CFA Nigeria

Climate Finance Mapping Project

September 2019

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Climate Finance Accelerator

The Climate Finance Accelerator was conceived by Ian Callaghan and Tessa Tennant and is led by a consortium including Ricardo Energy & Environment. For more information visit


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Executive Summary

The Nigeria Climate Finance Landscape Mapping project is a follow-up to the UK/Nigeria Climate Finance Accelerator (CFA) pilot process conducted between October 2018 and January 2019.

The objective of the mapping project is to cast light, via a database of actors, on the landscape for climate finance in Nigeria, identifying sources of both financial and capacity building support for project developers and financiers themselves. The project, like the CFA itself, is built around the concept of a ‘supply chain’ for low-carbon finance (see figure below), and the methodology used for the mapping is based on the categorisation of different types of actor according to the role in the supply chain.

*Figure 1 CFA Supply Chain*

The mapping exercise was conducted between June and September 2019, by a team of climate finance experts based in Nigeria and overseas, which included individuals who had been involved in delivery of both the initial London CFA workshop in 2017 and the CFA Nigeria pilot in 2018/19. Logistical and other support in Lagos was provided by the Nigeria Economic Summit Group.

Following a design phase, the project database was populated by means of public sources and the specialist knowledge of the CFA team. The database finally included just over 200 entities, including those involved in all stages of the supply chain set out above from capacity building and grant providers to fully commercial sources of finance. These entities were then analysed according to the types of support they provide and the sectors they demonstrate interest in.

Following completion of the database and the preparation of initial findings, a series of meetings was organised in Lagos with groups representing different clusters of actors in the Nigerian climate finance landscape. The purpose of these meetings was to both test the initial findings from the database and to add a qualitative layer of context to the basic information in the database.
Informed by both the database and the focus group meetings, the key conclusions from the mapping project are as follows:

1. With few exceptions, most of the ‘components’ for a well-functioning climate finance supply chain are present in the Nigerian landscape. One key gap is skilled transaction intermediation, i.e. firms which can assist project and business promoters to bring together the different forms of financial and non-financial support that are often required to be combined to bring schemes to market. There are also few resources devoted specifically to adaptation, and a relatively small number of capacity building resources – though the quality of such resources would be more important than their number, so this observation requires further investigation.

2. These components / actors are not, however, engaging productively, with the result that the supply chain is not delivering financeable pipeline. There is no shortage of ambition or innovation among developers and entrepreneurs, and no shortage of ‘raw’ projects, but these are in most cases failing to progress through the supply chain to the primary finance stage, where the Lagos financial markets have ample capacity to fund.

3. There was general agreement that a co-ordinating entity of some kind, focussed on improving the functioning of the supply chain, would be of considerable value. There was also agreement that such an entity should ideally be independent of both financial and political interests. The CFA approach was seen as suitable as the basis for the functioning of such an entity.

In light of the outcomes of the mapping project, we believe that both the information and the ‘buy-in’ from stakeholders is in place for the final stage of the Nigeria Climate Finance Accelerator to be implemented. This phase, ideally to be completed in 2020, would include the final design of the CFA entity, including governance and financial sustainability issues, and its ‘installation’ on the ground.

_Ian Callaghan Associates, for NDCi.global_

_Ricardo Energy & Environment_

_Climate Finance Advisory Ltd_

_Nigeria Economic Summit Group_

_Climate Advisers Network_
1 Background to the project

1.1 The CFA

The Nigeria Climate Finance Landscape Mapping Project has been a follow-on initiative from the Climate Finance Accelerator (CFA) process run in Nigeria from October 2018 to March 2019.

The CFA is an innovative transaction-oriented process that can be run in various formats. Its aim, in whatever format, is to help identify and develop pipelines of bankable climate-related projects that can attract investment at scale from the private sector. These project pipelines will in turn support the implementation of the 2015 Paris climate agreement by realising the commitments made by countries in their “Nationally Determined Contributions” or NDCs.

The CFA model is still evolving but as piloted with Nigeria it will proceed through four stages:

1. An initial workshop process designed to create high-level awareness and linkages between government and finance in the target country and the elements of the international capital markets relevant to climate finance, typically moderated via the City of London
2. An in-country pilot, similarly designed to create awareness of climate related financing opportunities in local capital markets, and to get an initial ‘fix’ on the level and stage of development of project pipeline
3. A mapping of the domestic market, to understand the availability of climate-relevant financial resources and informing the design of…
4. A locally embedded entity, with a sustainable business plan, devoted to the creation of a fully functioning climate finance supply chain (described below) and the identification and development of financeable project pipelines.

