stock Exchanges





Ground-breaking Issuances Supported by FSD Africa



"We don't inherit the Earth from our ancestors, we borrow it from our children."

- African proverb

