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Green Bonds

Financing Sustainable Infrastructure

December 1, 2021



Green Bond Basics

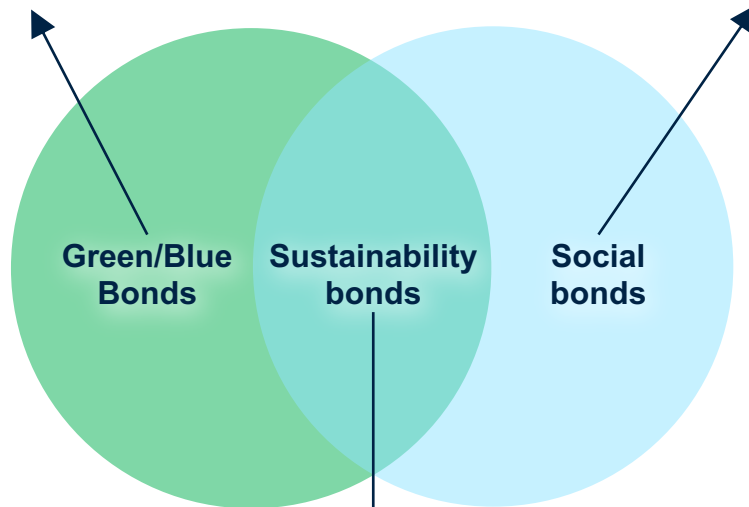


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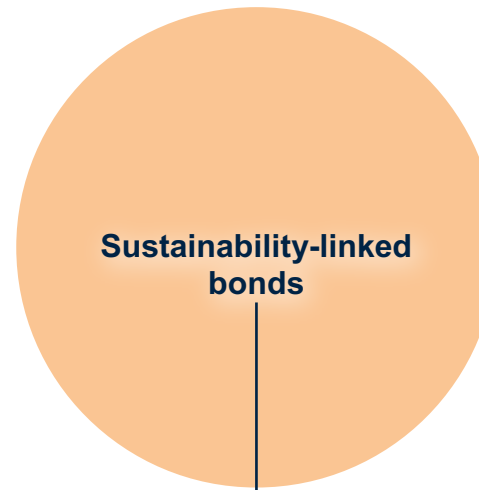
Types of Sustainable Bonds

Green/blue bonds are any type of bond instrument where the proceeds will be exclusively applied to finance or refinance, in part or in full, new and/or existing eligible green/blue projects

Social bonds are use of proceeds bonds that raise funds for new and existing projects with positive social outcomes



Sustainable-labelled bonds encompass elements from both green and social bonds



Sustainability-Linked bonds have a general corporate purpose, but link a specific bond characteristic (i.e., coupon payment) to a sustainability KPI (i.e., GHG emissions)

Impact-Linked Bonds follow similar processes to SDG-linked bonds

International Standards

- Green Bond Principles
- Social Bond Principles
- Sustainability Bond Guidelines
- Sustainability-Linked Bond Principles

International Capital Market Association (ICMA)

<https://www.icmagroup.org/green-social-and-sustainability-bonds/>

Disclosure and Transparency Differentiate Green Bonds

- 1. Use of proceeds**
- 2. Process for project evaluation
and selection**
- 3. Management of proceeds**
- 4. Reporting**

Green Bonds: Eligible Projects

Mitigation

- Solar and wind installations
- Funding for technologies that result in significant reductions in GHG emissions
- Rehabilitation of power plants and transmission facilities to reduce GHG emissions
- Greater efficiency in transportation, including fuel switching and mass transport
- Waste management (methane emission capture)
- Energy efficient building construction
- Reforestation and avoided deforestation

Adaptation

- Protection against extreme events, such as floods and droughts (including reforestation and watershed management)
- Food security improvement and stress-resilient crops (to slow down deforestation)
- Sustainable forest management and avoided deforestation

More can be found at:

<https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Green-Project-Mapping-June-2021-100621.pdf>.