The CFA has to date been supported by the UK Government (BEIS) and other donors, which have to date included the Children’s Investment Fund Foundation (CIFF) and the Hewlett Foundation. The landscape mapping project has been funded by Rockefeller Brothers Foundation.

1.2 The CFA and Nigeria To Date

Nigeria has been a focus for the CFA for a number of reasons, including:

- The size and importance of its economy in Africa
- The low level of access to climate finance in the country, relative to its climate vulnerability and greenhouse gas emissions profile
- The pressures on public sector financing, when to date the Government has been the main source of funding for implementing development plans (ERGP, SDGs, NDC). Linked to this, the need for public expenditure review (a Climate Public Expenditures and Institutional Review or CPEIR) and the mainstreaming of climate within the budget process
- The already visible effects of climate change and the increasing level of interest in engaging with NDC implementation among key stakeholders including the government of Nigeria, its development banks and the private sector.
Nigeria took part in the inaugural international CFA process in late 2017, in which delegations from three countries (the others being Mexico and Colombia) worked with teams of financial experts led by London investment banks HSBC, BNP Paribas and Deutsche Bank to hone portfolios of bankable projects supporting their NDCs.

Following this successful London event, Nigeria also became the first country to have a dedicated in-country CFA initiative. This was announced by then UK Prime Minister Theresa May during her visit to the country in August 2018 and was funded by the UK Government and CIFF. The Nigeria CFA pilot took place between October 2018 and January 2019, and had the following main objectives:

- To communicate and disseminate the message that financing Nigeria’s NDC is a necessity, is achievable, and offers widespread opportunities for diversification of the economy and for financiers themselves
- To promote policy reform to create the enabling environment for this massive programme of economic and social development
- To engage and promote discussion between the multiple stakeholders involved in this effort
- To build the capacity of both project developers and investors
- To improve the bankability of the projects which were supported during the workshop

The pilot identified 15 projects worth some USD 400 million in a range of sectors from energy to agriculture and manufacturing. Following initial capacity building work with the project proponents, an intensive 4-day workshop in Lagos refined the projects to enhance their bankability, while also identifying a number of concrete enabling environment and public-funding interventions that would be required both to de-risk projects, and to promote the creation of an ongoing ‘Nigeria-embedded’ pipeline development process.

1.3 Conclusions from Nigeria CFA Pilot

Key insights from the Lagos workshop were:

- The Nigerian banking sector realises that finance is a critical opportunity for them and the CFA provided an entry point to which they responded with enthusiasm and resources.
- There is an urgent need for improved coordination of the diverse stakeholders across the climate and green finance community. NESG played a crucial role as the local convener for the CFA and is keen to continue and expand this role going forward.
- Ways to bring development finance institutions (DFIs) to the table must be found to bring given the central need for blended finance in many low carbon and climate resilient projects and programmes.
- The support of the Federal Government was an important pre-condition for the success of the CFA and must be maintained in the CFA Nigeria process going forward, in particular to help de-risk investments in SDG and NDC aligned projects.
- There was real appreciation of the support of UK government in funding the CFA and there is a major opportunity for the UK to get more involved in green finance in Nigeria.
1.4 Follow-up with projects

Following the CFA pilot, a number of projects have received additional support from two CFA Nigeria partners, NESG and Climate Finance Advisory Limited (which provides an innovative guarantee programme that helps banks in particular), together with the Heinrich Boll Foundation, and have made progress towards primary finance. The main follow-up was provided via a workshop organised with the Renewable Energy Agency of the Federal Government held in March 2019.

Given the complexity of projects and financing packages, which generally take at least two years to put together, it is too early to say at this stage what level of success will ultimately be achieved.

