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Climate Change and Development Bank Project Cycles

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- Characterization of SDG-compatible investments
- Business Models
- Governance
- Financial regulation
- Global Development Finance Architecture

Partners and coordinators

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Climate Change and Development Bank Project Cycles

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Abstract
In the five years since the Paris Agreement, Development Finance Institutions have made various commitments to aligning their operations with climate change goals. In this report, we analyze the extent to which those official commitments and principles have become manifest in the regular project cycle operations of a presentative sample of DFIs operating across the globe. As defined by the World Bank "the project cycle is the framework used to design, prepare, implement, and supervise projects." For both MDBs and IDFC members we analyze the strategy, roles, tools and techniques used to mainstream climate change in their operations at the project level. For each DFI and for the two sets of DFIs together this involves three levels of analysis (1) DFI strategies on climate change as they pertain to mainstreaming climate change into their respective project operational structures; (2) their roles in facilitating their clients' efforts to meet the requirements applied to them; and (3) the actual requirements applied to their clients by each DFI. For this analysis we relied on primary sources: the official ESS policies and borrower requirements as set forth in public documents. We find that different parts of the project are more conducive to incorporating climate goals than others, and while numerous DFIs exhibit leadership in some parts of the project cycle, there is still the need for more ambition and coordination.

Keywords
Climate change, Development Finance, Sustainable Development

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Résumé
Au cours des cinq années qui ont suivi l'accord de Paris, les institutions de financement du développement ont pris divers engagements pour aligner leurs opérations sur les objectifs en matière de changement climatique. Dans ce rapport, nous analysons la mesure dans laquelle ces engagements et principes officiels sont devenus manifestes dans les opérations régulières du cycle de projet d'un échantillon représentatif d'IFD opérant dans le monde entier. Selon la définition de la Banque mondiale, "le cycle de projet est le cadre utilisé pour concevoir, préparer, mettre en œuvre et superviser les projets". Pour les BMD et les membres des IFD, nous analysons la stratégie, les rôles, les outils et les techniques utilisés pour intégrer le changement climatique dans leurs opérations au niveau des projets. Pour chaque IFD et pour les deux ensembles d'IFD réunis, cela implique trois niveaux d'analyse : (1) les stratégies des IFD sur le changement climatique en ce qui concerne l'intégration du changement climatique dans leurs structures opérationnelles de projet respectives ; (2) leurs rôles dans la facilitation des efforts de leurs clients pour répondre aux exigences qui leur sont appliquées ; et (3) les exigences réelles appliquées à leurs clients par chaque IFD. Pour cette analyse, nous nous sommes appuyés sur des sources primaires : les politiques ESS officielles et les exigences des emprunteurs telles qu'elles sont énoncées dans les documents publics. Nous constatons que différentes parties du projet sont plus propices que d'autres à l'intégration des objectifs climatiques, et que si de nombreuses IFD font preuve de leadership dans certaines parties du cycle de projet, plus d'ambition et de coordination restent nécessaires.

Mots-clés
Changement climatique, finance du développement, développement durable.

Introduction

On the sidelines of 21st Conference of the Parties of the United Nations (COP21), in Paris in December 2015, twenty-six Institutions from around the world[1] adopted the 5 Principles for Mainstreaming Climate Action within Development Financial Institutions (DFIs).[2] The new initiative provides benchmarks that will enable greater integration of climate related considerations into both lending and advisory activity by an unprecedented coalition of the world's leading financial institutions.

These Principles were intended to make climate change considerations a core component of how financial institutions conduct business, parallel to and in addition to the necessary development of appropriate regulatory and enabling environments at the domestic and international levels. They imply a shift from incremental financing of climate activities to ensuring that climate change – risk and opportunity – is a fundamental consideration through which financial institutions deploy capital. The Principles outline how financial institutions can:

- Commit to climate strategies,
- Manage climate risks,
- Promote climate smart objectives,
- Improve climate performance,
- Account for climate action

[1] African Development Bank Group; Asian Development Bank; Agence Française de Développement; BNP Paribas; (France); Development Bank of Latin America (CAF); Caisse de Dépôt et de Gestion (Morocco); Caisse des Dépôts Group (France); Crédit Agricole S.A. (France); Development Bank of South Africa; European Bank for Reconstruction and Development; European Investment Bank; FMO Entrepreunerial Development Bank (Netherlands); HSBC (UK): Inter-American Development Bank); International Bank for Reconstruction and Development (World Bank Group); International Finance Corporation (IFC); Industrial Development Bank of India; Industrial Development Bank of Turkey; Japan International Cooperation Agency – JICA; KfW Group (Germany); Malaysia Credit Guarantee Corporation; Multilateral Investment Guarantee Agency (World Bank Group); Nordic Development Fund; Proparco (France); Société Générale (France); and YESBank (India)

[2] Climate Action in Financial Institutions, Adoption of the 5 "Mainstreaming" Principles during COP21: https://www.mainstreamingclimate.org/adoption-of-the-5-mainstreaming-principles-during-cop21/

At the One Planet Summit in December 2017 held at Boulogne-Billancourt, France and acting on their previous commitments to support to the Five Voluntary Principles nine MDBs[3] together with the International Development Finance Club IDFC[4]), announced their vision to align financial flows with the objectives of the Paris Agreement. In practical terms this commitment requires each party to operationalize Article 2.1(c) of the Paris Agreement which would "mak[e] finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development." (United Natio,2015) It goes beyond the specific MDBs' 2020 and 2030 climate finance targets and builds on the on-going contribution to climate finance

The MDBs' approach is based on six building blocks that have been identified as the core areas for alignment with the objectives of the Paris Agreement. A joint MDB working group is developing methods and tools to operationalize this effort under each of the building blocks of which the following three are most relevant to mainstreaming of climate change into project operations:

1. Alignment with mitigation goals. MDB operations are to be consistent with the different countries' low-emissions development pathways and compatible with the overall climate change mitigation objectives of the Paris Agreement. In line with Principle 2 of the "Mainstreaming Principles," MDBs will assess their operations against transition risks and opportunities related to climate change.

2. Adaptation and climate-resilient operations. Similarly, in line with Principle 2 of the "Mainstreaming Principles," MDBs pledged to be active in managing physical climate change risks, in a manner consistent with climate-resilient development, and in identifying opportunities to make their operations more climate-resilient. In addition, MDBs will seek to support a significant increase in their

[3] The African Development Bank Group; the Asian Development Bank; the Asian Infrastructure Investment Bank; the European Bank for Reconstruction and Development; the European Investment Bank; the Inter-American Development Bank Group; the Islamic Development Bank; the New Development Bank; and the World Bank Group (IFC, MIGA, World Bank) (Jointly the MDBs).

[4] Members of the IDFC include Agence Française de Développement (AFD); Bancoldex S.A. (Colombia); Banco Estado (BE) (Chile); Banco de Inversión y Comercio Exterior S.A. (BICE) (Argentina); Banco Nacional de Desenvolvimento Econômico e Social (BNDES) Brazil); Banque Ouest Africaine de Développement (BOAD)(Togo); Black Sea Trade and Development Bank (BSTDB); Cassa depositi e prestiti (CDP)(Italy); Caisse de Dépôt et de Gestion (CDG) (Morocco); Central American Bank for Economic Integration (BCIE/CABEI); China Development Bank (CDB); Corporación Financiera de Desarrollo S.A. (COFIDE); Croatian Bank for Reconstruction and Development; Development Bank of Latin America (CAF) (Caribbean Region); Development Bank of Southern Africa (DBSA) (South Africa); Eastern and Southern African Trade and Development Bank (TDB)(Mauritius and Burundi); Industrial Development Bank of Turkey (TSKB); The International Investment Bank (IIB) (Hungary); Islamic Corporation for the Development of the Private Sector (ICD)(Saudi Arabia); Japan International Cooperation Agency (JICA); KfW Bankengruppe (Germany); Korea Development Bank; (KDB); Small Industries Development Bank of India (SIDBI); Nacional Financiera (NAFIN) (Mexico); PT Sarana Multi Infrastruktur (PT SMI) (Indonesia); and the State Development Corporation VEB.RF (Russia)

clients'[5] and communities' ability to adapt to the adverse impacts of climate change.

3. Reporting. Building on the joint efforts on climate finance tracking and collaboration on mitigation and adaptation issues, the MDBs will further develop tools and methods for characterizing, monitoring and reporting on the results of our Paris-alignment activities. Where possible, they will collaborate to harmonize our respective approaches.

More recently, in parallel to the MDB commitment, the International Development Finance Club, consisting of twenty-six national level DFIs launched its Climate Finance Facility (CFF) at the 25th Conference of the Parties of the of the UNFCCC in Madrid. The objectives of the CFF are to support IDFC members' efforts to further integrate climate change into their mandates; develop innovative and more flexible financial products; mainstream climate finance into operations, develop private sector engagement; and reinforce collaboration and knowledge sharing between them.

Since COP 21, the IDFC doubled its climate finance, going from $100 billion in late 2014 to close to $200 billion in 2018. Today, already 13 IDFC members are accredited by the Green Climate Fund (GCF) making IDFC the main group of financial institutions partnering with the GCF. In this capacity and in other international fora IDFC assumes a role as a platform for advocacy, vision and action to address climate change and foster related action.

Although harmonization has proven to be somewhat elusive, to the extent that it has made limited progress, such progress is yet to be transposed into the climate related policies and procedures that have been mainstreamed into MDB's respective environmental and social standards. DFIs fully acknowledge that given "each [DFI's] mandate, capability and operational model, differentiated ways and timing of implementation are possible within robust common principles, framework, criteria and timeline."

Methodology and Structure of the Report

In this report, we analyze the extent to which those official commitments and principles have become manifest in the regular project cycle operations of a representative sample of DFIs operating across the globe. As defined by the World Bank "the project cycle is the framework used to design, prepare, implement, and supervise projects.[6]

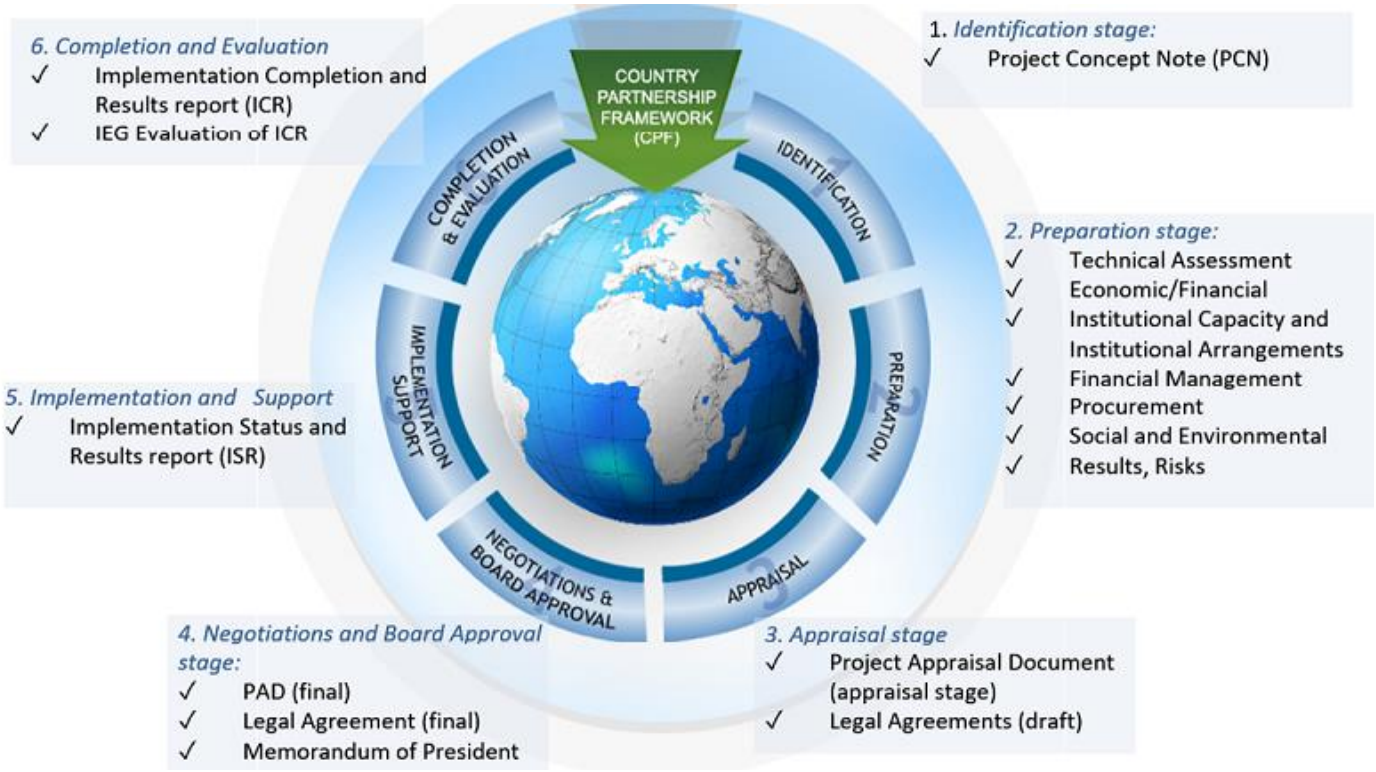
[5] The word "client" in this report refers the project proponent or proponents which may include government agencies, or private entities that borrow funds from DFIs to undertake specific projects. In some cases, private entities may be equity owners as well as borrowers. In call cases, the responsibility of the client is to obtain DFI funding and if necessary also technical support to develop and operate the project through its life cycle. In the course of a project's life cycle the identity of the client may change from the fund seeking to the development and operational stages of a project. Where a citation from a DFI refers to a "borrower" this reference will remain intact with the understanding that "borrower" is synonymous with "client."