Green Bond Issuance Process



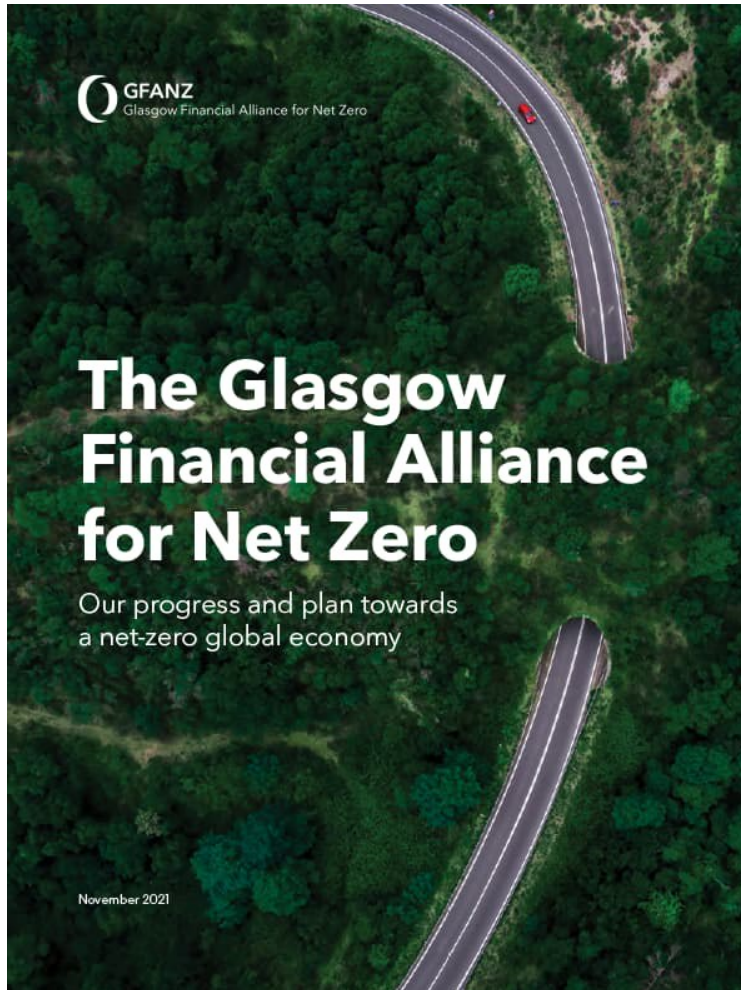
Investment Landscape for Sustainable Finance



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New Demand for Green and Sustainable Assets



On Nov. 3 at the COP26, the Glasgow Financial Alliance for Net Zero (GFANZ) announced that over 450 firms across 45 countries can deliver the estimated \$100 trillion of finance needed for net zero over the next three decades

“The architecture of the global financial system has been transformed to deliver net zero. We now have the essential plumbing in place to move climate change from the fringes to the forefront of finance so that every financial decision takes climate change into account. Only this mainstream focus can finance the estimated \$100 trillion of investment needed over the next three decades for a clean energy future.”

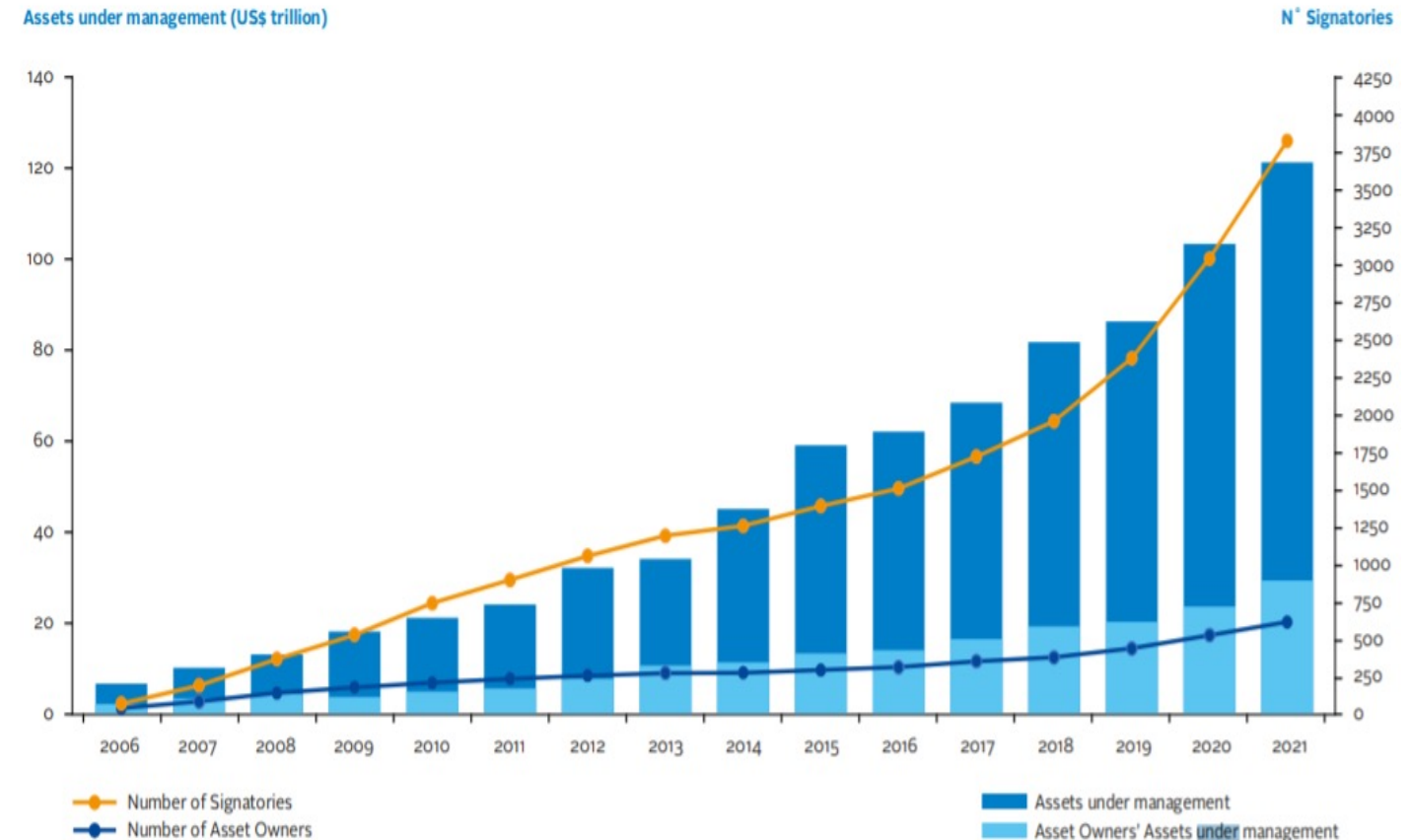
- Mark Carney, UN Special Envoy for Climate Action and Finance