1.5 Objectives of this project

The present climate finance landscape mapping project follows up on one of the key conclusions from the CFA Nigeria pilot, namely to improve coordination of the diverse stakeholders across the climate and green finance community. Its aim is to create a high-level but transparent mapping of the resources available to project developers in Nigeria, both in-country and international, encompassing both sources of finance and resources supporting capacity building. Such resources could include, for example:

Financial resources

- Grants for project development (for example from bilateral funds)
- Grants for adaptation projects (for example from climate funds)
- Philanthropic finance (including venture philanthropy)
- Concessional loans / Government intervention funds
- Guarantees (for example to de-risk private finance and bring down the cost of such finance)
- Private sources of primary project finance (such as commercial bank loans, private equity and venture capital)
- Private sources of secondary finance (for example institutional investors, to refinance primary project finance, including via the issuance of green bonds)
- Specialist financial intermediaries, capable of bringing together investors and investees and putting financial transactions in place

Capacity Building Resources

- Project readiness programmes (such as those offered by climate funds)
- Project development programmes in specific sectors (for example the UK Government’s Renewable Energy Performance Platform)
- Technical assistance funding provided by private equity / debt funds
- Trainings and workshops (for example, offered by local trade associations)
- In-house programmes (e.g. those run by DFIs)

Based on previous experience, our starting proposition was that many of these resources were already present in, or targeted towards, Nigeria, but that awareness of them was low. We considered it likely that this low level of awareness in turn was leading to poor transparency and confusion about who can access what funds and how. The modalities and criteria for access set by funders, which can be overwhelming to the project developers, were also felt to be a contributory factor to poor take-up of resources.
The immediate use of the database and mapping created by the project will be to inform the design of the embedded CFA entity in Nigeria. Once that entity is in place, a part of its role will be to constantly update the database and mapping as a publicly available resource.

### 1.6 Information Sought

To create the landscape map, we sought to gather together the following information and answer the following questions:

- Financial resources: a list of companies / banks / DFIs etc, both national and international (where their agenda includes Nigeria) and their role (for example what type of finance they would provide in a ‘blended finance’ structure and any sectors supported)
- Capacity building resources: a list of all entities including both government, international organisations and NGOs, both national and international and their role
- Obvious gaps in the present provision of resources
- Obvious gaps / inefficiencies in interactions between providers and how these might be addressed.

This information would then be used to inform the next phase in the Nigeria CFA project, namely the design of the embedded entity referred to above.

### 1.7 Project Delivery

The project was undertaken by a consortium of Nigeria and Europe-based consultants led by Ian Callaghan Associates Ltd (for NDCi.global). The other participants were, in Nigeria, the Nigeria Economic Summit Group and Climate Finance Advisory Limited and, in Europe, Ricardo Energy and Environment and Climate Advisers Network. The work, the methodology for which is described below, was undertaken between June and September 2019. Experience of the delivery team is set out in the Appendix.

### 1.8 Project Outputs

Key outputs from the project are to be as follows:

- Data on the financial and capacity building resources mentioned above, and their linkages and interactions, initially in spreadsheet format
- Identification of significant gaps in resources
- High level recommendations for improvements in the landscape
- Implications for design of the follow-on project

### 2 The Climate Finance Supply Chain

In order to generate global climate finance flows at the scale required to meet the Paris goals – generally estimated at $6 trillion p.a. – we need to create an efficient supply chain along which the necessary flows of money can move. Though definitive figures are not available, “guesstimates” would suggest that at present something in the region of 1/6th of this level is being achieved.

The climate finance supply chain for developing countries needs to resolve the basic conundrum that:

1. The vast bulk of projects will need ultimately to be financed from private sources but
2. Most of these sources are highly constrained institutional investor portfolios in external markets
This means that a number of ‘transformations’ need to take place to turn physical assets in often-high-risk economies that are little understood by money-owners and -managers into paper assets that these parties are willing (or permitted) to invest in.

There are many variants of this supply chain depending on the country and / or sector involved, but typically the chain will four main components. For the chain to work each of these components has to both perform effectively itself and to be linked securely to the components surrounding it. The four components are:

- Identification of projects and initial project development
- Primary finance of projects, ideally in local markets
- ‘Transformation’ phase: secondary finance / refinancing of projects. This will take place via aggregation and de-risking of the physical assets once built and initially proven operationally, to create highly rated paper assets such as green bonds
- Distribution of these paper assets into mainstream institutional investment markets

The CFA, and the present mapping project, are designed around the concept of the supply chain for climate finance. In the context of Nigeria, and for projects such as renewables, the supply chain might be depicted as below:

*Figure 2-1 CFA Supply chain*

3 Mapping Design and Methodology

3.1 Design of the Database

We employed both primary and secondary data collection methods to identify local and international financial actors within the climate finance ecosystem, either located in Nigeria or with resources targeted towards it.