[6] The World Bank, World Bank Project Cycle: https://www.worldbank.org/en/projects-operations/products-and-services/brief/project-cycle#:~:text=A%20World%20Bank%20project%20consists%20of%20six%20stages%3A&text=Preparation,Completion%2FEvaluation

A World Bank project consists of six stages:

- Screening
- Scoping
- Impact and Risk Assessment
- Public Disclosure and Stakeholder Consultation
- Mitigation of Impacts and Risks
- Monitoring and Reporting

Figure 1



For both MDBs and IDFC members we analyze the strategy, roles, tools and techniques used to mainstream climate change in their operations at the project level. For each DFI and for the two sets of DFIs together this involves three levels of analysis (1) DFI strategies on climate change as they pertain to mainstreaming climate change into their respective project operational structures; (2) their roles in facilitating their clients' efforts to meet the requirements applied to them; and (3) the actual requirements applied to their clients by each DFI.

It should be note d here that in this report the terms "impact" "risk" "and resilience" used in the following manner. "Impact" refers to the effects of an individual or collective projects on the external climate whereas "risk" refers to the effects of the existing or prospective climate on the viability of the project. "Resilience" refers to the ability of the climate to absorb the impact of a project and/or the ability of a project to adapt to the effects of climate change.

The source materials for this research are limited to formal documentation includeing strategy and policy papers on climate change;, reports to public and private organizations to which they are accountable; and their respective environmental and social standards that govern project operations through the entire project cycle from screening, scoping, impact and risk assessment; information disclosure and stakeholder consultation, management of climate impacts and risks; monitoring of management implementation and outputs (including greenhouse gas emissions); and grievance mechanisms.

Part I of the report will focus on five MDBs: the African Development Bank (AfDB0; the Asian Infrastructure Investment Bank (AIIB); the Development Bank of Latin America (CAF); the European Investment Bank (EIB); and the World Bank (International Bank for Reconstruction and Development and the International Development Institution)[7].

Part II of the report will focus on the following six members of the IDFC; Development Bank of Southern Africa (DBSA); Japan Bank for International Cooperation (JICA); KfW Bankengruppe (Germany); Nacional Financiera (NAFIN) (Mexico); and PT Sarana Multi Infrastruktur (PT SMI) (Indonesia). However, it should be noted that the IDFC members were selected on the basis of geographic diversity and size in the expectation of developing a representative sample. Unfortunately not all of the IDFC Members area sufficiently transparent with respect to their environmental, social assessment and climate-related components to generate the same quality of data as other IDFC Members or the MDBs.[8]

[7] Not included here are the other two World Bank institutions that provide and financing and political risk insurance respectively and exclusively to the private sector; the International Finance Corporation and the Multilateral Investment Guarantee Agency.

[8] In particular it was not possible to access such data for PT SMI and to a lesser extent, NAFIN.

Part III of the report will use the comparative analyses to identify existing and developing best practices for each stage of the project cycle. For this purpose the data set will go beyond the respective formal requirements of the DFIs and their clients and draw on guidance documents that several DFIs have prepared to provide their clients of detailed examples how to meet various formal requirements.

Development projects are subject to many cycles of due diligence: financial, economic, procurement, risk assessment, etc. However For purposes of climate mainstreaming at the project level the only project cycle deals with climate in a substantive manner is the environmental and social assessment, management and monitoring cycle. This cycle contains the following many sequential activities undertaken by DFIs and/or their clients: screening; scoping, impact and risk analysis, public disclosure of the draft analysis and other pertinent information', informed and inclusive public consultation; an environmental and social management plan; project approval by the DFI; project implementation by the client, monitoring, reporting and remediation and provisions for a grievance mechanism on the part of project affected people.

The project cycle for environmental and social and risks has evolved considerably since the introduction of environmental impact assessment (EIA) as a standard part of the DFI project cycle since its adoption by the World Bank in 1999 as one of its ten environmental, social, and legal safeguard policies – to identify, avoid, and mitigate the potential negative environmental impacts associated with Bank lending operations.(World Bank,2991) Until quite recently, EIA and its more comprehensive version, Environmental and Social Impact Assessment (ESIA) have been the tools of choice for assessing climate impacts and risks.

One key finding of this report is that some stages of the project cycle as, currently conducted, are inherently more conductive to mainstreaming climate change than others. In particular the screening, scoping, impact and risk assessment, mitigation, monitoring and reporting provide ample opportunities to consider climate change. On the other hand, for reasons to be described below such processes as information disclosure at the early stages of the impact and risk assessment along with stakeholder consultation during the assessment, and grievance mechanisms are less conducive to integrating climate change.

For purposes of this report the "project cycle" consists of the five sequential activities that animate the environmental and social assessment (ESIA) and management (ESIM) process: Screening, Scoping, Impact and Risk Assessment, Management of Environmental and Social Impacts and Risks and Monitoring/ Remediation (See Annex, Table 1 Key Stages of the Environmental and Social Assessment as Relevant to Climate Change) (describes each of these satges of the project cycle for its corresponding climate-related activity.

1. Comparative Analysis of MDBMainstreaming

1.1. MSB Strategic and Policy Commitments to Mainstreaming

Four of the five MDBs (AIIB, CAF, EIB and the World Bank) have made explicit commitments to mainstreaming climate change into their operational project cycles as part of their strategic and policy objectives on climate change. The five MDBs have distinctive approaches or emphases in their respective corporate strategies toward mainstreaming climate change in their operations. CAF's Environmental Strategy(CAF,2008) and its 2017-18 Sustainability Report(CAF, 2018) focus contribute to the design and structuring of projects and programs. EIB focuses its stated strategy on adaptation projects and project components rather than mitigation. The World Bank's Environmental and Social Framework goes beyond "do no harm" to consider improvements to baseline conditions. The AfDB emphasizes the need to incorporate "good international practice" in their Integrated Safeguards System which includes the Operational Safeguards that apply to the environmental and social impacts of their projects throughout the project cycle. See Annex, Table 2, MDBs' Strategic and Policy Commitments to Mainstreaming.

1.2. Direct Roles and Responsibilities of MDBs for Mainstreaming

MDBs do not generally rely on client compliance with environmental and social standards to ensure that climate change is mainstreamed into the project cycle. Rather they engage in a number of diverse activities both unilaterally in parallel to the requirements applied to client as well as in cooperation with the client to optimize the mainstreaming of climate change into project operations, outputs and outcomes. (See Table 3. Direct Roles and Responsibilities of MDBs for Mainstreaming Climate into Project Operations).

- Through its support of projects AIIB assists its clients[9] in achieving their nationally determined contributions, supports their formulation of long-term low greenhouse gas emission development strategies; evaluates both the potential impacts of the Project on climate change and the implications of climate change on the Project; and finance measures for the Client[10] to quantify and report to national authorities, direct and indirect emissions from Project-related facilities.

- EIB conducts extensive due diligence independent of the requirements of the client, on the financial and economic aspects of the project's climate change impacts, including opportunities for the project to earn carbon credits.

[9] In this instance, nationally determined contribution" likely refers to countries rather than project sponsors. However, as the rest of the statement makes clear is through it support for projects that AIIB seeks to support this larger objective.

[10] In this instance, "the client" clearly refers to the project rather than the national government.

- The World Bank undertakes its own due diligence of climate impacts of proposed projects but does not specify the focus of its due diligence.
- Neither AfDB nor CAF indicate their respective roles with respect to due diligence of projects in terms of climate impacts and risk.

1.3. Comparative Analysis of MDB Requirements for Clients to Mainstream Climate Change Mitigation and Adaptation into the Project Cycle

As noted above environmental and social impact assessment (ESIA) management planning and implementation (ESMP) are the primary processes through which DFIs (both MDBs and IDFC members) mainstream climate change into the project cycle.[11] It appears that some stages of the project cycle for which actions are required of clients are, as currently conducted, inherently more conductive to mainstreaming climate change than others. In particular the screening, scoping, impact and risk assessment, mitigation, monitoring and reporting provide ample opportunities to consider climate change. On the other hand, for reasons to be described below such processes as information disclosure at the early stages of the impact and risk assessment along with stakeholder consultation during the assessment, and grievance mechanisms are less conducive to integrating climate change.

Some DFIs undertake separate project risk assessments that combine various sources of risk: financial, economic, structural, environmental, social and reputational risk into a quantitative measure.

1.3.1. Screening

The screening stage has proven to be highly conducive to mainstreaming climate change due to its role in determining the relative sensitivity of the project and the corresponding level of effort ("proportionality") that the client and the MDB need to invest in all stages of the project cycle including the depth of the environmental and social assessment; the scope and duration of information disclosure and public consultation; the actions and resources required for mitigation (including the need for avoidance and offsets along with the measures in between); monitoring and evaluation and the requirements for a grievance mechanism; along with the budget to support these activities.

In most cases, MDBs have delegated screening to their clients while providing guidance to them (CAF, EIB) or as a joint exercise (AfDB). This is a relatively recent development as in the past MDBs tended to undertake screening as a unilateral practice. This is consistent with the progressive delegating of environmental and social assessment from MDBs to their clients as clients gained experience with MDB policies and in some cases even transposed MDB policies and practices into their international transactions. The case of the World Bank is an outlier for reasons suggested in the footnote to Annex Table 4, Respective Roles of MDBs and Clients for Screening.

[11] Some DFIs undertake separate project risk assessments that combine various sources of risk: financial, economic, structural, environmental (possibly including climate change), social and reputational risk into a quantitative measure. This methodology is normally proprietary for each DFI and the results are not available in the public domain.

Respective Roles of MDBs and Clients for Screening

Exclusion Lists

As a first level of screening many DFIs have issued formal "Exclusion Lists" (ELs) which categorically prohibit the organization from supporting specific types of projects. However, with respect to the MDBs none have been fully updated to match the institutions' public commitments on climate change. Alhough some ostensibly climate-related activities appear on the ELs of those MDBs these were adopted prior to an MDB's acknlowlegement of climate change as a project impact or risk and entail GHG emissions limitations principally as a co-benefit of air pollution mitigation. The prohibition on clearing primary tropical forest was adopted for the sole purpose of conserving biodiversity in the late 1980's and early '90s and not for the purpose of conserving GHG sinks. Whatever their origins these provisions do provide co-benefits for GHG mitigation.

Under pressure from various stakeholders (and over the objections of others) MDB's have issued qualified public statements categorically excluding or limiting their support of coal-fired and some cases all hydrocarbon based projects. The end result of these policies and strategies has been a marked decline in MDB financing for coal-fired power plants. Among the five MDBs included in this study:[12]

- At the UN Climate Action Summit in September 2019 AfDB President Akinwumi Adesina announced that the AfDB will no longer finance coal projects.
- In November 2019 EIB stated that it would stop funding all fossil fuel projects at the end of 2021.
- According to its 2013 energy sector strategy, the World Bank will provide financing for coal projects only "in rare circumstances," when there is a lack of feasible alternatives to coal or a lack of financing for coal power. Efforts to further restrict support of coal projects have been blocked by the US and several other shareholders.

1.3.2. Categorization

With respect to climate change, screening is particularly useful when paired with formal categorization based on the relative sensitivity of the project.[13] Categorization is a critically important threshold decisions as it determines: (a) the depth of the environmental and social assessment; (b) the scope and duration of information disclosure and public consultation; (c) the actions and resources required for mitigation (including the need for avoidance and offsets along with the measures in between); and (d) monitoring requirements along with the budget to support these activities.

[12] Lorenzo Piccio, Coal or no coal: A balancing act for MDBs, https://www.devex.com/news/coal-or-no-coal-a-balancing-act-for-mdbs-87610

Most MDBs formalize the results of screening by assigning each project to a category depending on its relative environmental and/or social sensitivity. Over time three main categories have emerged: Category A, B and C.[14] For purposes of projects with significant climate change impacts and risks only Category A projects are of interest here.

- The criteria for a Category A project are not fully uniform among MDBs although there is some overlap among them. Three MDBs- AfDB, AIIB and EIB include "significance". AfDB, AIIB and CAF include "irreversibility" and "associated" or otherwise offsite impact. AfDB and AIIB include "cumulative impacts." AIIB and CAF include "unprecedented" impacts. AIIB further specifies that the impact may be "temporary or permanent."

- CAF and EIB CAF take a distinct approach by listing the types of projects that would be subject to Category A designation. CAF appends list of project activities would normally be considered Category A, including several that are directly or indirectly GHG-intensive.(World Bank,2017)[15] EIB identifies Category A project based on the criteria of "type, scale, location," as well as likelihood, "magnitude," and "materiality and is otherwise obliged by virtue of its relationship to the EU to include specific types of projects classified under Annex I of the EU EIA Directive,(European Union, 2015)[16] and by national legislation.

- As all of these criteria (with the exception of CAF and EIB are highly generic in nature. Moreover, none of the MDBs explicitly cite "climate change" impacts as a criteria for categorizing a project as Category A. However the generic criteria they do cite – in particular- cumulative, irreversibility and permanent -leaves little doubt that a project with potentially significant impact on climate change would be classified as Category A as would many of the activities cited by CAF as well as those listed in Annex 1 of the EU EIA Directive.

[14] There is a fourth category, FI, referring to Financial Intermediaries, who may carry out a number of simultaneous or sequential projects funded by the DFI. However these are normally small projects that very unlikely to generate a carbon footprint, although they may be subject to climate risks.

[15] Construction of pipelines for the transport of gas, oil or chemicals with a diameter of more than 800 mm and a length of more than 40 km.;
- Thermal power stations and other combustion installations with a heat output of 300 megawatts or more / or / electricity generation of 100 megawatts or more;
- Crude-oil refineries, excluding undertakings manufacturing only lubricants from crude oil,
- Installations for the gasification and liquefaction of 500 tonnes or more per day of coal or bituminous shale;
- Installations for storage of petroleum, petrochemical, or chemical products with a capacity of 200 000 tonnes or more;
- Extraction of more than 500 tonnes/day of petroleum for commercial purposes; and
- Extraction of more than 500 000 m3/day of natural gas for commercial use.