<https://www.gfanzero.com/press/amount-of-finance-committed-to-achieving-1-5c-now-at-scale-needed-to-deliver-the-transition/>

Growth in Demand for Green and Sustainable Assets

- International investors are committing in record numbers to sustainable investments and are seeking compatible opportunities
- The collective assets under management represented by all 3,826 United Nations Principles for Responsible Investment (PRI) signatories stood at just over US\$121 trillion as of 31 March 2021
- PRI signatories commit to:
 - Incorporating ESG issues into investment analysis and decision-making processes.
 - Being active owners and incorporate ESG issues into our ownership policies and practices.
 - Seeking appropriate disclosure on ESG issues by the entities in which they invest

PRI signatory growth in 2020 - 2021

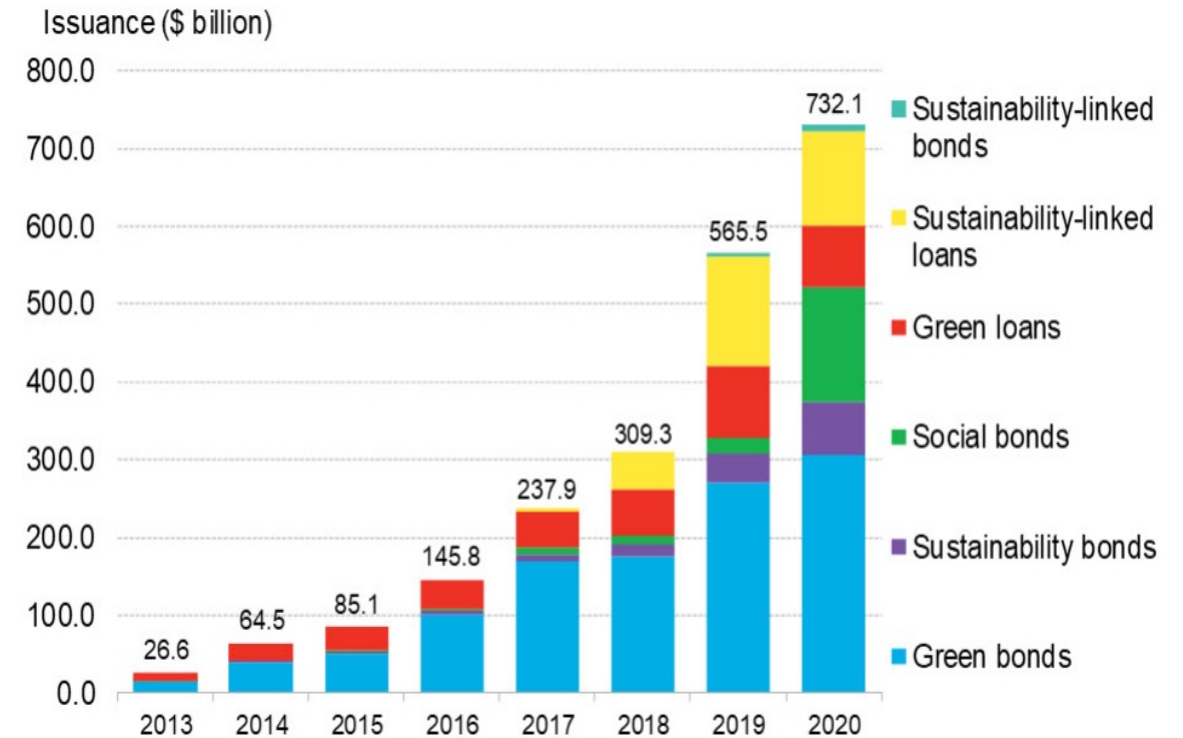


https://dwtyzx6upklss.cloudfront.net/Uploads/y/o/i/pri_annualreport_2021_web_346706.pdf

Limited Global Supply of Sustainable Bonds

- Global sustainable debt issuance totaled US\$732 billion in 2020
 - Increase of 29% over the same period in 2019
- *Sustainable bond issuance is estimated to represent ~2% of total issuance globally 2020*
- Green bonds represent the largest portion of sustainable debt issuance at about 40% of the total outstanding sustainable debt
- The fiscal responses to COVID-19 have inspired an increase in social, sustainable and sustainability-linked issuances in 2020
 - Sovereigns and supranationals have taken advantage of investor demand to issue such bonds