The information sought for each organisation identified as meeting these criteria was:

- Organisation type
- Support type
During the compilation of the information, it became clear that there were two consistent information gaps which would need to be rectified in the future if full transparency on the climate finance market is to be available

1) In most cases information was not available to the level of sub-sectors, so this category has not been filled out at this stage.

2) Ideally it would also have been possible to gather information on the level of resources available and / or already committed, but this information was found to be mainly unavailable at any usefully granular level, even for public funding providers.

### 3.2 Methodology for Information Gathering

The project began with a scoping exercise, in which both sources and types of climate finance available in Nigeria were identified, building on the in-depth knowledge and experience of the project team. This scoping informed both the initial design of the research and secondary data collection.
Next, secondary data were collected to kick-start the mapping. The websites of different finance platforms and multi-lateral organisations were reviewed as a source of aggregated data of climate funds in the global climate finance ecosystem. This included platforms created by the United Nations Framework Convention on Climate Change (UNFCCC), the Organisation for Economic Co-operation and Development (OECD), the World Bank Group, and other international financial institutions, such as the African Development Bank. We also learned from, and enhanced, existing data categorisations available from other platforms, in order to align our work with the global best practice on data gathering from climate finance actors. After mapping more than 200 relevant financial institutions and funds, including international and in-country funds, we conducted in-depth desk research accessing every actor’s website and other works in the public domain, such as articles, annual reports and research papers, on the respective financing activities as it relates to climate investments. The in-depth desk research phase uncovered the key information required to populate the dropdown list under each category in the table above.

At this time the team reviewed the entire database. After detailed and comprehensive analysis of the mapped data, we proceeded to a final round of primary data collection, in order to validate and enhance the mapped data.

For this phase, five face-to-face focus group discussions with the different financial actors were organized in Lagos in late July 2019. The groups were clustered according to the type of organization and the type of support provided. The main objective for adopting focus group discussion methodology was to enable an inclusive discussion among otherwise competing financial actors. The format allowed them to interact with each other, and the research team, and shed light on the constraints abating the flow of funds to financing projects. Meeting notes from these discussions are summarized below in section 5.

The focus groups assembled were the following:

- Multi-lateral development finance organisations and official development assistance (ODA)
- The finance experts who provided expert inputs as facilitators in the CFA Nigeria pilot earlier in 2019
- Commercial banks
- Microfinance banks
- Private equity firms and investment banks

Each focus group discussion lasted for two (2) hours on the average.

Due to the unavailability of most government agencies at the time of the Lagos visit, we were only able to conduct face-to-face interview with one agency, the Rural Electrification Agency (REA).

The focus group discussions and the interview with the REA produced valuable insights and feedbacks from the different financial actors on what needs to be in place to facilitate funds mobilization for climate finance activities and provoke active participation from every relevant financial and non-financial actor locally and in the global markets.

Key findings and analysis of data collection from both secondary and primary data collection methods are articulated in the next section.
4 Initial findings

A total of 201 different climate funding actors were included in the database. This number includes a variety of organisation types as well as different focuses of support. The sections below provide a summary of the key findings according to these differences.

4.1 Types of organisation providing climate finance, and where it is focussed

The results of the categorisation by type of organization are shown in Figure 4-1.

The most common types of finance provider are commercial banks (24), climate funds (19) and ‘other private investors’ which include institutional investors (17). The climate funds are multilateral and bilateral, but in many cases their precise ‘agendas’ (as to types of funding they provide and target sectors / countries) are not immediately clear. There is also a significant presence of ODA and private philanthropy (21 altogether) organisations, which have the potential to identify and develop projects. The number of guarantee providers is small (4) compared to the need for de-risking in the presence of a large number of commercial banks.