[16] Illustrative Examples of climate-sensitive projects in EU Directive Annex 1 include: Thermal power stations and other combustion installations with a heat output of 300 megawatts or more; extraction of petroleum and natural gas for commercial purposes where the amount extracted exceeds 500 tonnes/day in the case of petroleum and 500000 cubic metres/day in the case of gas; Crude oil refineries (excluding undertakings manufacturing only lubricants from crude oil) and installations for the gasification and liquefaction of 500 tonnes or more of coal or bituminous shale per day. Storage sites pursuant to Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide; Installations for the capture of CO2 streams for the purposes of geological storage, pursuant to Directive 2009/31/EC, from installations covered by this Annex, or where the total yearly capture of CO2 is 1.5 megatonnes or more.

- That leaves open the question of what would be considered a "significant" impact with respect to climate change as many projects of various sizes generate climate change impacts, ranging from global (atmospheric) to local (ecosystemic) impacts. One possible surrogate measure of significance, although not cited by any of the MDB,s would be the threshold above which MDBs are required to calculate and report their respective greenhouse gas. (See Annex, Table 5, MDBs' Definitions of Category A Projects and Section 1.3.7, Monitoring and Reporting.)

1.3.3. Scoping

The objectives of scoping are to identify and focus the environmental and social impact assessment on significant environmental and social issues and to establish a logical roadmap for the assessment process. The output of scoping is usually a Terms of Reference for the ESIA, tailored to the project. Over time scoping has become less of an independent exercise among MDBs as it has become progressively incorporated into the heart of the ESIA process. As a result two important issues that are best undertaken at the beginning of the ESIA process may not be getting attention on a timely basis with respect to climate change; the identification of associated impacts[17] and alternatives assessment. Although none of the five MDBs explicitly refer to associated impacts or alternatives assessment in the context of climate change it is quite likely that in practice they do consider climate change in the context of associated impacts and alternative assessment depending on how these key terms are defined and applied as illustrated below in Annex, Table 6.

Associated Impacts

The definition of associated impacts and the nature of its association with the project that the MDB is financing has implications for the aggregate scale of the MDB-financed project and its potential impacts on climate change. A large associated project could have the effect of converting an otherwise Category B project into a Category A project requiring a higher level of assessment with respect to climate change impacts and risks.

MDB criteria for defining an associated impact are both similar and diverse. The most common requirement (AfDB, AIIB, EIB and World Bank) is that to be associated project would not be undertaken absent the project the MDB is financing. A similar requirement (AIIB, EIB and the World Bank) is that the associated project be necessary to support the **MDB-funded** project. Other distinctions turn on to extent to which the proponent of the MDB-supported project can exercise some control over the associated project by virtue of ownership, management or some other contractual relationship (AIIB, EIB, World Bank). In such cases where such control is lacking the associated project is not subject to the environmental or social requirements of the MDB, including with respect to climate change.

[17] Per EIB associated impacts include: (i) assets and facilities directly owned or managed by the promoter that relate to the project activities to be financed, (ii) supporting activities, assets and facilities owned or under the control of parties contracted for the operation of the promoters business or for the completion of the project (such as contractors); (iii) associated facilities or businesses that are not funded by the EIB as part of the project and may be separate legal entities yet whose viability and existence depend exclusively on the project or whose goods and services are essential for the successful operation of the project.

Alternatives Assessment

The assessment of alternatives should ideally be undertaken after screening and before the in depth ESIA assessment commences, although it may continue during the ESIA process as more details about potential impacts and risk become available. However, the initial stage is important because it is often the only opportunity to pose the critical questions of whether: the proposed project is the best use of resources to produce a product or service; the location, design and technology are the most appropriate as well as the "elephant in the room" which no project proponents are inclined to consider: "the without project alternative." The later in the ESIA process these questions are posed the fewer options are available, including those with respect to climate change impacts. See, Annex, Table 7, Alternatives Assessment

The World Bank and EIB explicitly incorporate climate change in the context of alternatives assessment. The World Bank "recognizes that climate change is affecting the nature and location of projects, and that World Bank-financed projects should reduce their impact on the climate by choosing alternatives with lower carbon emissions."(World Bank, 2017)

EIB's methodology allows for the estimation of two measures of GHGs from investment projects financed by the Bank: (1) the absolute GHG emissions or sequestration of the project, and;(2)the emissions variation of the project i.e. the relative GHG emissions of the project, which is the difference in emissions between the "with" and the "without" project scenarios. Relative emissions can be either positive or negative, based on whether there is an increase or decrease in emissions.(EIB, 2020)

1.3.4. Impact and Risk Assessment

Although impact and risk assessment are both mainstreamed into the ESIA process, there are some distinctions in the allocation of ESIA resources that are best illustrated by analyzing them separately.

MDBs have traditionally required that project proponents address "transboundary and global" issues in environmental assessment. This requirement pre-dated the emergence of climate change as a global issue and referred primarily to cross-border pollution and ozone-depleting chemicals. The inclusion of "global issues" provided the entry point for MDBs to incorporate climate change into ESIA. See Annex, Table 8, MDB Mainstreaming of Climate Change into Impact Assessment.

MDB Mainstreaming of Climate Change into Impact Assessment[18]

All MDBs require the client to address the impacts of projects on climate change, however briefly, with due reference to direct, indirect, associated and cumulative impacts (AFDB, AIIB) and at all stages of the project cycle (EIB).MDBs' assessment of the impact of climate change tends to focus on biodiversity and ecosystem services to the exclusion of other issues such as sea level rise, desertification, climate refugees, etc.

[18] As previously noted "impact assessment" in this report refers to the impact of the project on climate change whereas "risk assessment" refers to the effects of climate change on the project.

With respect to impacts, even with accurate measurement of greenhouse gas emissions (GHGs) from a large project, and reliable data on the level of GHGs in the global atmosphere a project's total contribution to the global level of GHGs over the life cycle of the project (e.g. 25 years) would be deemed de minimis.

Rather, the value of measuring GHGs for individual projects lies in the aggregate and cumulative amount of GHGs generated by a DFI on an annual or cumulative basis, within the contexts of commitments that DFIs have made pursuant to their Paris Agreement and/or the host country's Nationally Determined Contribution.

Mainstreaming of Climate Change in Risk Assessment

Observations:

- All MDBs require clients to take climate change into account as a potential risk to the project through the ESIA process, or in some cases part of their own project risk assessments.

- As an example of the former CAF requires that the client prepare an Ecosystem Management Plan that includes expected changes in average temperature and precipitation patterns due to climate change.

- AfDB Operational Safeguard 1 on Environmental and social Assessment (OS1), along with the OSs that support it, is "to mainstream environmental and social considerations— including those related to climate change vulnerability."

- Although AIIB has no explicit provisions regarding the risk to the project from climate change AIIB's President Jin Liqun stated in 2016 that "The Bank supports its Clients in their evaluation of both the potential impacts of the Project on climate change and the implications of climate change on the Project." (Darius Nassiry and Smita Nakhooda, 2016)

- The World Bank requires that the environmental and social assessment undertaken by the client consider potentially significant project-related risks including climate change… adaptation and resilience issues while noting that communities that are already subjected to impacts from climate change may also experience an acceleration or intensification of impacts due to project activities.

- In addition, both AIIB and CAF undertake their own assessments of climate change risks to a project as part of their standard risk assessment procedures.

See Annex, Table 9. MDB Mainstreaming of Climate Change in Risk Assessment.

1.3.5. Information Disclosure and Stakeholder Consultation and Engagement

All five MDBs have elaborate requirements for public disclosure of project information and stakeholder consultation at various points throughout the project cycle. However, these requirements, developed over many years, are entirely procedural in nature and are designed to optimize stakeholder access to information and a maximally inclusive process

of consultation between project-affected people and the project proponent at all stages of the project cycle. The absence of sufficiently transparent and timely information disclosure and inclusive consultation has been a consistent complaint directed MDBs accountability mechanisms –such as the World Bank's Inspection Panel. In most cases the information disclosure and consultation requirements are embedded in the ESIA process; however some MDBs (EIB and the World Bank) have issued stand-alone standards for stakeholder engagement as well as project-level grievance mechanisms.

Accordingly none of the MDBs cite climate change or any other substantive issue in their requirements for information disclosure and consultation. However, these requirements are fully capable of facilitating information disclosure and stakeholder consultation on climate changes impacts as well as risks to the project from climate change.[19]

1.3.6. Management of Climate Change Impacts and Risks

Mitigation is potentially one of the more robust areas of mainstreaming climate change into the project cycle among the five MDBs. All of the five MDBs have extensive requirements for management of project impacts on the environment including an Environmental and Social Management Plan (ESMP) (or in the case of the World Bank, an Environmental and Social Commitment Plan (ESCP).[20] In addition all of the MDBs apply some version of the mitigation hierarchy[21] which is considered the "state-of-the art" in the management of environmental and social impacts, including climate change impacts. However, it should be noted that the MDB ESMP requirements are largely generic and procedural nature and that reference to substantive impacts and risks is the exception to the rule.Accordingly, Annex, Table 10 uses

[19] For example, CAF observes "Giving opportunities for stakeholders to express their views during alternatives analysis can be beneficial in two ways-to obtain information and to build consensus. First, some stakeholders shall be sources of valuable local knowledge, others may be experts, and stakeholders in general are the main source of information on acceptability of certain alternatives. Second, participation throughout identification of the alternatives that shall be considered, as well as during their evaluation and comparison, helps build consensus for the preferred alternative. Consensus-building is particularly important in operations like integrated conservation and development projects that depend on stakeholders for successful implementation;"

[20] The ESCP is explicitly part of the contract between the World Bank and the borrower.

[21] MDB definitions of the mitigation hierarchy are similar:

- AfDB Operational Safeguard 1 – environmental and social assessment: "If avoidance is not possible, reduce and minimise potential adverse impacts; if reduction or minimisation is not sufficient, mitigate and/or restore; and as a last resort compensate for and offset."
- AIIB Environmental and Social Policy, para. 29: "(a) anticipate and avoid risks and impacts; (b) where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; (c) once risks and impacts have been minimized or reduced, mitigate them; and (d) where residual risks or impacts remain, compensate for or offset them, where technically and financially feasible"
- CAF: Environmental Strategy, Box 1.iii "[A]void, control, mitigate, and offset any environmental and social impacts and risk."
- EIB: Environmental and Social Standards, Glossary: "The mitigation hierarchy is defined as: Avoidance: measures taken to avoid creating impacts from the outset, such as careful spatial or temporal placement of elements of infrastructure, in order to completely avoid impacts on certain components of biodiversity. Minimisation: measures taken to reduce the duration, intensity and/or extent of impacts (including direct, indirect and cumulative impacts, as appropriate) that cannot be completely avoided, as far as is practically feasible. Rehabilitation/restoration: measures taken to rehabilitate degraded ecosystems or restore cleared ecosystems following exposure to impacts that cannot be completely avoided and/or minimised. Compensation: measures, such as offsets, taken to compensate for any residual significant, adverse impacts that cannot be avoided, minimised and/or rehabilitated or restored, in order to achieve no net loss or a net gain of biodiversity. Offsets can take the form of positive management interventions such as restoration of degraded habitat, arrested degradation or averted risk, protecting areas where there is imminent or projected loss of biodiversity." World Bank, Environmental and Social Framework: Environmental and Social Standard 1: Assessment and management of environmental and social risks and impacts: Objectives: "Anticipate and avoid risks and impacts; (b) Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; (c) Once risks and impacts have been minimized or reduced, mitigate; and (d) Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.

the mitigation hierarchy to compare the MDBs' respective approaches to the management of impact and risks in general and where applicable, with specific references to climate change.

Although the structure of the respective MDB hierarchies are identical there is some diversity of measures and focus among the specific measures required. For example, AfDB includes an option to "restore" an affected area; EIB specifies measures to avoid impacts along with compensation; whereas the Word Bank adds concerns about the technical and financial feasibility of compensation and offset measures.The EIB and CAF require the application of the precautionary principle in its clients' projects. Although this is not stated explicitly with respect to climate change, it would be difficult to make the argument that the uncertainties related to climate change do not require its application.The World Bank ESF refers to the General Industry recommendations of the widely used World Bank Group Environment, Health and Safety Guidelines (EHSG) for specific measures to consider for reduction and control of greenhouse gases[22] include:

- Carbon financing;[23]
- Enhancement of energy efficiency;[24]
- Protection and enhancement of sinks and reservoirs of greenhouse gases;
- Promotion of sustainable forms of agriculture and forestry;
- Promotion, development and increased use of renewable forms of energy;
- Carbon capture and storage technologies;[25]

1.3.7. Monitoring and Reporting Climate Change Impacts and Risks

MDB environmental and social monitoring requirements are also primarily generic and procedural nature, with the one significant exception of climate-related monitoring and reporting. The primary vehicle for MDB monitoring of climate impacts is through the measurement of individual projects' greenhouse gas emissions on an annual basis. This information is normally aggregated at the MDB level for reporting to international organizations to which MDBs have committed to meet negotiated targets for total GHG emissions over time. Accordingly, Annex, Table 11 compares the GHG monitoring requirements of each of the MDBs.

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[22] The six greenhouse gases that form part of the Kyoto Protocol to the United Nations Framework Convention on Climate Change include carbon dioxide (C02); methane (CH4); nitrous oxide (N2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulfur hexafluoride (SF6).

[23] Carbon financing as a carbon emissions reduction strategy may include the host government-endorsed Clean Development Mechanism or Joint Implementation of the United Nations Framework Convention on Climate Change.