Global sustainable debt: annual issuance 2013-20



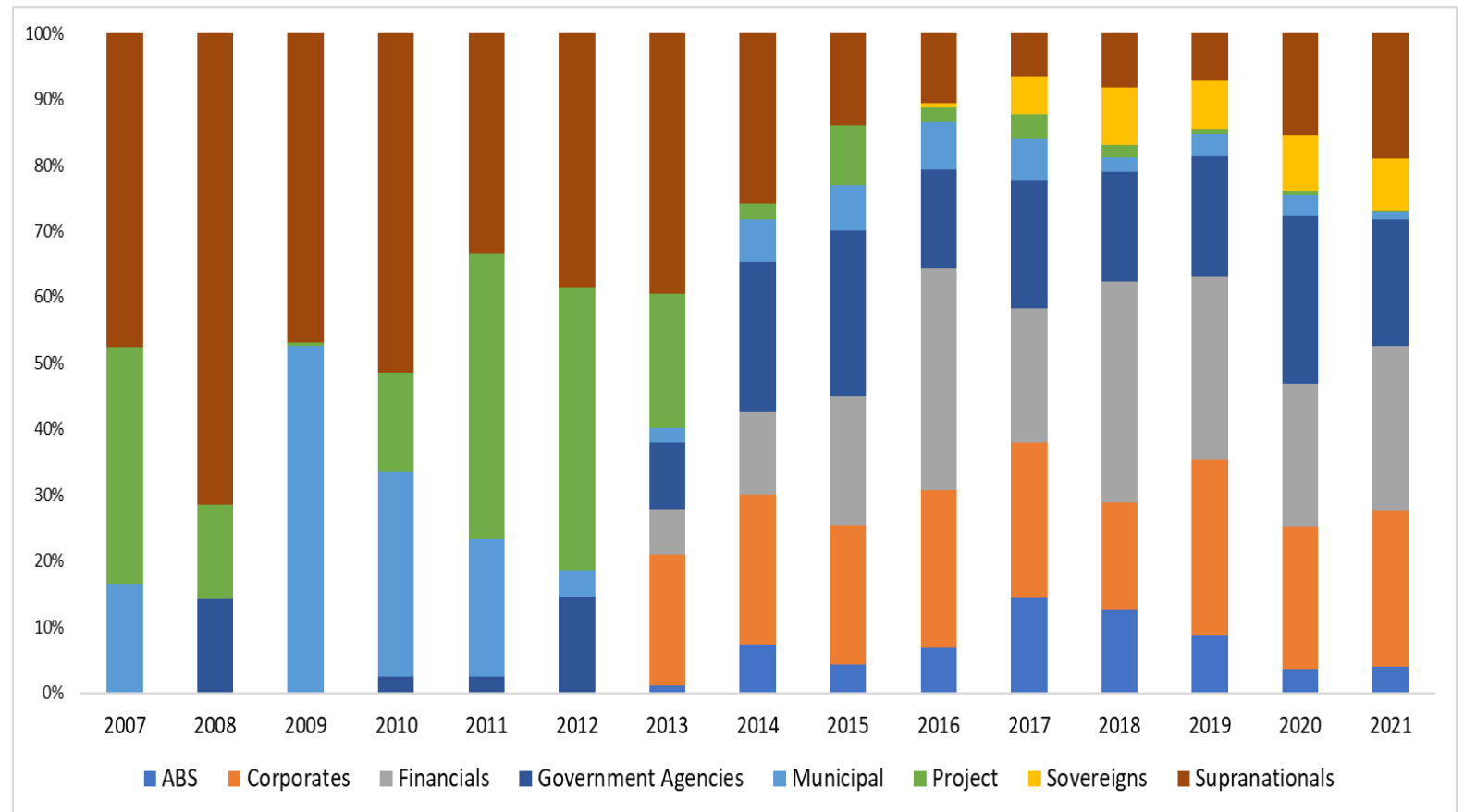
Source: BloombergNEF, Bloomberg L.P.

See: <https://about.bnef.com/blog/sustainable-debt-breaks-annual-record-despite-covid-19-challenges/>.