Figure 4-1 Number of organisations providing climate finance per type of organisation

Figure 4.2 shows the locations where the actors identified provide their resources. 52% operate in Nigeria, 19.5% target Africa, 19.5% target developing countries and 1% operate / target worldwide. For the remaining 8% no information was available. It should be noted that these results are numbers rather than amounts; showing the latter, once available, would likely create a very different picture in terms of coverage.
4.2 Type of support

The most common types of support provided by the identified funding bodies, as shown in Figure 4-3 are commercial debts (22%), unlisted equity (16%) and grants (14%). This indicates that key components of primary finance for the types of project requires to implement the low-carbon transition, are already present in the Nigerian market. There is reasonable availability of structured finance for secondary product de-risking, with 11% of the funding bodies providing this type of finance. There are, however, a relatively small number of providers of capacity building and technical assistance (3%) and intermediary and transaction support focused on green finance (3%).
Table 4-1 A detailed breakdown of the combinations of support type provided by funding bodies

<table>
<thead>
<tr>
<th>Support Type</th>
<th>Funding bodies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity building</td>
<td>3</td>
</tr>
<tr>
<td>Capacity building, Grants</td>
<td>1</td>
</tr>
<tr>
<td>Commercial Debt</td>
<td>51</td>
</tr>
<tr>
<td>Commercial Debt, Intermediary</td>
<td>3</td>
</tr>
<tr>
<td>Concessional Finance</td>
<td>14</td>
</tr>
<tr>
<td>Concessional Finance, Grants</td>
<td>1</td>
</tr>
<tr>
<td>Concessional Finance, Guarantee, Unlisted equity</td>
<td>1</td>
</tr>
<tr>
<td>Concessional Finance, Grants, Technical assistance</td>
<td>1</td>
</tr>
<tr>
<td>Concessional Finance, Guarantee, Grants</td>
<td>1</td>
</tr>
<tr>
<td>Concessional Finance, Unlisted equity, Structured Finance</td>
<td>1</td>
</tr>
<tr>
<td>Cost-sharing grants</td>
<td>1</td>
</tr>
<tr>
<td>Technical assistance</td>
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</tr>
<tr>
<td>Grants</td>
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</tr>
<tr>
<td>Green Bonds</td>
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</tr>
<tr>
<td>Guarantee</td>
<td>39</td>
</tr>
<tr>
<td>Intermediary</td>
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</tr>
<tr>
<td>Partial Credit Guarantee - Portfolio Guarantee / Bond Guarantee</td>
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</tr>
<tr>
<td>Structured Finance</td>
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<tr>
<td>Structured Finance, Unlisted equity</td>
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<tr>
<td>Structured Finance, Unlisted equity, Guarantee</td>
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<tr>
<td>Structured Finance, Unlisted equity, Guarantee, Commercial Debt</td>
<td>4</td>
</tr>
<tr>
<td>Structured Finance, Unlisted equity, Guarantee, Concessional Finance</td>
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</tr>
<tr>
<td>Structured Finance, Unlisted equity, Guarantee, Green Bonds</td>
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<td>Structured Finance, Unlisted equity, Guarantee, Technical assistance, Green Bonds</td>
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<td>Technical assistance, Unlisted equity, Structured Finance, Concessional Finance</td>
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<tr>
<td>Transaction Support</td>
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<td>Transaction Support, Unlisted equity, Structured Finance</td>
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<tr>
<td>Unlisted equity</td>
<td>2</td>
</tr>
<tr>
<td>Unlisted equity, Commercial Debt</td>
<td>2</td>
</tr>
<tr>
<td>Grand Total</td>
<td>23</td>
</tr>
</tbody>
</table>

4.3 Focus on mitigation and adaptation

Figure 4-4 presents the split between support provided for mitigation and adaptation actions. The categorization is based on the current focus of the organisation provided support. Overall, there is a significantly larger focus on mitigation with 78% (163) of the organisations focusing solely on mitigation. Only 3% of the organisations considered (7) focus solely on climate finance in the area of adaptation. In the instances where an organisation provides support for both mitigation and adaptation, it is likely that a stronger focus is placed on the former.
4.4 Sectoral focus

With respect to sectoral focus (see Figure 4-5 below), 49% of the identified actors focus on projects in all sectors (though note that this finding largely reflects the non-specific focus of organisations like banks and institutional investors). We observe a general bias to energy projects, with 17% of the remaining funding bodies focusing on this sector. The energy sector is followed by the agriculture sector, where 9% of the identified funding bodies operate. In comparison, the interest in projects in the waste and water sectors is comparatively low (5% in each). The lowest interest has been identified for the industry (3%), transport (2%) and forestry (1%) sectors. Finally, the information obtained shows that there is a potential for securing funding for inclusive finance projects such as ‘last mile’ energy access.