[24] For any energy-using systems, a systematic analysis of energy efficiency improvements and cost reduction opportunities should include a hierarchical examination of opportunities to: balance demand/load Side management by reducing loads on the energy system:

- Reduce Supply Side Management
- Reduce losses in energy distribution to Improve energy conversion efficiency to Exploit energy purchasing opportunities
- Use lower-carbon fuels

[25] Carbon dioxide capture and storage (CCS) is a process consisting of the separation of CO2 from industrial and energy-related sources; transport to a storage location; and long-term isolation from the atmosphere, for example in geological formations, in the ocean, or in mineral carbonates (reaction of CO2 with metal oxides in silicate minerals to produce stable carbonates). It is the object of intensive research worldwide (Intergovernmental Panel on Climate Change (IPCC), Special Report, Carbon Dioxide Capture and Storage (2006).

Although this Section of the report focuses on MDB requirements applied to clients, monitoring or GHG emissions is a joint enterprise that requires data submission by clients to the MDB and aggregation and analysis of client generated data for public reporting purposes.

MDBs use a diversity of methods for monitoring GHG emissions from individual projects.

The AfDB monitors GHG emissions estimated to be produced by the Bank's investments on a gross and net basis. The Bank also monitors reductions in emissions achieved as a result of the Bank's investments. AIIB may, at the Client's request, finance measures for the Client to quantify and report to national authorities, in accordance with internationally recognized methodologies and good practice, direct and indirect emissions from Project-related facilities. It is unclear whether the client's monitoring of emissions is voluntary or if the client's request applies only to the ADB's decision to finance such measures.

- CAF uses GreenCloud to track data and information related to estimation of its carbon footprint

- EIB goes beyond the assessment the carbon footprint of EIB financed investment projects (based on proprietary sector-specific methodologies) to estimate how changes of GHG emissions can affect a project's Adjusted Economic and Financial Rates of Return and Carbon credit potential.

The World Bank follows the World Bank Group Environmental, Health, and Safety Guidelines (EHSGs) require monitoring of GHGs for specific industries. It should be noted that the EHSGs are used by many MDBs and other DFIs and are not limited to the World Bank

All MDBs are subject to international reporting requirements consistent with their commitments under the Paris Agreement and other international organizations to which they affiliated. Accordingly, one would expect to see greater harmonization among MDBs in terms of their respective methodologies. The extent of such harmonization is difficult to determine from the information provided in their environmental and social standards, which most often cite "internationally recognized methodologies," or in the case of EIB "proprietary sector-specific methodologies."

1.3.8. Grievance and Accountability Mechanisms

All MDBs have established Accountability Mechanisms at the institutional level and more recently grievance mechanisms at the project level. As with other aspects of the project cycle these mechanisms are largely procedural in nature and are designed to provide opportunities to project affected people to seek recourse for damages to their personal property or livelihoods as a result of specific projects supported by MDBs.

As such they are not particularly conductive to seeking recourse for the adverse effects of climate change. To do so, an individual or group must have "standing." To have standing the individual or group must be able to demonstrate a causal relationship between the project and the alleged damages. Since the climate-related impacts of an individual project- to the extent they can be measured, as per greenhouse gas emissions for example, are diffuse and global in scope, there is no opportunity for locally affected people to demonstrate a

causal relationship and any type of alleged damage to their property or livelihoods. Where climate change is cited in a grievance or formal complaint, it is never the basis of whether or not the project proponent or MDB will accept the complaint for review.

However, risks to the project from climate change could be the basis of a formal complaint in circumstances where a project demonstrated a lack of climate resilience with adverse effects on people associated with the project or the affected surrounding community. Such persons could presumably meet the "standing" requirement if they could demonstrate the relationship between climate change, the project and their individual or collective circumstances.

2. IDFC Members Mainstreaming of Climate Change into the Project Cycle

Amidst a changing development finance landscape, IDFC members in emerging economies and developing countries are poised to play a critical role in delivering global climate and sustainable development goals. With the largest volumes of financing for development originating domestically, IDFC members [both individually and collectively as Members of the IDFC] are key in financing the development priorities of their governments, especially for areas where private finance is not available. The relevance of these banks for sustainable development lies in their collective financial footprint as well as their trusted role in delivering the policy mandates of their governments[26] According four of the six IDFC Members (have made explicit strategic and policy commitments to mainstreaming climate change into their project cycles.

Unlike MDBs that are accountable to multiple government shareholders, IDFC Members are national development banks and their activities are accountable primarily to national authorities and in the second instance to international organizations that provide them with financial and technical support. Accordingly, as critical sources of finance their lending priorities are consistent with those of their national level policies which tend to focus on economic growth and development with climate change reflecting the risks they face rather than the climate change impacts of their economic activities.

It should be noted that many IDFC members' environmental and social standards, including those related to climate change are similar to MDB standards, particularly those MDBs with which an IDFC member may have a close funding, technical assistance and training relationship.

For example the preface to DBSA's 2018 Environmental and Social Standards acknowledges "contributions drawn from the World Bank, the AfDB, the GEF and GCF policies and procedures."(DBSA,2018) JBIC's 2015 Environmental Guidelines reference World Bank "Safeguard Policies" and Finance Corporation IFC Performance Standards.[27] Even, KfW, one of the more mature of the IFDC members, acknowledges that its standards are the Environmental and Social Standards of the World Bank Group (i.e. for public agencies the Environmental and Social Standards (ESS) as well as relevant Operational Polices of the World Bank and the IFC Performance Standards (PS) for cooperation with the private sector) and their General and sector-specific Environmental, Health and Safety (EHS) Guidelines as well as the Core Labour Standards of the International Labour Organization (ILO).(KfW, 2019a)

DFC states that its Environmental and Social Policies and Procedure implement applicable environmental and social requirements and procedures contained in U.S. law and, and to the extent that any subsequent revisions to those standards are incorporated into its ESPP by reference.(DFC, 2020) CAF's

[26] Why do National Development Banks (NDBs) matter, and why now? (OECD 2018)

[27] Japan Bank for International Corporation, Environmental Guidelines, https://www.jbic.go.jp/en/business-areas/environment.html

PT Sarama has issued separate guidelines for projects funded by national(PT SMT, 2014) and multilateral Institutions.(PT SMT, 2018) It is noteworthy that none of the climate change provisions included in the Multilateral Project Environmental and Social Safeguards (ESS) Guidelines are included in the guidelines for national institutions. (The national guidelines make no mention of "climate" or "greenhouse gases). Allowing for the fact that the national guidelines were issued in 2014 and the multilateral guidelines in 2018, the national guidelines have not been updated to include the more recent climate change provisions.

This tendency toward similarity has both advantages and disadvantages. The advantages include the adoption by IDFC's of international best practices and support a long-sought effort to harmonize environmental and social standards among DFIs. On the other hand, some IDFC members' policies were adopted from older MDB policies as reflected in their structure, coverage and terminology. Unless there are effective provisions to update the IDFC policies whenever the referenced MDB policy is changed, the IDFC policy may no longer reflect international best practice.contained in U.S. law and, and to the extent that any subsequent revisions to those standards are incorporated into its ESPP by reference. CAF's

2.1. IDFC Members' Strategic and Policy Commitments to Mainstreaming Climate Change.

Four of the IDFC members have made explicit strategic and policy commitments to mainstreaming climate change as indicated below. These are consistent with the high level commitments made by the MDBs

DBSA: The majority of South Africa's population in vulnerable to the impacts of climate change, with a large segment of the population dependent on free basic services, either as a result of age, disease and/or poverty. DBSA is an accredited Global Climate Facility (GCF) and a Global Environmental Facility (GCF) project implementing agent. Its recently adopted Climate Change Policy Framework situates the bank's role in contributing to South Africa's Nationally Determined Contribution (NDC) and sets a climate finance target for the organization of a minimum of 35% of annual lending by 2022 (with sub targets of 70% for mitigation and 30% for adaptation).

DFC: One of DFC's core objectives is to support the reduction of Greenhouse Gas emissions associated with projects."(DFC, 2020) U.S. legislation enacted in requires DFC's predecessor agency, the U.S. Overseas Private Investment Corporation (OPIC), to phase down greenhouse gas emissions from financed projects by 30 percent in 10 years and by 50 percent in 15 years over 2008 levels.[28] These provisions continue to apply to DFC.

[28] Pacific Environment, New Law Requires U.S. OPIC to Reduce Greenhouse Gas Emissions by 50%, https://www.eca-watch.org/publications/newsletter-items/new-law-requires-us-opic-reduce-greenhouse-gas-emissions-50.

KfW: Per KfW Group's Sustainability Mission Statement and Sustainability action areas in our financing activities" KfW focuses on the social and economic megatrends of "climate change and the environment.[29]

PT Sarana Multi Infrastruktur (Persero):"contributes in [managing] climate change by supporting the climate change adaptation and mitigation projects."

2.2. Direct Roles and Responsibilities of IDFC Members for Mainstreaming

Unlike the MDBs whose clients tend to be government and sophisticated private entities, the Members of the IDFC tend to lend to small enterprises that often lack experience in assessing and managing environmental and social impacts of their project, including with respect to climate change impact and risk. As a result the IDFC Members tend to take a more-hands on process in managing the environmental and social impacts and risks of the projects they support, including efforts to mainstream climate change into the project cycle. These actions my include reviewing Client information relating to the project climate-related risks and impacts; screening and categorizing projects; appraising client capacity to develop and implement the project; undertaking site visits and interacting with key stakeholders; and tracking and reporting annual GHG emissions from projects.

DBSA: DBSA's responsibilities towards ensuring that the client complies with the DBSA ESSs include:

- Reviewing Client information relating to the project climate-related risks and impacts, and requesting additional relevant information where there are gaps that prevent DBSA from completing its due diligence.
- Undertaking due diligence of proposed projects, proportionate to the nature and potential significance of project environmental and social risks and impacts.
- Appointing appropriately skilled people to appraise projects and evaluate whether projects meet ESSSs requirements.
- Appraising the nature and significance of the projects potential environmental and social risks and impacts, project implementation timeframes, and client capacity to develop and implement the project.
- Providing guidance to assist the Client develop appropriate measures consistent to address environmental and social risks and impacts in accordance with the ESSSs.
- Undertaking site visits and interacting with relevant key stakeholders, as appropriate.
- Identifying any measures and actions that the client needs to put in place to address identified social and environmental risks and impacts.

[29] KfW, KfW Group sustainability mission statement and sustainability action areas, https://www.kfw.de/nachhaltigkeit/Dokumente/Nachhaltigkeit/Nachhaltigkeitsleitbild-en.p

DFC

- New investments are screened by DFC for Climate-related Risks and Climate-related Vulnerability. A desk based climate vulnerability/impact assessment will utilize publically available tools and databases such as the World Bank Climate Change Knowledge Portal.

- DFC tracks and reports on an individual project basis the annual Greenhouse Gas emissions associated with projects within DFC's active portfolio with Direct Emissions that exceed 25,000 metric tonnes CO2eq per year.

- DFC calculates Greenhouse Gas emissions using internationally accepted GHG accounting protocols, including those from the U.S. Environmental Protection Agency and methodologies approved by the Climate Registry. http://www.theclimateregistry.org.

KFW

- KfW Development Bank seeks to incorporate climate and/or environmental outcomes into the scope of the project.

- It supports the executing agency in the management and monitoring of possible adverse environmental, social and climate impacts and risks associated with the implementation of the project.

- Environmental and Social Due Diligence and categorization of the project are performed under involvement of the environmental and social experts of KFW Development Bank.

- The executing agency, in consultation with KfW Development Bank, is responsible for the design and implementation of the required studies, which are part of the preparation phase of the project. During the preparation, relevant bodies and agencies of the partner countries which are responsible for environmental, social and climate issues are consulted.

2.3. Mainstreaming of Climate Change into the Project Cycles of Six National Development Finance Club (IDFC) Members

2.3.1. Screening and Categorization

Screening can take place with or without categorization. Alternatively, categorization may be the sole format used by an IDFC for screening. See Annex, Table 11, IDFC Members' Screening and Categorization Requirements.

An analysis of mainstreaming of climate change at the screening stage shows high variability among IDFC members. The most robust approach is exemplified by KfW which employs a stand- alone "Climate Screening" procedure by which "climate relevance" is

assessed by with regard to reducing greenhouse gas emissions; climate change adaptation; and whether the project can contribute towards significantly enhancing the adaptive capacity of target groups or ecosystems; and if positive impacts of climate change could be enhanced for the project's development goals, where appropriate. In addition, KfW screens potential projects against a list of coal and other hydrocarbon-based activities that it will not support. Categorization is the tool favored by DFC and NAFIN for identifying projects that are "high risk."

- For DFC, projects that are considered high risk include those that could result in the significant diminishment benefits that people obtain from priority ecosystems including …carbon storage and sequestration, climate regulation, and protection from natural hazards. New investments are screened for Climate-related Risks and Climate-related Vulnerability.[30] For such projects a desk based climate vulnerability/impact assessment is uses publically available tools and databases such as the World Bank Climate Change Knowledge Portal.[31]

- When a project is proposed for financing by NAFIN, it categorizes the Project based on the magnitude of potential environmental risks and impacts,[32] including those related to ….climate change.[33]

- DBSA applies measures to screen for and report on greenhouse gas emissions, climate change impacts, climate change mitigation and adaptation measures and carbon emission estimates."[34] Less directly related to climate change impacts and risks PT Sarana Multi Infrastruktur (Persero) (SRI)[35] screens any large power plant into the High Risk category[36]

Many DFIs have issued Exclusion Lists which categorically prohibit the organization from supporting specific types of projects. However, most of these lists were compiled about ten years ago and, with the exception of KfW are derived from older MDB lists and have not been updated to reference projects associated with adverse global climate impacts.