Sovereign Sustainable Bonds Starting to Takeoff

- Sovereigns is the newest issuer type in the sustainable bond market, the first sovereign sustainable bond was issued in 2016 by Poland
- Since then, sovereign sustainable bond issuance grew from 0.74% of total sustainable bond issuance to 8.43% in 2020.
- Global sustainable debt issuance totaled US\$732 billion in 2020
 - Increase of 29% over the same period in 2019

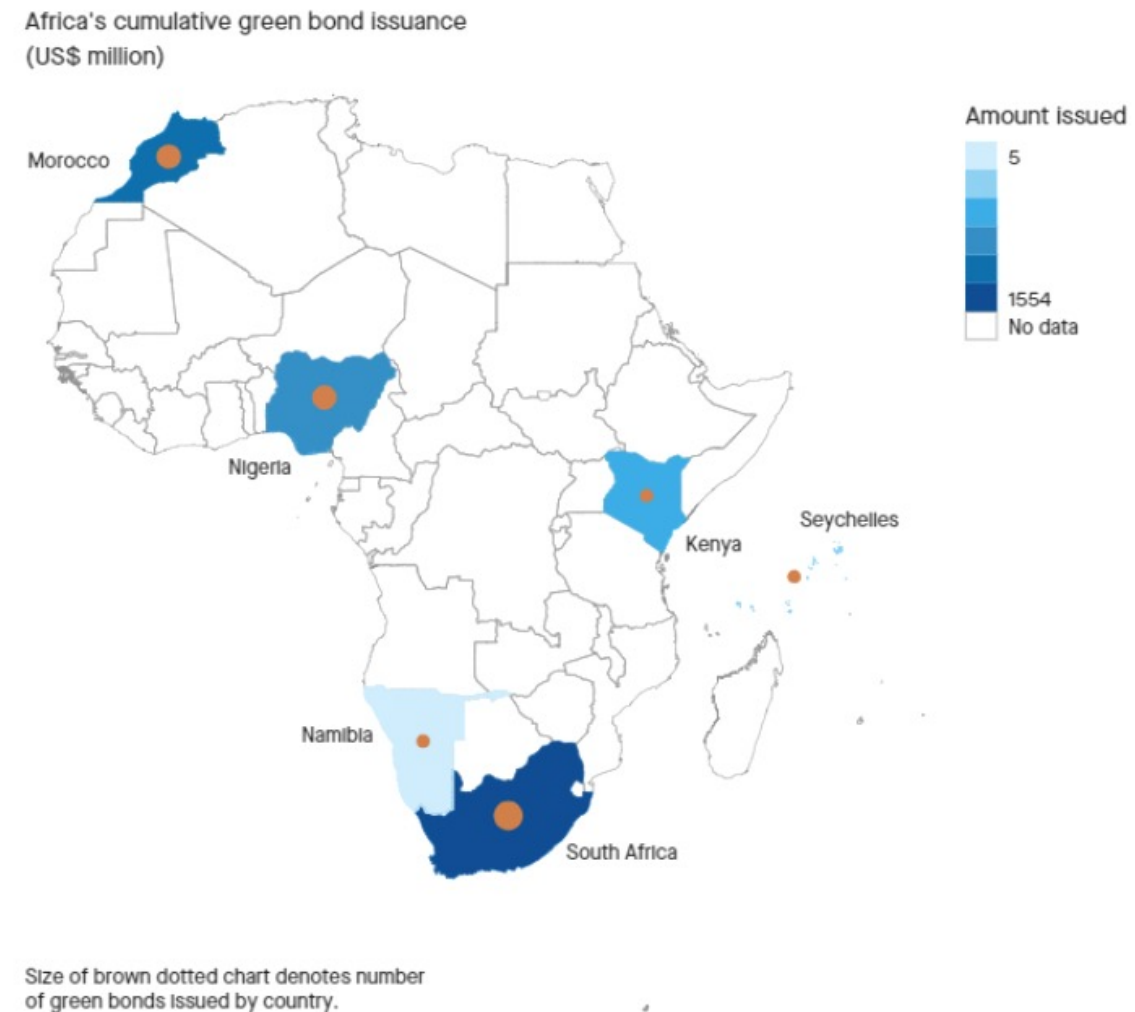
Sustainable Bond: composition of annual issuance by issuer type 2007-2021



Source: BloombergNEF, as of April 2021

Sustainable Bond Market Trends in Africa

- Africa has seen 20 sustainable bond issuances since 2012 of a total of USD2.78 billion
- South Africa has been the leader in the market.
 - Nedbank issued the Africa's first green bond.
 - ZAR 1.46 billion and ZAR 1 billion green bonds were issued by the City of Johannesburg in 2014 and City of Cape Town in 2017.
- South Africa is the country which has issued the most, with USD2.189 billion issuances in 8 deals, followed by Nigeria with USD136 million.
- Nigeria is the only African sovereign to issue a green bond in 2017 to fund solar and forestry investments.



Data in text from Climate Bonds Initiative, <https://www.climatebonds.net/2020/09/climate-bonds-initiative-and-fsd-africa-launch-africa-green-bonds-toolkit-practical-guide>. Graph from Stockholm Sustainable Finance Center, *Scoping the Sustainable Finance Landscape in Africa*, July 2020, <https://www.stockholmsustainablefinance.com/scoping-the-sustainable-finance-landscape-in-africa-ssfc-report/>.