*Figure 4-5 Number of organisations providing support per sector*
4.5 Is the supply chain working?

Figure 4-6 shows the clustering of different types of resource providers at different stages of the supply chain and indicates how well they are integrated in the supply chain.

It finds that there are some types of actor that are well focussed, but their numbers are small (for example TA and guarantee providers). Green bonds fall into this category as well but are shaded a lighter colour as they presently have little pipeline with which to work and, as a result, issuance is small.

Other actors are present in numbers but are not well segmented in their focus. This particularly applies to grant and equity providers, which are extremely important in the first three stages in the supply chain, but where there needs to be clearer strategies on where exactly each actor will seek to operate (earlier or later stages).

As a result of the dysfunctionality of the supply chain, various types of actor are largely precluded from operating in it at all, especially, for the Nigerian market, commercial banks.

Figure 4-6 Finance needs
5 Meeting reports

As described above, in the week commencing 29 July 2019, the CFA team held a series of meetings with focus groups active in climate finance based in Lagos. The purpose of these meetings was to test initial conclusions from the data collected. The CFA team further used the opportunity to share research insights and, for those not familiar with our work, the background to the Climate Finance Accelerator.

The following groups were assembled:

1. Development Finance Institutions (DFIs)
2. Financial Expert Facilitators, who participated in the January CFA workshop
3. Private equity companies
4. Commercial banks
5. Micro-finance banks

As mentioned above, a meeting with in-country development banks had to be cancelled due to non-availability of the invitees. All meetings were attended by appropriate members the CFA team, consisting of Dr Uzo Egbuche, Dr Jubril Adeojo, Damilola Oyelowo, Hans Verolme and Ian Callaghan.

Brief notes on the focus group and other meetings held during the trip are provided below.

1. The meeting with Development Finance Institutions was hosted by the International Finance Corporation (IFC). In addition to IFC, representatives of the African Development Bank, Agence France de Development (remotely) and AHK on behalf of GIZ, the German development agency, attended. The sense prevailed that DFIs are not collaborating with other actors in the market but continue to operate in silos. On a positive note, AfDB is now co-operating with UNDP and there is at least growing awareness of the need for cooperation. AfDB shared its 2019 Climate Finance Matters report detailing the climate finance instruments available at the bank. The Bank is committed to allocating 40% of its project approvals as climate finance by 2020; up from 32% in 2018. IFC has recently focused more on impact investing and is looking for case studies and best practice examples of projects. IFC also explained the role its capacity building program (with local commercial bank FCMB) plays in facilitating investment in the renewable energy sector. In the off-grid renewable energy space there is a looming concern about the creditworthiness of end users.
2. The Deputy British High Commission hosted a meeting of CFA’s *Financial Expert Facilitators*. Currently, quite a lot of capacity building work is underway involving government, including the Finance, Budget and Planning and Environment Ministries. FSD Africa (a UK government financial sector deepening programme), FMDQ (a local stock market) and local investment bank Chapel Hill Denham are among those supporting government in mobilizing green investment. The Nigeria pensions commission, PENCOM, had also requested support from FSD Africa. Mobilizing investment from long-term investors clearly could significantly deepen the pool of capital available for climate-aligned investments. Furthermore, avenues to support the Nigeria CFA were explored and a discussion took place on how best to conclude the CFA 2019 process. In particular, donors are eager to see evidence of immediate outcomes. The FEFs pointed out that with projects in different phases of development, the Nigeria CFA was a catalyst and enhanced capacity of both projects and potential investors. However, it was harder to pinpoint projects that have gone to financial close with participating banks. It was agreed that a table will be prepared showing what happened to each project (financed, received further capacity building, etc) and what further support might be needed. One example would be mini-grid projects that have since applied to the Rural Electrification Fund – World Bank window.

3. The Nigeria Economic Summit Group (NESG), the preeminent Nigerian economic think tank and our in-country CFA partner, hosted a meeting with *private equity investors and investment banks*. This group noted that the climate finance space lacked skilled intermediation and that (unlisted and listed) equity is missing from the pipeline. It was further observed that commercial banks want project proponents to bring physical assets as collateral. There needs to be a way around this, for example, by collateralising revenue streams and long-term purchase agreements with customers that projects might have in place. The low carbon housing field could be a big new sector for NDC-aligned investment, though at present a lot of new housing remains unoccupied. It is unclear how the significantly higher cost of green buildings would be recovered in such a competitive housing market. One option might be for the government to offer guarantees.