[30] The US DFC cites Executive Order (EO) 13677 (September 23, 2014) requiring the integration of climate-resilience considerations into all United States international development work. https://obamawhitehouse.archives.gov/the-press-office/2014/09/23/executive-order-climate-resilient-international-development. However, this along with other climate –related E0s issued by President Obama were repealed en masse by President Donald Trump https://defenders.org/blog/2017/03/unmitigated-disaster-executive-order-climate-change-puts-us-all-danger

[31] World Bank, Climate Change Knowledge Portal, https://climateknowledgeportal.worldbank.org/

[32] Such categorization is based on the International Finance Corporation's (IFC) environmental and social categorization process. The categories are:
Category A – Projects with potential significant adverse environmental and social risks and/or impacts that are diverse, irreversible or unprecedented;
Category B – Projects with potential limited adverse environmental and social risks and/or impacts that are few in number, generally site-specific, largely reversible and readily addressed through mitigation measures2; and
Category C – Projects with minimal or no adverse environmental and social risks and/or impacts.

[33] EPFI P1, Review and Categorization.

[34] DBSA, ESS. 1.2

[35] SRI, Project Environmental and Social Management System (ESMS) Guidelines

[36] SRI, ESMS Guidelines, 1.c,1 and Table 2

For example, KFW's Exclusion List includes a provision that investments in power transmission grids with significant coal-based power feed-in will only be pursued in countries and regions with an ambitious national climate protection policy or strategy or where the investments are targeted at reducing the share of coal based power in the relevant grid. In developing countries, heating stations and cogeneration facilities essentially fired with coal can be co-financed in individual cases based on a rigid assessment, if there is a particularly high sustainability contribution, major environmental hazards are reduced, and if there demonstrably is no more climate-friendly alternative.(KfW, 2019b)

2.3.2. Scoping

Similar to the practices of the MDBs as described above, scoping is less of a stand-alone practice among IDFC members but is rather integrated into the Environmental and Social Impact Assessment Process. As a result, two important aspects of scoping are undertaken, if at all, during the ESIA process rather than in between screening and ESIA, where threshold assessments and decisions on the project footprint, alternatives, associated and cumulative impacts can be made. See Annex, Table 12, IDFC Members' Use of Scoping to Identify Potential Climate Change Impacts.

DBSA and DFC are the only two IDFC members that could be said to engage in formal scoping at the front end of the ESIA process.For DBSA in addition to the direct and immediate impact of projects, derivative, secondary, and cumulative impact and impact of associated facilities are also to be examined and investigated to a reasonable extent. Specific requirements for environmental and social considerations on this issue are to be made based on the Common Approaches;(EIB, 2015) DFC reviews the risks and impacts identified by the applicant, within the applicant's "defined area of influence."

2.3.3. Impact and Risk Assessment

In general, and to a greater extent than the MDBs the IDFCs focus substantial attention on the risks of existing and potential climate change on the viability of the project along with the impact of the project on climate-related receptors (e.g. biodiversity, ecosystems and public health).

For example, DBSA requires clients to detail the likely climate change impacts to influence the project and detail appropriate climate change mitigation and adaptation measures to be implemented. An objective of KfW's climate assessment is also to recognise climate impacts that may impair the achievement of project objectives in due time so that, if applicable, required adaptation measures can be taken into consideration in the conception of the project.

In this regard the expected climate changes and their consequences for the project will be analyzed. This includes both direct effects (e.g. more frequent flooding or drying out of agricultural areas) and indirect effects of climate change (e.g. revenue losses in agriculture). The analysis examines the longer targeted period of impacts beyond the formal project implementation period. Moreover, the climate assessment is to consider relevant project

alternatives that are available to reach the project objective.[37] With respect to impact assessment DBSA requires clients to detail any greenhouse gas emissions, and carbon emission estimates emanating from the project and any associated project activities. DBSA also requires the ESIA to include cumulative impact assessment which considers cumulative project impacts from relevant past, present, foreseeable developments and unplanned but predictable project related activities that may occur later or at a different location.[38]

NAFIN requires a Climate Change Risk Assessment[39] to consider relevant physical risks to the project from climate change for all Category A and, as appropriate, Category B projects, and for all projects, in all locations, when combined Emissions are expected to be more than 100,000 tonnes of CO2 equivalent annually. For DFC the following general topics, when applicable, are examined during the environmental and social assessment review: "Environmental issues, including …emissions of Greenhouse Gases"

For KfW the objective of the climate assessments is to anticipate and appraise any foreseeable impacts and risks a project may have on the climate, and to identify, avoid and/ or minimise adverse impacts and risks to an acceptable level, or if unavoidable, to offset and compensate for these impacts and risks.[40]

See Annex, Table 13, IDFC Members Mainstreaming of Climate Change into Impact and Risk Assessment

2.3.4. Information Disclosure and Stakeholder Consultation.

All DFIs have extensive formalized procedures for information disclosure and stakeholder consultation. Two of the IDFC members and one non-IDFC development bank have mainstreamed climate risks into the information disclosure and associated stakeholder consultation process by explicitly requiring these assessments to be included in the ESIA document.

- KFW requires the executing agency to disclose the in-depth climate assessment to the interested public.[41]
- NAFIN expects the client is to include assessments of potential adverse climate change risks as part of the ESIA or other Assessment, with these included in the Assessment Documentation.[42]
- US DFC requires that if the Project is screened as Category A, Applicants are required to submit an ESIA (and for existing projects a Baseline Audit) for public disclosure on the DFC web site

[37] KFW 4.15
[38] DBSA. ESS 1.3.3
[39] EPFI, P2, Environmental and Social Assessment
[40] KFW, 4.1.2
[41] KFW, 4.9.1
[42] EPFI, P10, Reporting and Transparency

See Annex, Table 14, IDFC Members' Climate-related Disclosure and Stakeholder Consultation Requirements

2.3.5. IDFC Members' Requirements for Climate-related Stakeholder Consultation and Disclosure

IDFC requirements for stakeholder consultation and disclosure are generic and procedural and do not generally include requirements for such consultation with respect to climate related issues. However the elaborate consultation procedures that apply to projects in general, do not preclude the se of stakeholder consultation with respect to climate-related issues. The single exception found among this group of IDFC Members if KfW's requirement that during the preparation, relevant bodies and agencies of the partner countries which are responsible for environmental, social and climate issues are to be consulted. Where major mitigation and/or compensation measures are to be expected, the costs of such measures have to be taken into account in the economic feasibility study and included in the funding scheme.

2.3.6. IDFC Members' Requirements for Management of Climate Impacts

Most of the IDFC members have robust and diverse requirements for mitigation of and adaptation to climate impacts and risks. Such requirements may take the form of benchmarking (JBIC, DFC), a Climate Vulnerability and Adaptation Assessment and Management Plan (DBSA; use of clean technology (DFC) or alternatives analysis (NAFIN). See Table 15 for the specific requirements of the IDFC members. See Annex, Table 15, IDFC Members' Requirements for the Management of Climate Impacts and Risks

2.3.7. IDFC Members Monitoring and Reporting of Climate-related Impacts and Risks

There have been considerable international efforts to harmonize GHG monitoring and reporting protocols for several years under the auspices of diverse organizations and some progress has been made. However, IDFC Members continue to use a broad variety of monitoring and reporting methodologies and GHG thresholds. It is likely that much IDFC reporting is converted to some common formats for aggregation at the international level; however such common formats have not been transposed into individual IDFC Members' requirements for client nor into their internal practices.

2.3.8. IDFC Grievance Recourse Mechanisms

Most IDFCs have Grievance Recourse Mechanisms (GRMs) to resolve project-affected parties concerns and grievances arising from the project. For the most part these are designed in much the same way as the MDBs, but with a stronger focus on project level mechanisms rather than complaints at the institutional level, As in the case of the MDBs, the requirement to establish such mechanisms at the project or institutional level are procedural requirements that do not address substantive concerns such as climate change.

It is difficult to envisage how these GRMs could adjudicate climate- related concerns and grievances at the level of an individual project. Given that the climate-related impacts of a project are diffuse and global in scope it would be difficult if not impossible to demonstrable

cause and effect between a project and such impacts which in any case, would be de minimis. With respect to climate risks to a project, to have standing an individual or group of project-affected people would need to demonstrate harm to their assets or livelihoods from the project, and thereby indirectly from adverse effects on the project from existing climate change not adequately anticipated and managed by the project proponent. Such a situation would appear unlikely.

3. Towards Best Practices

This section of the report will draw on the data presented in the comparative analysis of DFIs (both MDBs and IDFC Members) to identify what appear to be best practices among the DFIs included in this report. It should be noted that these DFIs constitute only a small sample of DFIs worldwide and may not be representative. Accordingly, global best practice in mainstreaming climate change into the project cycle may be found outside these DFIs and in some cases in an assessment and mitigation process, such as a holistic project risk assessment that takes place apart from the ESIA process which is the focus of this paper. However, since this paper did focus on the ESIA process, the presentation of best practices will follow the same sequence as the comparative analysis using the successive stages of screening, scoping, impact and risk assessment, mitigation, monitoring and reporting Given that none of the DFIs reviewed in this paper have, in their documentation, set forth their policies and requirements for mainstreaming climate change into information disclosure to locally affect people, public consultation and grievance mechanisms the identification for best practices among them will need to be generated from questionnaires and interviews on existing practices.

In general, it can be said that MDBs have substantially more capacity than IDFC members to mainstream climate impacts and risks into their project cycles. However, MDB environmental and social impact assessment, which provides the main vehicle for mainstreaming have been slow to evolve and tend toward generic approaches in order to address the needs and a highly diverse and demanding set of stakeholders. IDFC Members, although lacking the greater capacity of MDBs benefit from their smaller size, fewer stakeholders and resulting flexibility to enable some to develop more innovative approaches to mainstreaming.

3.1. Screening for Climate Change Risk

There is a broad range of practice with respect to if and how MDBs mainstream climate change impacts and risks into their respective screening and categorization processes. Three trends are apparent. Some MDBs refer explicitly to climate change as a factor in screening and categorizing projects as Category A, requiring the full scope of assessment, management, monitoring reporting to be applied. Others imply either through the language used in defining Category A projects that large scale projects with significant climate change impact and risks would of necessity be screened and categorized A. Others use examples of specific project activities, including many that are known to be greenhouse gas intensive, leaving little room for speculation as to whether climate change is an important factor in the resulting classification. This paper finds that taking explicit and direct reference to climate change impacts and risks amounts to best practice with respect to mainstreaming climate change into the project screening stage of the ESIA cycle.

AfDB is the most explicit in identifying climate change as a determining factor in project screening and categorization.[43] AfDB's Climate Safeguards System is a set of decision-making tools and guides that enable the Bank to assess investments in terms of their vulnerabilities to climate change, and to review and evaluate adaption and mitigation measures. Screening should be done as early as possible, as one element of project categorisation.

- Category 1: Projects may be very vulnerable to climate change and require a detailed evaluation of climate change risks and adaptation measures. Comprehensive, practical risk management and adaptation measures should be integrated into the project design and implementation plans.

- Category 2: Projects may be vulnerable to climate change and require a review of climate change risks and adaptation measures. Practical risk management and adaptation options should be integrated into the project design and implementation plans.

- Category 3: Projects are not vulnerable to climate change. Voluntary consideration of low-cost risk management and adaptation measures is recommended, but no further.[44](EIB, 2018)

For DFC, projects that are considered high risk include those that could result in the significant diminishment benefits that people obtain from priority ecosystems including …carbon storage and sequestration, climate regulation, and protection from natural hazards. New investments are screened for Climate-related Risks and Climate-related Vulnerability.[45] For such projects a desk based climate vulnerability/impact assessment is will utilize publically available tools and databases such as the World Bank Climate Change Knowledge Portal.[46]

3.2. Scoping

The objectives of scoping as explained by CAF are to "identify and focus the environmental and social impact assessment on significant environmental and social issues and to establish a logical roadmap for the assessment process. Scoping is undertaken in the ESIA process after a project has been identified as Category A and prior to conducting a full ESIA for the project. The output of scoping is usually a ToR for the ESIA, tailored to the project. It is encouraged that the ToR for each environmental specialist under project preparatory technical assistance be prepared based on the output of scoping."

[43] EIB takes a similar approach, albeit it in more concise manner. As stated in EIB's Handbook for Environmental and Social Assessment: "In determining the need for a comprehensive environmental and social assessment impacts of the project the promoter will take into account the following criteria into the analysis:……on climate change, contribution of the project to improved resilience, and the impacts of climate change on the project."

[44] In terms of greenhouse gas emissions including from land use, land-use change and forestry. EIB, Environmental and Social Standards, para. 31 https://www.eib.org/en/publications/environmental-and-social-standards

[45] US Executive Order 13677 (September 23, 2014) requires the integration of climate-resilience considerations into all United States international development work.

[46] World Bank, Climate Change Knowledge Portal, https://climateknowledgeportal.worldbank.org/

As noted in the comparative analysis, in general and over time scoping has become less of an independent exercise among MDBs as it has become progressively incorporated into the heart of the ESIA process. As a result two important issues that are best undertaken at the beginning of the ESIA process may not be getting attention on a timely basis with respect to climate change: the identification of associated impacts[47] and alternatives assessment. None of the five MDBs explicitly refer to associated impacts or alternatives assessment in the context of climate change.[48] Best practice would include a defined scoping stage as part of the ESIA process, to take place after screening and prior to impact and risk assessment. During the scoping phase the project proponents and the DFI would undertake and agree on the findings of alternatives assessment and the inclusion of any associated impacts, if any in the detailed ESIA.

With respect to mainstreaming climate change into the formal scoping process, the World Bank is the only MDB to do so explicitly in stating that '[t]he environmental and social assessment, informed by the scoping of the issues, will take into account all relevant environmental and social risks and impacts of the project, including: Environmental risks and impacts, including: (i) those defined by the EHSGs; …those related to climate change and other transboundary or global risks and impacts …" (emphasis added)

[47] Per EIB Such areas include: (i) assets and facilities directly owned or managed by the promoter that relate to the project activities to be financed, (ii) supporting activities, assets and facilities owned or under the control of parties contracted for the operation of the promoters business or for the completion of the project (such as contractors); (iii) associated facilities or businesses that are not funded by the EIB as part of the project and may be separate legal entities yet whose viability and existence depend exclusively on the project or whose goods and services are essential for the successful operation of the project.