Considerations for CFOs and Debt Managers



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Green Bonds can be Useful for Many Reasons

For an ***international issuance*** program:

1. Signals commitment to sustainability objectives and fiscal transparency
2. Diversifies investor base
3. Increases and taps growing investor demand
4. Potentially achieves better pricing and terms
5. Can crowd-in concessional financing

For a ***local issuance*** program:

1. Sovereign bonds can build the benchmark for other issuers and build a regional market
2. It can also set the overall market framework for green bond issuances

Green Bonds and Compliance with Standards

- **Need to align with international best practices**
 - Green/Social/Sustainability Bond Principles
 - External review of the framework
 - Annual allocation and impact reporting
 - Align with green taxonomy
- **Costs associated with compliance**
 - Need to have a pipeline of verifiable eligible projects
 - Costs associated with third party reviews and impact reporting
 - Internal coordination for strategy and monitoring

Green Bonds and Overall Debt and Financing Strategies

- **Decisions about issuances should be made in accordance with a broader strategy**
 - Domestic or external issuance
 - Local vs. foreign currency
 - Size (amount)
 - Maturity, target coupon, bullet vs. amortizing structure of repayment
- **Align with international best practice**
 - Green Bond Principles
 - External review of the framework
 - Annual allocation and impact reporting
 - Align with green taxonomy

Green Bonds and Risk Considerations

- **Green bonds are debt and thus, all associated credit risks must be considered before issuing such as:**
 - Credit worthiness (and rating) of the issuer
 - Underlying project viability and bankability
 - Project sponsor quality
 - Procurement
 - Policy changes in the sector
 - Macroeconomic dynamics and volatility

Case Study: Indonesia Infrastructure Fund (IIF)



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Blended Finance to Kick Start a Market

- IIF focuses on sustainable infrastructure in projects that need public sector investment to move them forward.
- The World Bank advised on its establishment and provided \$100M in early debt capital to the fund back in 2011.
- The IIF has a blended capital structure and is 30% owned by the Government, 55% by ADB, IFC, and KfW, and 15% by the private sector.
- Since its start, it has done approximately \$2 billion in new financing, including about \$400M in PPPs.
- Through the development of a credible financial foundation, the IIF was able to be rated on par with the Government.
- This evolution allowed the IIF to access international capital markets.



Sustainable Finance to Grow the Market

- Starting in January 2021, the IIF issued a sustainable bond of a \$150 million for 5-years.
- The bond proceeds will be used for the eligible green and/or social projects under the IIF's sustainability financing framework
- The bond was oversubscribed by 2.6 times.
- It was 37.5 basis points tightening from the initial price guidance.
- This was the lowest-ever coupon and yield for a fixed rate 5-year offering by an Indonesian company.
- World Bank supported the IIF on the sustainable bond framework and now is working on the impact reporting.



Other Green Debt Instruments



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Other Green and Sustainable Financing Options

Uses	Examples of Instruments	Key Features	Benefits and Limitations and Examples					
			Affect public debt sustainability?	Useful for countries with weak credit quality?	Useful for projects without or weak revenues?	Scalable?	Improve market access and/or financing costs?	Case Study Examples
1-Linking Use of Proceeds to Projects	Sustainable, Green, and Social bonds	Transparency on how investors' money is used and wide investor acceptance	Increase public debts if issued by governments	No; limited pipeline of eligible projects, ESG investments more prevalent for high-grade assets	Yes, as long as the issuer is bearing full risks – these are use of proceeds bonds	Yes	Very little; perhaps only at margin	Egypt: Issued its first sovereign green bond in Sept. 2020. Bond was USD 750 million and 5x oversubscribed). Bond was a 5 year note with a yield of 5.25% (50 bps less than guidance).
2-Linking Repayments to KPIs	Sustainability-linked bonds	Result-orientation, announcement on the issuer's commitment to achieve defined results	Increase public debts if issued by governments	No; potential financial penalty for failure to achieve KPI may increase debts	No, as the funding is general revenue (not use of proceeds for specific projects)	No; calibration of appropriate KPIs and penalties is highly customized	Yes with a step-down performance linked coupon	Italy: Enel, the state-owned energy utility, issued a multi-tranche Sustainability-Linked bond for institutional investors in the Eurobond market totaling 3.25 billion euros in June 2021. bond, which is guaranteed by Enel, was oversubscribed 3.5 times and sold at a discount (lower rate than the market rate) with a 25 bps step-up coupon if Enel does not meet performance targets.
3-Linking Repayments to Future Revenue Flows	Green project bonds Green Asset Backed Securities (ABS)	Transparency on how investors' money is used and clear linkage between project revenues and debt repayments	Does not affect public debt sustainability, unless host-government provide guarantees	Yes; project revenues could be used for credit enhancement, pooling of credits can diversify risk, can be supported by state owned entity or government guarantee	No	Possibly	Yes, for well-structured deals in low-credit countries	United States: Government owned Fannie Mae issued \$85 billion of green bonds through 4,000 individual bonds since 2012 that has financed over 4,100 multi-family housing units meeting green building standards. Allows for lower rates, greater loan amounts, and associated services for eligible loans.