4. The Nigeria Economic Summit Group hosted a further meeting with *commercial banks*. The group noted that banks need innovative product development for NDC-aligned investments. In order for this to change, the KPIs of key management will need to be amended. Teams should be incentivised to engage with projects earlier in their development. The group discussed the supply chain issues in depth, responding to the illustration shown above. It became clear during these discussions that, while the concept of the supply chain is understood, most actors are not clear on where precisely the fit in it, or how they can or should interact with others that need to support them and they in turn need to support, in order to make the chain work effectively. In order to overcome these challenges, it was a repeated message from this group that Nigeria needs an embedded, neutral entity that can help financiers to steer through this supply chain and that CFA could perform this function. A technical but important observation was that recognising the climate finance ‘supply chain’ could assist grant-making organizations in redefining grants as quasi-equity and thus enhance transparency of a finance model for the Banks and other investors.
5. NESG also hosted a meeting with micro-finance banks, a sector that, compared to peer countries East Africa in particular, is very small both in absolute terms and relative to the size of the population. At present, the micro-finance institutions are doing little in the climate finance space. There are a few projects around access to clean energy, and crop insurance. The banks would like to see demonstration projects (in energy) set up to demonstrate how the value chain works, so that they could build on that experience.

6. Following the focus groups, the CFA team met with senior staff of FMDQ OTC Securities Exchange, which manages the Lagos chapter of the International Network of Financial Centres for Sustainability, a partnership between financial centres and the United Nations Environment Programme established with the objective to accelerate the expansion of green and sustainable finance. FMDQ also works with the C40, the global network of megacities committed to addressing climate change. FMDQ is focusing on improving the financial enabling environment, complementary to the role NESG plays more widely in improving the business environment. FMDQ would be partner and potential host of CFA Nigeria.

7. Finally, Hans Verolme attended a roundtable meeting with Alok Sharma, the incoming Secretary of State for the UK Department for International Development (DFID) on behalf of the CFA team. Other attendees included:

- Catriona Laing, the British High Commissioner to Nigeria,
- Debbie Palmer, the head of DFID Western and Southern Africa,
- Richard Ough, senior economist DFID Abuja,
- Oscar Oneyema, the CEO of the Nigeria Stock Exchange,
- Andrew Alli, the recently retired head of Africa Finance Corporation,
- Patience Oniha, the Director-General of the Debt Management Office,
- Bolaji Balogun, the CEO of Chapel Hill Denham,
- a representative of the UK CDC Group in Nigeria,
- Chinua Azubike, CEO of InfraCredit.

In discussing ways to deepen green investment in Nigeria, there was agreement on the need to increase transparency in the marketplace and the positive role of the UK-Nigeria 2019 CFA workshop was noted. There remains a need for an independent actor to co-ordinate the workings of the supply chain. The views on where investment is most welcome were more spread, with PPPs paid some lip service, but few concrete projects being mentioned. The important role of InfraCredit as provider of risk guarantees to green investments was endorsed (although it was also acknowledged that it mainly operates at the level of larger projects than the CFA is typically addressing).
6. Conclusions

Informed by both the database and the focus group meetings, the key conclusions from the mapping project are as follows:

1. With few exceptions, most of the ‘components’ for a well-functioning climate finance supply chain are present in the Nigerian landscape. One key gap is skilled transaction intermediation, i.e. firms which can assist project and business promoters to bring together the different forms of financial and non-financial support that are often required to be combined to bring schemes to market. There are also few resources devoted specifically to adaptation, and a relatively small number of capacity building resources – though the quality of such resources would be more important than their number, so this observation requires further investigation.

2. These components/actors are not, however, engaging productively, with the result that the supply chain is not delivering financeable pipeline. There is no shortage of ambition or innovation among developers and entrepreneurs, and no shortage of ‘raw’ projects, but these are in most cases failing to progress through the supply chain to the primary finance stage, where the Lagos financial markets have ample capacity to fund.