[48] AIIB in a typical approach to these issues requires the Client to prepare an analysis of alternatives, including the "without Project" scenarios using baseline and other data. Associated facilities are also required to be taken into account depending on the extent of control that the client can exercise over the associated activity. If and where this is applied directly to climate change it would enrich the ESIA.

3.3. Impact Assessment

As noted, all MDBs and most DFC Members require the client to address the impacts of projects on climate change as part of their environmental and social impact assessments. Some examples of best practice using qualitative measures include:

3.3.1. Baseline Threats

World Bank Guidance note 6, Biodiversity Conservation and Sustainable Management of Living Natural Resources recommends that the ESIA include a description of the existing baseline including:

(i) habitat loss or degradation;

(ii) trends with and without the project; and

(iii) existing and likely future threats, including cumulative impacts (as defined in ESS1 to include climate change). Threats might include, for example, ongoing habitat loss or degradation (including from the decline of overexploited species) from long-standing or recently initiated human activities, existing development plans for the area, or expected climate change.[49]

3.3.2. Environmental and Social Management of Infrastructure Projects

To support its clients for an adequate development of environmental and social studies during the pre-investment phase, CAF has developed a Guide for Environmental and Social Management of Infrastructure Projects, aimed at ten specific sectors.[50]

This guide includes technical guidelines to treat environmental and social subjects that are specific to each sector, as well as information requirements necessary to facilitate CAF´s evaluation and follow-up of said projects.

Thus, the tools and criteria are provided to support decision making related to the feasibility and subsequent environmental and social management of operations.

This is done through a due diligence process that enables to identify and prevent the occurrence of negative impacts on social and environmental components in all the phases of credit operations, as described below:

[49] WB GN 6.11.1(f) Biodiversity Conservation and Sustainable Management of Living Natural Resources

[50] CAF Sustainability Report 2019

3.3.3. Estimation of Prospective Greenhouse Gas Emissions

Most DFIs seek to quantify estimated prospective project impacts through the application of greenhouse gas emissions methodologies51

There are many distinctions that can be made among GHG emissions methodologies. For the purpose of this report the most relevant distinction is between those methodologies used in the ESIA stage of the project cycle and the monitoring/reporting stage. During the ESIA stage when the prospective project has yet to be constructed and operated involves an estimation of the potential range of GHG emissions. The monitoring/reporting stage involves direct or indirect measurement of actual GHG emissions and would likely differ from the ESIA estimates for the same project to any number of variables.

It is beyond the scope of this report to compare methodologies used by DFIs to determine which constitute best practice on a technical basis. Rather it is to identify examples of methodologies that are endorsed by independent organizations such as the UNFCCC as suitable tools to implementing the various global climate change agreements reached under its auspices, most recently the Paris Agreement along, and in particular those subscribed to by the DFIs examined in this report.

Many DFIs directly subscribe or require their clients to use any number of approved methodologies.

- For example, DBSA requires its clients to use GHG estimation methodologies approved by Intergovernmental Panel on Climate Change, international organisations, such as the Asian Development Bank (ADB) or IFC and or relevant host country agencies

- In 2013 the AfDB developed and piloted a tool to track greenhouse gas (GHG) emissions in accordance with the provisions of the UNFCCC The AfDB reports GHG emissions estimated to be produced by the Bank's investments on a project-by-project basis and will report on GHG emissions (gross and net) in project documentation. (2) Graduated reporting: the Bank will initially report on emissions for all Category 1 operations and will use the findings of the GHG tracking tool pilot to gradually refine and expand its reporting on GHG emissions.

- As part of the environmental and social assessment of a prospective project, the World Bank requires the borrower to characterize and estimate sources of air pollution related to the project. This includes an estimate of gross GHG emissions resulting from the project, providing that such estimation is technically and financially feasible. Where the Borrower does not have the capacity to develop the estimate of GHG emissions, the Bank provides assistance to the Borrower. National methodologies for estimating GHG emissions accepted in the context of international agreements on climate change or other methodologies may be used to make the estimate, provided such methodology is acceptable to both the Borrower and the Bank.

[51] World Bank GN 3: References

- AIIB's Draft Proposed Approach for Calculating Net Greenhouse Gas (GHG) Emissions of the Bank's Energy Projects(AIIB, 2018) is based on methodologies jointly developed and adopted by MDBs, individual MDB methodologies and guidance notes, as well as methodologies and guidelines issued by internationally recognized bodies in this domain, notably the United Nations Framework Convention on Climate Change (UNFCCC) Clean Development Mechanism (CDM), the Global Environment Facility (GEF) and the GHG Protocol (GHGP).

It is self-evident from a review of these DFIs that no single methodology is sufficiently robust to estimate in advance of project operation the GHG emissions the diversity of technologies used in DFI-supported projects. Accordingly, best practice requires that diverse methodologies be applied on a case-by-case basis depending on the project or type of project under assessment. Two commonly used approaches stand out for the range of project types for which GHG estimation methods have been developed.

- The World Bank's Environmental Health and Safety General Guideline (EHSG) recommends the use of sector-specific methodologies to estimate GHG emissions, Examples of sectors that have potentially significant emissions include energy, transport, heavy industry, building materials, agriculture, forest products, and waste management. For example the sector specific guideline on Thermal Power includes a table containing the "Typical CO_2 emissions performance of different fuels/technologies used in generating thermal power, including coal, natural gas and oil.52 Per the World

- To complement the World Bank's exclusion of projects designed to produce GHG savings, the Clean Development Mechanism (CDM) under the auspices of the UNFCCC issued its most recent of its CDM Methodology Booklet (11th edition, November 2019). (United Nations, 2019) For each methodology
  - Typical project(s) to which the methodology is applicable;
  - Type(s) of GHG emission mitigation action;
  - Important conditions for application of the methodology;
  - Key parameters that need to be determined or monitored;
  - Visual description of baseline and project scenario

Per the CDM Methodology Booklet project-specific methodologies are divided into two categories: mitigation activity and applied technology. Examples of mitigation activities include renewable energy, low carbon electricity generation, energy efficiency measures, fuel and feedstock switch, GHG destruction, GHG emission avoidance, displacement of a more-GHG-intensive output and GHG removal by sinks. Methodologies based on applied technology are subdivided into three main categories: large-scale CDM project activities small-scale CDM project activities Methodologies for small and large-scale afforestation and reforestation CDM project activities. It is worth noting here that the CDM Methodology

[52] Per the World Bank's Guidance Note 3, Resource Efficiency and Pollution Prevention and Management, the emissions from projects designed to produce GAHG certain projects are designed to produce GHG savings and not considered significant. Accordingly, the Bank does not seek to calculate or record their emissions

is intended to applied specifically to project that are designed to reduce GHG emissions. As such they are of most value to DFIs that have climate change as their primary focus, such as the Global Environment Facility.

3.4. Risk Assessment

As noted above, and to a greater extent than the MDBs the IDFCs focus substantial attention on the risks of existing and potential climate change on the viability of the project along with the impact of the project on climate-related receptors (e.g. biodiversity, ecosystems and public health).

With respect to the risk of climate change to the project KfW requires the client to conduct an in-depth climate adaptation assessment and consideration of the aspects related to climate change adaptation (climate resilience). The in-depth assessment starts with a complete (as far as possible) compilation and analysis of the information about the past, current and projected future climate development. In a second step, impact chains are used to examine the effects that climate change could have on the project.

The outcome of this type of analysis of climate risks and opportunities of climate change is then whether – as a result of unacceptable risks or also due to potential which can be exploited – there is additional need for action in the form of adaptation measures. The adaptation activities identified in this way are integrated into the project as well as into the further phases and the monitoring and evaluation process. This makes the project "climate proof".(KfW, 2011)

NAFIN requires the client conduct a Climate Change Risk Assessment[53] to consider relevant physical risks to the project from climate change for all Category A and, as appropriate, Category B projects, and for all projects, in all locations, when combined Emissions are expected to be more than 100,000 tonnes of CO2 equivalent annually.AfDB requires an assessment of vulnerability to climate change as part of the environmental and social assessment process for its public and private sector operations.

3.5. Management of Climate Change Impacts and Risks

Three key principles animate the use of best practice in the management of climate impacts and risks at the project level. These include application of the "mitigation hierarchy" and the "precautionary principle." And efforts to improve project performance beyond that which is required by minimum DFI standards.

All five MDBs explicitly apply the mitigation hierarchy to all environmental and social risks and impacts including (in most cases implicitly) climate change.

CAF and EIB require clients to apply the precautionary principle.

[53] EPFI, P2, Environmental and Social Assessment

Management of climate change impacts and risks normally requires the preparation of a plan, on either a stand-alone or incorporated basis.

All five MDBs require the client to prepare an environmental and social management plan that would presumably include measures to reduce climate impact and risk. Such a plan could be a stand-alone document or be incorporated into a broader environmental and social management plan.

DBSA requires the client to prepare a Climate Vulnerability and Adaptation Assessment and Management Plan as part of an SESA/ESIA/ ESMS/ESMP. For the World Bank the plan takes the form of an Environmental and Social Commitment Plan (ESCP) and is incorporated into the legal agreement between the Bank and the borrower.

KfW requires the client to conduct an in-depth climate mitigation assessment to consider the potential for greenhouse gas reduction (Emission Saving) serves to avoid substantial greenhouse gas emissions and to identify potential for reducing greenhouse gases.[54] On this basis, options to contribute to greenhouse gas reduction will be developed and if applicable – taking into consideration the developmental impacts and costs – integrated into the project, the economic feasibility study and included in the funding scheme.

All the rove project performance beyond that which is required by law or the MDBs' minimum standards.[55] IDFC Members do not appear to be as proactive in encouraging their clients to achieve emissions reductions beyond required standards.

[54] KFW 4.4.5

[55] AIIB requires borrowers to enhance positive impacts by means of environmental planning and management where possible. EIB requires that the ESMP should be developed so as to enhance positive impacts. CAF requires that recommendations on how to increase the positive impacts of the project shall be suggested. AfDB requires that abatement measures as spelled out for the project may be used to enhance national and local institutions capacity and the World Bank requires that the ESMP should be developed so as to enhance positive impacts

3.6. Best Practices for Monitoring Project Impacts on Climate

Monitoring projects' impacts on climate change during the operational phase normally takes the form of monitoring actual GHG emissions as distinguished from the estimation of such emissions during the impact assessment phase of the ESIA process. Some best practices implemented by DFIs during the operational phase include:

- Including both direct(EPA, 2018)[56] and indirect[57] emissions associated with off-site production of electricity used by the Project (DBSA
- Monitoring emissions on both a gross and net basis (AfDB)
- Using third parties to monitor or validate emissions reporting (CAF)
- Developing specialized monitoring technologies for particular industries (World Bank)[58]

Using internationally agreed protocols to facilitate harmonization across DFIs and other institutions (NAFIN)

3.7. Best Practices for Reporting on Climate Change Impacts

The following are some examples of best practice for reporting on projects' impacts on climate.

- Full disclosure of information in line with the DFI's Disclosure and Access to Information Policy (AfDB, DBSA)
- Graduated reporting based on scale of project and estimated emissions
- (AfDB, World Bank)
- Use internationally recognized methodologies. (AIIB, DBSA, World Bank)

[56] Direct carbon emissions come from sources that are directly from the site that is producing a product. These emissions can also be referred to as scope 1 and scope 2 emissions.
Scope 1 emissions are emissions that are directly emitted from the site of the process or service.] An example for industry would be the emissions related to burning a fuel on site. On the individual level, emissions from personal vehicles or gas burning stoves would fall under scope 1.

Scope 2 emissions are the other emissions related to purchased electricity, heat, and/or steam used on site. In the US, the EPA has broken down electricity emission factors by state.

[57] Indirect carbon emissions are emissions from sources upstream or downstream from the process being studied, also known as scope 3 emissions.[21] EPA, OA, US (23 December 2015). "Overview of Greenhouse Gases | US EPA". *US EPA*.
Examples of upstream, indirect carbon emissions may include: Transportation of materials/fuels
- Any energy used outside of the production facility
- Wastes produced outside of the production facility

Examples of downstream, indirect carbon emissions may include: Any end-of-life process or treatments
- Product and waste transportation
- Emissions associated with selling the product

[58] World bank Group Environment, Health and Safety Industry Guidelines

Examples of internationally recognized methodologies include:

- The Greenhouse Gas Protocol (GHGP) provides accounting and reporting standards, sector guidance, calculation tools, and trainings for business and government. It establishes a comprehensive, global, standardized framework for measuring and managing emissions from private and public sector operations, value chains, products, cities, and policies.[59]

- The European Union Climate Monitoring Mechanism reporting covers emissions of seven greenhouse gases (the greenhouse gas inventory) from all sectors: energy, industrial processes, land use, land use change and forestry, waste, and agriculture[60]

- The ISO 14064 standards provide governments, businesses, regions and other organizations with an integrated set of tools for programs aimed at measuring, quantifying and reducing greenhouse gas emissions. These standards allow organizations take part in emissions trading schemes using a globally recognized standard. ISO 14064 is comprised of three standards, respectively detailing specifications and guidance for the organizational and project levels, and for validation and verification.[61]

[59] World Resources Institute, Greenhouse Gas Protocol, https://www.wri.org/our-work/project/greenhouse-gas-protocol

[60] European Commission, Emissions monitoring & reporting, https://ec.europa.eu/clima/policies/strategies/progress/monitoring_en

[61] Carbon Action, What is ISO 14064? https://www.carbonaction.co.uk/carbon-trust-standard/what-is-iso-14064

Conclusions

Public development finance is essential for meeting our climate change goals given that private markets often fail at incorporating the social costs of their actions and tend to shy away from making long-term investments. To fill that gap, Development Finance Institutions (DFIs) have made a number of pledges to align their operations to the Paris Climate Agreement and broader climate goals. In this paper, we set out to examine the extent to which these pledges have become mainstreamed across what is referred to as the 'project cycle' of the development finance process.