Other Green and Sustainable Financing Options (Continued)

Uses	Examples of Instruments	Key Features	Benefits and Limitations and Examples					
			Affect public debt sustainability ?	Useful for countries with weak credit quality?	Useful for projects without or weak revenues?	Scalable ?	Improve market access and/or financing costs?	Case Study Examples
4- Linking Provision of Guarantees and/or grants to Projects or Policy Actions (Blended finance)	Guaranteed Sustainable Bonds and Loans	Improved financial terms Better investor acceptance	Increase public debts if issued by governments	Yes	Yes	No	Yes	Seychelles: Blue bond issued by the government where the WB helped to customize a US\$15 million, 10-year private placement bond that aligned with project funding needs and Seychelles' liability profile and integrated a World Bank partial credit guarantee of US\$5 million to lower the borrowing cost by at least 2.0% per year and a US\$5 million in concessional financing from the Global Environmental Facility, which further lowered the net borrowing cost by over 3% per year.
5-Linking interest rates to policy actions	Interest buy-down facility	Facility to buy-down the interest of loans for sustainable development purposes	Yes	Yes	Yes	Possibly	No	Colombia: Global Concessional Financing Facility (GCFF) supported an IBRD loan of US\$100 million by buying down the fixed interest rate to make it at IDA credit terms by providing \$21.7 million of grant funding. The GCFF allocations are based on development impact criteria.
6-Linking repayments to natural disasters	Catastrophe Bonds	High-yield bond designed to fund governments only if specific disasters occur (insurance securitization)	No	No	No, funding is general revenue resource	Possibly	Yes	Jamaica: World Bank priced a catastrophe bond that will provide the Government of Jamaica with financial protection of up to US \$185 million against losses from named storms for three Atlantic tropical cyclone seasons ending in December 2023. GRiF trust fund paid \$16.4 million in premium and transaction costs for the cat bond.

Overview of the Global Infrastructure Facility



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THE GLOBAL INFRASTRUCTURE FACILITY (GIF)

A *global collaboration platform* that supports the preparation, structuring, and de-risking of high-quality, bankable, sustainable infrastructure programs and projects in emerging markets that are attractive to private capital

Current Funding Partners



A 2014 G20 initiative, the GIF became operational in July 2015

Five-year pilot period ended June 30, 2020 and post-pilot phase commenced July 1, 2020

50+ Advisory Partners
(>US\$18 trillion AUM)

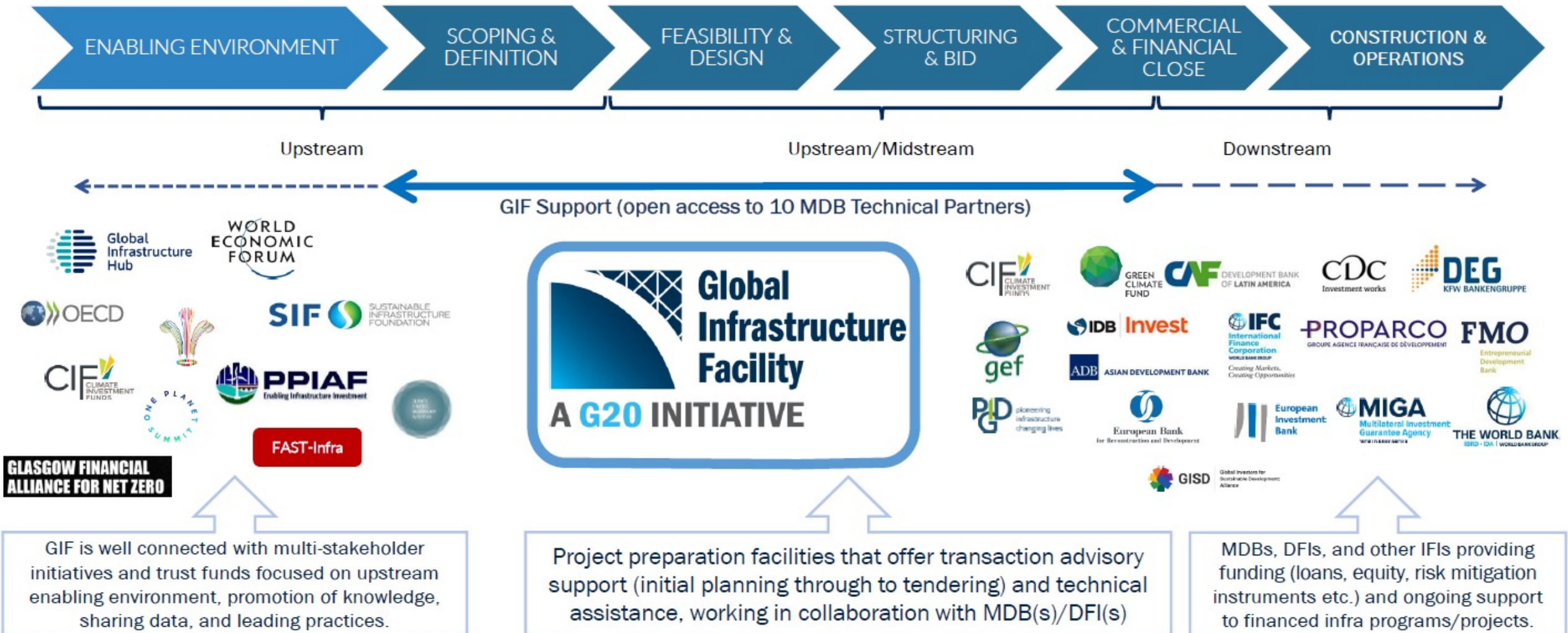
Pension funds, insurers, asset managers, commercial & investment banks, along with infrastructure, finance and other organizations