3. There was general agreement that a co-ordinating entity of some kind, focussed on improving the functioning of the supply chain, would be of considerable value. There was also agreement that such an entity should ideally be independent of both financial and political interests. The CFA approach was seen as suitable as the basis for the functioning of such an entity.

In light of the outcomes of the mapping project, we believe that both the information and the ‘buy-in’ from stakeholders is in place for the final stage of the Nigeria Climate Finance Accelerator to be implemented. This phase, ideally to be completed in 2020, would include the final design of the CFA entity, including governance and financial sustainability issues, and its ‘installation’ on the ground.
Appendix

Project Team
The project was managed by Ian Callaghan, co-founder of NDCi.global and the Climate Finance Accelerator. Ian is a highly experienced banker with specialisms in project and climate finance and impact investing. As well as his consulting work, Ian is a practicing sustainable finance professional, working as a Senior Adviser to Consilium Capital based in London.

Nigeria liaison was provided by Hans Verolme, founder of Climate Advisers Network. Hans has 25 years of international experience as a strategic adviser in the field of climate change, environment and sustainable development. Much of his recent work has focussed on Nigeria where, since 2015, he has lead teams that have advised the federal government in preparing for the Paris Agreement on climate change, and subsequently its implementation across key economic sectors. To that end he was responsible for drafting of Nigeria’s INDC and five sectoral implementation plans. He has been involved with Nigeria’s engagement with the CFA since 2017, acting as team leader for the recently concluded UK-Nigeria CFA.

Research and fieldwork in Nigeria has been carried out by Climate Finance Advisory Limited based in Lagos. This work was led by Dr Jubril Adeojo, who is a certified climate and sustainable energy finance expert from the Frankfurt School of Finance and Management, Germany. He holds a PhD in development finance and community development from the Da Vinci Institute for Technology Management; an MSc. in Strategic Finance with merits honours from Oxford Brookes University, United Kingdom; and a BA. in Business Administration with first class honours from the University of Hertfordshire, United Kingdom. Dr Adeojo has worked in the Nigerian banking industry for over 11 years, in three banks, covering areas such as corporate, commercial, SME and retail banking, as well as internal audit and control, strategy, and financial inclusion.

Dr Uzo Egbuche is a Sustainability and Development Advisory Consultant with over 25 years working experience with a variety of government and private sector organizations, including Chair of a 7man international Technical Panel reviewing sustainability solutions for remediation and rehabilitation of the Niger Delta, by the International Union on the Conservation of Nature (IUCN) and the Nigerian Government. She has conducted field work for the Ministries of Environment, Budget and National Planning, National Environmental Standards and Regulatory Enforcement Agency, the Sustainable Energy for All at the Ministry of Power as well as in the private sector for IOCs, Telecommunications companies and for Multilateral Institutions like the World Bank, and the African Development Bank. Uzo is the Facilitator, Sustainability Policy Commission, Nigerian Economic Summit Group, where she oversees activities for the thematic areas in Green, Blue and Circular Economies. As Facilitator, she also works with relevant ministries and the PMO, Office of the Vice President for National Gas Expansion Program. The NESG has hosted the CFA-UK activities for the Nigeria.
Database design and analysis was carried out by Ricardo Energy & Environment (REE). Ricardo provides expertise to governments, donors, development banks and international institutions in investment planning and financing as well as NDC implementation. Ricardo supports national institutions to access climate finance though capacity building, identifying where public finance is best placed to leverage private sector funds and tracking and evaluating climate finance flows. Ricardo expertise include supporting companies globally with investment opportunities and mitigating the business risks of climate regulation, enabling new revenue sources and ensuring long-term business security. In addition, Ricardo provides governance and compliance support for companies that are under increasing legislative and client scrutiny to disclose the carbon embedded in their assets, operations and supply chains.

Damilola Oyelowo, the General Manager of Climate Finance Advisory Limited also supported the research and fieldwork in Nigeria. Damilola is an accomplished programme manager, business analyst and implementation consultant with over eight years of experience in the global capital markets, financial services, and renewable energy and power industry. He is presently managing the US$100 million Green Energy Fund Programme (GEF-P) in collaboration with Vetiva Capital (as consortium partner), African Guarantee Fund (as fund guarantor) and local development banks, i.e. Central Bank of Nigeria, Development Bank of Nigeria, and Bank of Industry