In this report, we analyze the extent to which those official commitments and principles have become manifest in the regular project cycle operations of a presentative sample of DFIs operating across the globe. As defined by the World Bank "the project cycle is the framework used to design, prepare, implement, and supervise projects." For both MDBs and IDFC members we analyze the strategy, roles, tools and techniques used to mainstream climate change in their operations at the project level. For each DFI and for the two sets of DFIs together this involves three levels of analysis (1) DFI strategies on climate change as they pertain to mainstreaming climate change into their respective project operational structures; (2) their roles in facilitating their clients' efforts to meet the requirements applied to them; and (3) the actual requirements applied to their clients by each DFI. For this analysis we relied on primary sources: the official ESS policies and borrower requirements as set forth in public documents.

We find that virtually all of the development finance institutions that we studied have incorporated climate change into their project cycles to some degree but there is a real lack of consistency and coordination both within individual DFIs and across them as a whole. Only the European Investment Bank has gone so far as to end all fossil fuel financing by 2021 and estimate the emissions from all projects, whereas others such as the AIIB and JICA are just beginning to exclude coal financing. Many DFIs such as the Development Bank of South Africa and NAFIN in Mexico, have opened up new and innovative clean energy financing programs. Most however are yet to incorporate physical and transition climate risk analysis into project assessment and examinations of overall DFI balance sheets. We also find that many DFIs lack transparency about their climate change policies and record. What is more, we find that it is harder to hold DFIs accountable to their climate pledges because affected parties lack the legal standing to file grievances

Although many DFIs are beginning to move in the right direction they need to scale their ambition, coordinate their actions, and be held accountable. The first summit of all public development banks to be held in November 2020 is a perfect opportunity to do just that. DFIs need to move beyond general pledges of alignment to compulsory commitments with clear targets and timetables for action. A summit like this also presents an opportunity for coordinated action as well. Where appropriate DFIs can join forces on financing climate transitions and sharing best practices with each other along the way. Finally, strong mechanisms for transparency and accountability should be erected at local, national, and global levels to ensure that DFIs are meeting their commitments.

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Annex. Table 1-15

Table 1. Key Stages of the Environmental and Social Assessment as Relevant to Climate Change

Stage	Environmental and Social Assessment/Management	Climate-related Activity
Screening	Assessment of Project Environmental or Social Sensitivity Categorization	Determination of relative scale of potential climate impact of the project and/or risk of climate change to project
Scoping	Assessment of Project Footprint Associated Impacts[62] Project alternatives[63]	Identify associated impacts that could generate climate impacts Assess project alternatives (siting, technology) that could avoid or minimize climate impacts, including potential climate impacts without the project
Impact and Risk Assessment	Detailed assessment of environmental and social impacts compared to baseline conditions	Detailed assessment of climate-related impacts and risks compared to baseline conditions
Management of Environmental and Social Impacts and Risks	Preparation of Environmental and Social Management Plan (ESMP) including targets and monitoring parameters	Inclusion of climate related impacts and risks ESMPI
Monitoring/Remediation	Monitoring of project outputs and outcomes against ESMP targets and monitoring parameters. Remediation of adverse outcomes	Monitoring of project outputs and outcomes against climate-related targets and monitoring parameters Remediation of adverse outcomes

Table 2. MDBs' Strategic and Policy Commitments to Mainstreaming

MDB	Strategic and Policy Commitment to Mainstreaming
AfDB	"The [Integrated Safeguards System] (ISS) seeks to… [a]dopt good international practice, including on climate change;(AfDB, 2013)
AIIB	*"The Bank recognizes the challenges presented by climate change and the need to support both mitigation and adaptation measures in a Project facing such challenges."* "Contribute to the design and structuring of projects and programs that incorporate the climate change variable in order to ensure their resilience and sustainability."
CAF	"Proactively cooperate with the initiative'Mainstreaming Climate Action in Financial Institutions' "Contribute to the design and structuring of projects and programs that incorporate the climate change variable in order to ensure their resilience and sustainability."
EIB	"Mainstream climate risk considerations generally into the project cycle and to promote adaptation projects or projects with adaptation components and measures, in the interests of long term sustainability."
World Bank	*"Within the parameters of a project, the Bank seeks to:… [a]ddress project-level impacts on climate change and consider the impacts of climate change on the selection, siting, planning, design and implementation and decommissioning of projects;"*[64] *"The Bank's vision goes beyond 'do no harm' to maximizing development gains. Where the Borrower's environmental and social assessment has identified potential development opportunities associated with the project, the Bank will discuss with the Borrower the feasibility of including these opportunities in the project"*[65]

[64] A Vision for Sustainable Development, para. 5.

[65] A Vision for Sustainable Development, para. 6

Table 3. Direct Roles and Responsibilities of MDBs for Mainstreaming Climate into Project Operations

MDB	Roles and Responsibilities
AfDB	ND*
AIIB	AIIB assists its Clients in achieving their nationally determined contributions, including through mitigation, adaptation, finance, technology transfer and capacity-building "*It may, through its financings, support Clients' formulation of long-term low greenhouse gas emission development strategies*" "*The Bank supports its Clients in their evaluation of both the potential impacts of the Project on climate change and the implications of climate change on the Project.* "In order to support reporting on greenhouse gas emissions for implementation of the Paris Agreement, the Bank may, at the Client's request, finance measures for the Client to quantify and report to national authorities, in accordance with internationally recognized methodologies and good practice, direct and indirect emissions from Project-related facilities.
CAF	ND*
EIB	For climate-related projects EIB carries out its own assessments of the project's Adjusted Economic and Financial Rates of Return;[66] Carbon Footprint Assessment;[67] Climate Change Vulnerability Assessment;[68] and Carbon Credit Potential Assessment:[69]
World Bank	"*The environmental and social risks and impacts which the Bank will take into account in its due diligence are project-related and include the following… (iii) those related to climate change and other transboundary or global risks and impacts;*"[70]

[66] When appraising the economic case for a project which results in a significant change in GHG emissions, as may be the case with energy, industry or transport projects, the EIB incorporates an economic cost of carbon. This approach, based to a large degree on the evidence around the costs of meeting long term emissions targets, is distinct from the financial price of carbon, such as the spot price on traded markets, which may be used in the financial analysis.

[67] For Investment Loans and fully appraised allocations under Framework Loans, an assessment of the GHG emissions produced as a result of the project, based on proprietary sector-specific methodologies, is systematically carried out and reported for projects emitting more than 100kt CO2eq/yr. in absolute terms or leading to an emission variation of more than 20kt CO2eq/yr.

[68] The EIB has identified sectors expected to be most at risk from future climate change impacts and, starting with these sectors, is developing systematic screening of projects for climate risks. The EIB aims to ensure that potential adverse consequences of projects on the climate change vulnerability of natural ecosystems and human structures are addressed in SEA and EIA best practice.

[69] The potential of a project to generate tradeable carbon credits is assessed. When necessary, technical assistance can be provided to promoters to help them exploit this potential.

[70] ESP, para. 4

Table 4. Respective Roles of MDB and Client for Screening

MDB	MDB and/or Client
AfDB	Joint Effort between AfDB and client
AIIB	AIIB based on information supplied by the client
CAF	Client under CAF Guidance
EIB	Client under EIB Guidance
World Bank	Bank (World Bank, 2017)

Table 5. MDBs' Definitions of Category A Projects

MDB	Definition of Category A Project
AfDB[71]	Category 1 projects are likely to induce significant and/or irreversible adverse environmental and/or social impacts, or to significantly affect environmental or social components that the Bank or the borrowing country considers sensitive. In some cases, projects are included in Category 1 because of their potential cumulative impacts or the potential impacts of associated facilities. (AfDB, 2013)
AIIB	A Project is categorized A if it is likely to have significant adverse environmental and social impacts that are irreversible, cumulative, diverse or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works and may be temporary or permanent in nature.(AIIB, 2016)
CAF	High Environmental and Social Impact Potential; corresponding to projects that are likely to have significant adverse environmental and/or social impacts that are irreversible, diverse, or unprecedented. Impacts may affect an area larger than the sites or facilities subject to physical works[72]
EIB	The level of analysis in the identification process shall be guided by the characteristics, such as the type, scale, and location of the project. The nature, likelihood, and magnitude of the identified impacts and risks as well as their materiality will shape the scope and scale of the environmental and social assessment. The process may conclude that there is a need for a comprehensive environmental and/or social assessment or based on the evaluation of the significance and materiality of the impacts, for specific assessments. (EIB, 2018) A comprehensive environmental and/or social assessment is carried out for projects classified under Annex I of the EU EIA Directive and/or where an ESIA is required by national legislation or for projects where significant impacts and risks on the environment, population, human health and well-being have been determined. These projects require specific formalised and participatory assessment processes. Further details on the content of the comprehensive environmental and/or social assessment are described in the next section.
World Bank	The Bank will classify all projects (including projects involving Financial Intermediaries (FIs)) into one of four classifications: High Risk, Substantial Risk, Moderate Risk or Low Risk. In determining the appropriate risk classification, the Bank will take into account relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the Borrower (including any other entity responsible for the implementation of the project) to manage the environmental and social risks and impacts in a manner consistent with the ESS.(World Bank, 2017)

[71] AfDB uses the numbers 1, 2 and 3 in place of A, B and C.

[72] CAF appends a list of project activities would normally be considered Category A, including several that are directly or indirectly GHG-intensive[72]:

- Construction of pipelines for the transport of gas, oil or chemicals with a diameter of more than 800 mm and a length of more than 40 km.;
- Thermal power stations and other combustion installations with a heat output of 300 megawatts or more / or / electricity generation of 100 megawatts or more;
- Crude-oil refineries, excluding undertakings manufacturing only lubricants from crude oil,
- Installations for the gasification and liquefaction of 500 tonnes or more per day of coal or bituminous shale;
- Installations for storage of petroleum, petrochemical, or chemical products with a capacity of 200 000 tonnes or more;
- Extraction of more than 500 tonnes/day of petroleum for commercial purposes; and
- Extraction of more than 500 000 m3/day of natural gas for commercial use.

(CAF, 2015)

Table 6. MDB definitions of "Associated Impacts"

MDB	Definition of "Associated Impacts"
AfDB	Related or associated facilities dependent on the project that are not funded by the projectand that would not have been implemented if the project did not exist(AfDB, 2013)
AIIB	Associated facilities are not included in the description of the Project set out in the agreement governing the Project, but which, following consultation with the Client, the Bank determines are: (a) directly and materially related to the Project; (b) carried out, or planned to be carried out, contemporaneously with the Project; and (c) necessary for the Project to be viable and would not be constructed or expanded if the Project did not exist[73].
CAF	ND*
EIB	Associated impacts include: (i) assets and facilities directly owned or managed by the promoter that relate to the project activities to be financed, (ii) supporting activities, assets and facilities owned or under the control of parties contracted for the operation of the promoters business or for the completion of the project (such as contractors); (iii) associated facilities or businesses that are not funded by the EIB as part of the project and may be separate legal entities yet whose viability and existence depend exclusively on the project or whose goods and services are essential for the successful operation of the project.
World Bank	The term "Associated Facilities" means facilities or activities that are not funded as part of the project and, in the judgment of the Bank, are: (a) directly and significantly elated to the project; and (b) carried out, or planned to be carried out, contemporaneously with the project; and (c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist. For facilities or activities to be Associated Facilities, they must meet all three criteria. Associated Facilities will meet the requirements of the ESSs, to the extent that the Borrower has control or influence over such Associated Facilities (World Bank, 2017)[74]

**ND= No documentation available*

[73] AIIB makes a further distinction between Associated Facilities Controlled or Not Controlled by the Client. The Bank requires the Client, as part of its environmental and social assessment, to identify and assess the potential environmental and social risks and impacts of Associated Facilities, as follows: To the extent the Client controls or has influence over the Associated Facilities, the Bank requires it to take the following actions:

(a) the Client is required to comply with the requirements of the ESP and ESSs with respect to such facilities, to the extent of its control or influence; and

(b) if the Associated Facilities are financed by another multilateral development bank or bilateral development organization, the Bank may rely on the requirements of such other development partner in place of all or some of the requirements set out in the ESP and ESSs, provided that, in the Bank's judgment, such requirements do not materially deviate from what would otherwise be required under the ESP and ESSs.

(c) If the Client does not control or have influence over the Associated Activities, it identifies in the environmental and social assessment the environmental and social risks and impacts the Associated Facilities may present to the Project.

(d) The Client is required to demonstrate, to the Bank's satisfaction, the extent to which it does not exercise control or have influence over the Associated Facilities by providing details of the relevant considerations.

[74] World Bank Environmental and Social Policy for Investment Project Financing. Paras 10-11.