Open platform that works with MDB Technical Partners:



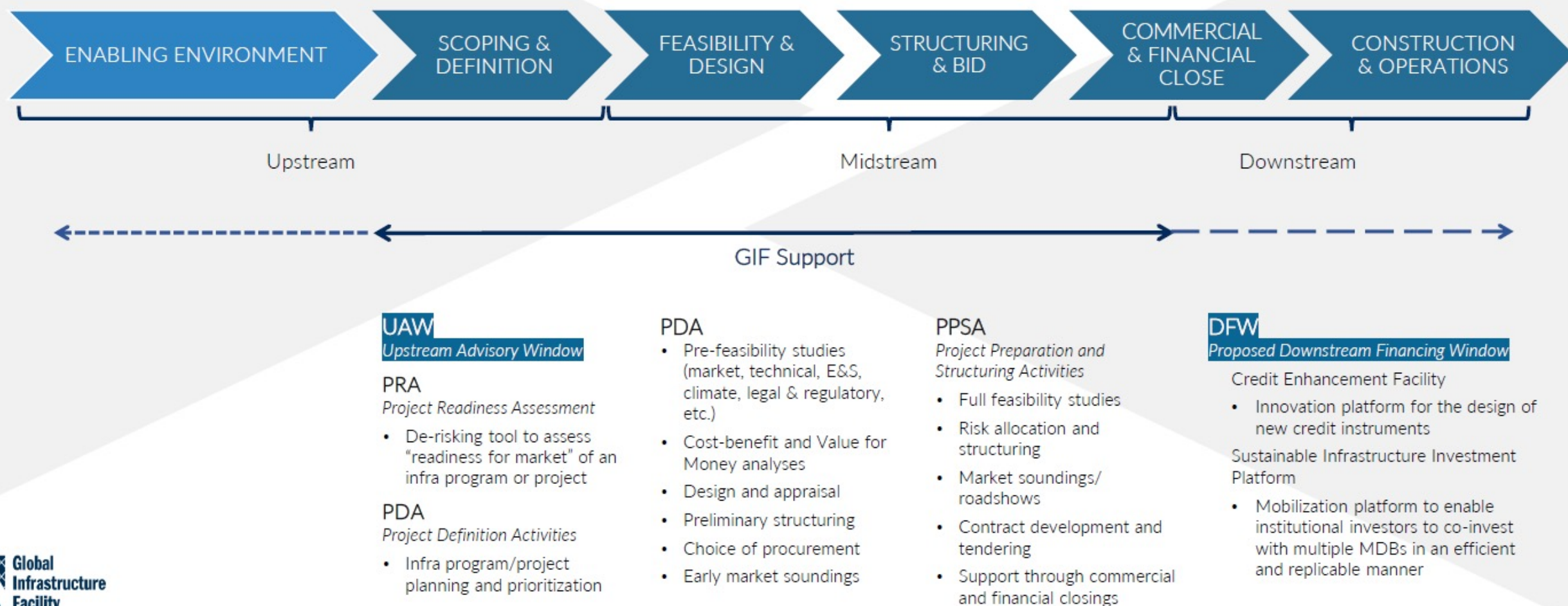
INFRA-FINANCE ECOSYSTEM: A MAPPING OF GLOBAL PLATFORMS AND INITIATIVES

The GIF is the only global collaboration platform that supports MDBs' project preparation efforts, and is well positioned to support various global infrastructure finance-related initiatives, leveraging its partnership platform to serve as an interlocutor amongst key partners.



FLEXIBLE AND TARGETED SUPPORT ACROSS THE VALUE CHAIN

From upstream to downstream, the GIF provides both *funding* and *hands-on technical expertise and tools* to client governments and MDB partners to drive increased focus on and execution of private capital mobilization.



Conclusions and Contacts



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Conclusions

- ✓ **Green bonds** can leverage investor interest in supporting the impact of the ongoing pandemic and post-pandemic economic recovery.
- ✓ **The World Bank** can facilitate these transactions for public sector issuers by providing technical assistance and sharing international experience.
- ✓ **For more information:** www.worldbank.org/sustainablefinanceadvisory



World Bank Treasury Contacts

The background of the slide is a photograph of the World Bank building in Washington, D.C. The building's facade is covered in large posters. One prominent poster shows two smiling women, one of whom is wearing a green shirt with an 'END POVERTY' logo. Another poster shows a city skyline. The text is overlaid on the right side of the image.

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