Table 7. Alternatives Assessment

MDB	MDB Approach to Alternatives Assessment
AfDB	AfDB considers alternatives assessment only in the context of projects requiring physical or economic displacement of project-affected people. Although In theory such displacement may be the result of climate change although this is not articulated in AfDB's policy in which displacement is generally related to expropriation(AfDB, 2013)
AIIB	Examine, all in a comparative manner: (a) alternatives to the proposed Project that are relevant to the stage of the Project's development; and (b) their potential environmental and social risks and impacts; and document the rationale for selecting the particular alternative proposed. Depending on the type of Project, alternatives examined may include: (i) investment alternatives to address the development objective; and (ii) technical alternatives including Project location, design, technology and operation. Consider and document the "without Project" alternative. Assess the alternatives' feasibility of mitigating environmental and social risks and impacts,capital and recurrent costs, suitability under local conditions, and the institutional, trainingand monitoring requirements for alternatives(AIIB, 2016)
CAF	The ESA will .... in an integrated way, assess: Alternatives to improve the selection, location, planning, design, and execution of the project, including the —no project situation, as well as capital costs and recurring costs and comparison between project benefits and project environmental costs ESA Guidelines: Alternatives(CAF, 2015) (a) Alternative sites, processes, designs and operating conditions (b) are considered (c) where these are practicable and available to the developer. (d) The main environmental advantages and disadvantages of these (e) are discussed and the reasons for the final choice given. **V**.1.8. Annex 1.H. Generic Terms of Reference for Alternative Analysis 1. The term —Alternatives, in relation to a proposed activity/project, refers to different means to meeting general purposes and requirements of the activity/project, which may include options or choices to: (i) the property on which or location where the activity/project is intended to be undertaken; (ii) the type of activity to be undertaken; (iii) the design or layout of the activity/project; (iv) the technology to be used in the activity/project; (v) the operational aspects of the activity/project. 2. The Analysis of alternatives is an integral part to the Environmental Assessment process of a Project. Foundation: The Environmental Assessment approach requires going through the investigation, assessment and communication of the potential impact of activities, which should ensure, for the proposed activity/project: (i) investigation of the environment likely to be significantly affected by the proposed activity/project and alternatives thereto; (ii) investigation of the potential impact of the activity/project and its alternatives on the environment, and assessment of the significance of that potential impact; and (iii) investigation of mitigation measures to keep adverse impacts to a minimum, as well as the option not to implement the activity/project. 3. Alternatives to take into consideration include the —no go, —no action or —no project alternative. 4. The assessment of alternatives should at all times include its consideration as a baseline against which all other alternatives should be measured. A suggestion is made to consider at least two alternatives against the no-go option. 5. The Analysis of alternatives shall attach special consideration to options to avoid or minimize: (i) significant degradation of natural habitats; (ii) involuntary resettlement; (iii) adverse effects on Indigenous Peoples. 6. In addition to the kinds of alternatives being listed above in 1. (—Alternative ‖ definition), the Analysis of alternatives may include some other options as described in examples in table below:

EIB	In relation to a proposed activity, [alternatives] means different means of meeting the general purposes and requirements of the activity, which may include alternatives to (i) the property on which or location where it is proposed to undertake the activity; (ii) the type of activity to be undertaken; (iii) the design or layout of the activity; (iv) the technology to be used in the activity; and (v) operational aspects of the activity. (EIB, 2018) No biodiversity-focused impact assessment will be considered valid [without] assessment [of the construction and operation impacts of the various alternatives against the benchmark of the "without-project scenario." A 'without-project' scenario must be established and included in the assessment of alternatives. The 'without-project' scenario—also referred to as a reference scenario, a baseline scenario, or a business-as usual scenario—is a narrative that describes what is expected to happen ...the project is not undertaken.(EIB, 2018) Where impacts cannot be avoided, the promoter will assess potential impacts and, if necessary,implementing mitigation measures and/or any required changes in design, if applicable, providing information, at least on: • proposed project and reasonable alternatives that were studied during the project preparationphases; • recommendation of new alternatives as needed and feasible; (EIB, 2018) [Resettlement Frameworks and Resettlement Plans] need to include measures to ensure that the displaced persons are: effectively consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives which take into account the suggestions made by the affected community as much as possible.(EIB, 2018)
World Bank	"[The World Bank] recognizes that climate change is affecting the nature and location of projects, and that World Bank-financed projects should reduce their impact on the climate by choosing alternatives with lower carbon emissions."(World Bank, 2017) The Borrower will provide full and detailed justification for any proposed alternatives through the environmental and social assessment. This justification must demonstrate, to the satisfaction of the Bank that the choice of any alternative performance level is consistent with the objectives of the ESSs and the applicable EHSGs, and is unlikely to result in any significant environmental or social harm.(World Bank, 2017) Indicative Outline of an ESIA: *Analysis of Alternatives(World Bank, 2017)* • Systematically compares feasible alternatives to the proposed project site, technology, design, and operation—including the "without project" situation—in terms of their potential environmental and social impacts. • Assesses the alternatives' feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of alternative mitigation measures, and their suitability under local conditions; and the institutional, Training, and monitoring requirements for the alternative mitigation measures. • For each of the alternatives, quantifies the environmental and social impacts to theextent possible, and attaches economic values where feasible.

Table 8. MDB Mainstreaming of Climate Change into Impact Assessment[75]

MDB	Climate Change in Impact Assessment
AfDB	The environmental and social assessment covers all relevant direct and indirect cumulative and associated facility impacts identified during the scoping phase… for which there are specific requirements…[such as] greenhouse gases
AIIB	Through its support of projects AIIB assists its clients in achieving their nationally determined contributions, supports their formulation of long-term low greenhouse gas emission development strategies. With respect to biodiversity conservation, ESS 1 requires that the ESIA "[c]onsider direct and indirect Project-related impacts on… climate change."
CAF	"Global and cross-sectorial issues shall be taken into consideration for the design, implementation and evaluation of the project; these issues include at least climate change…"
EIB	"The EIB aims to ensure that potential adverse consequences of projects on the climate change vulnerability of natural ecosystems are addressed in] and EIA best practice." Accordingly "[c]limate change considerations are taken into account at all stages of the project cycle."
World Bank	The assessment will consider…projected climate change impacts.

Table 9. MDB Mainstreaming of Climate Change in Risk Assessment

MDB	Climate Change in Risk Assessment
AfDB	The objective of AfDB's overarching Operational Safeguard 1 on Environmental and social Assessment (OS1), along with the OSs that support it, is "to mainstream environmental and social considerations— *including those related to climate change vulnerability*— into Bank operations and thereby contribute to sustainable development in the region." (emphasis added)[76] Incorporating climate change into development efforts. The Bank requires an assessment of vulnerability to climate change as part of the environmental and social assessment process for its public and private sector operations; any mitigating measures that result from that assessment are included in the operation with measures that result from the larger environmental and social assessment itself.(AfDB, 2013) The objective of AfDB's overarching Operational Safeguard 1 on Environmental and social Assessment (OS1), along with the OSs that support it, is "to mainstream environmental and social considerations— including those related to climate change vulnerability— into Bank operations and thereby contribute to sustainable development in the region." (emphasis added)[77]

[75] As previously noted "impact assessment" in this report refers to the impact of the project on climate change whereas "risk assessment" refers to the effects of climate change on the project.

[76] In addition, among the specific objectives of OS 1, AfDB refers to the need to: "Mainstream environmental, climate change… considerations into Country Strategy Papers (CSPs) and Regional Integration Strategy Papers (RISPs). CSPs and RISPs are country and regional level strategic planning documents that are intended to provide guidance to the project cycle, as distinct from being part of the project cycle. Other specific requirements in OS 1 reference mainstreaming of climate change in the project cycle. (AfDB, 2013)

[77] However, among the specific objectives of OS 1, AfDB refers to the need to: "Mainstream environmental, climate change… considerations into Country Strategy Papers (CSPs) and Regional Integration Strategy Papers (RISPs). CSPs and RISPs are country and regional level strategic planning documents that are intended to provide guidance to the project cycle, as distinct from being part of the project cycle. Other specific requirements in OS 1 reference mainstreaming of climate change in the project cycle.

AIIB	Through its support of projects AIIB assists its clients in achieving their nationally determined contributions[78], supports their formulation of long-term low greenhouse gas emission development strategies; evaluates both the potential impacts of the Project on climate change and the implications of climate change on the Project.
CAF	The identification of effects that can be aggravated by the effect of climate change is of particular importance, especially if expected changes in weather patterns can have an effect on ecosystem functioning." Identify real or potential impacts of projects on the health and quality of natural habitats ...in the area of impact. The identification of the impact on ecosystem services that are provided by natural habitats is of particular importance, specifically those that indirectly benefit society at a local and/or global scale (for instance, preservation of air, soil and hydrological cycles, CO2 storage, climate regulation, and ecosystem equilibrium)."[79] "The expected impacts of climate change in the quality and quantity of natural habitats have raised concerns about current practices of management of resources ....that sustain ecosystem services such as the hydrological cycle or forests that constitute natural carbon sinks. The risk management Program-PrEvEr has, as lines of action, established support for projects and activities to do with: i) El niño-related risk management and vulnerability reduction; ii) adaptation and vulnerability to climate change; iii) contingent treatment in response to disasters..."(CAF, 2008) In addition, CAF requires that an "Ecosystem Management Plan that includes....climate change: expected changes in average temperature and precipitation patterns."
EIB	EIB is committed by the EU to "mainstream[ing] climate risk considerations generally into the project cycle and to promote Adaptation projects or projects with adaptation components and measures, in the interests of long term sustainability." "Climate change vulnerability assessment: The EIB has identified sectors expected to be most at risk from future climate change impacts and, starting with these sectors, is developing systematic screening of projects for climate risks.
World Bank	"The environmental and social assessment will consider potentially significant project-related risks including climate change... adaptation and resilience issues." In addition, communities that are already subjected to impacts from climate change may also experience an acceleration or intensification of impacts due to project activities."

[78] In this instance, nationally determined contribution" likely refers to countries rather than project sponsors. However, as the rest of the statement makes clear is through it support for projects that AIIB seeks to support this larger objective.

Table 10. MDB Management of Climate Change Impacts and Risks

MDB	Avoidance	Minimization	Mitigation and Adaptation	Offset Compensation Restoration	Enhance Positive Impacts
AfDB	Avoid or, if adverse impacts on the environment and on affected communi-ties;(AfDB, 2013)	Avoid or, if avoidance is not possible, minimise… adverse impacts on the environ-ment and on affected communities;	Avoid or, if avoidance is not possible,… mitigate adverse impacts on the environment and on affected communities;	Avoid or, if avoidance is not compensate for adverse impacts on the environment and on affected communities	Project activities may also seek to enhance critical habitat and protect and conserve biodiversity (that is, have a positive conservation ou come). (AfDB, 2013)
AIIB	Apply a mitigation hierarchy in the environmental and social assessment, by: (i) anticipating and avoiding risks and impacts;	Where avoidance is not possible, apply pollution prevention and control technolo-gies and practices under the Project consistent with international good practice, as reflected in internationally recognized standards, such as the World Bank Group's Environ-mental, Health and Safety Guidelines (EHSGs)[80]., to minimize or control the intensity or load of pollutant emissions and discharges, including direct and indirect greenhouse gas emissions[81]	Where avoidance or minimization is not possible, mitigate risks and impacts to acceptable levels"Develop … adaptation measures to reduce risk of change, as relevant	Where residual risks or impacts remain, compensate for or offset them, where technically and financially feasible.[82]	Where possible, enhance positive impacts by means of environmental planning and management

[80] Environmental, Health, and Safety Guidelines (EHSGs) are technical reference documents with general and industry-specific state-ments of Good International Industry Practice. The EHSGs contain the performance levels and measures that are generally consid-ered to be achievable in new facilities by existing technology at reasonable cost. For complete reference, consult the World Bank Group Environmental, Health, and Safety Guidelines.

[81] AIIB ESP, 27

[82] EIB, ESS 3

CAF	The purpose of Guidelines and Procedures on Environmental and Social Safeguards is to support environmentally sustainable development by ensuring that the CAF/GEF-funded project incorporates measures as may be deemed to be necessary and sufficient to avoid … any adverse impacts to people and the environment.[83] Apply precautionary principle	The purpose of Guidelines and Procedures on Environmental and Social Safeguards is to support environmentally sustainable development by ensuring that the CAF/GEF-funded project incorporates measures as may be deemed to be necessary and sufficient to minimize…, any adverse impacts to people and the environment.	The purpose of Guidelines and Procedures on Environmental and Social Safeguards is to support environmentally sustainable development by ensuring that the CAF/GEF-funded project incorporates measures as may be deemed to be necessary and sufficient to abate… any adverse impacts to people and the environment	The purpose of Guidelines and Procedures on Environmental and Social Safeguards is to support environmentally sustainable development by ensuring that the CAF/GEF-funded project incorporates measures as may be deemed to be necessary and sufficient, where appropriate, offset any adverse impacts to people and the environment.	Recommendations on how to increase the positive impacts of the project shall be suggested. Abatement measures as spelled out for the project may be used to enhance national and local institutions capacity
EIB	The EIB requires the application of the precautionary principle The ESMP is expected to: … prevent the negative impacts that could be avoided;	Apply the mitigation hierarchy by identifying measures to be taken to …reduce significant adverse stakeholders, and the environment.	The ESMP is expected to mitigate the negative impacts that could not be avoided but could be reduced	The ESMP is expected to compensate/ remedy the negative impacts that could neither be avoided nor reduced	The ESMP should be developed so as to enhance positive impacts

[83] Justification for the application of the Precautionary Principle. The analysis should identify the source of irreversibility of impacts expected from the project (for instance based on the fragility and complexity of ecosystems to be impacted, or the risk for endangered species in the area of intervention), and of uncertainty about the effects of the project (for instance, the lack of information and/or scientific knowledge). (b) An assessment of the approach proposed by the proponent of the project to overcome the sources of irreversibility and/or uncertainty, and analysis of alternatives for the project. (c) A recommendation about the convenience of the implementation of the project under the application of the Precautionary Principle. CAF….VI.3.8

World Bank	These Standards establish objectives and require-ments to avoid, minimize, reduce and mitigate risks and impacts, and where significant residual impacts remain, to compensate for or offset such impacts.	These Standards establish objectives and requirements to ...minimize, risks and impacts...	These Standards establish objectives and requirements to... mitigate risks and impacts... The project will apply the relevant requirements of the Environmental Health and Safety Guidelines (EHSGs) performance level is consistent with the objectives of the ESSs and the applicable EHSGs, and is unlikely to result in any significant environmental or social harm. [84] Carbon capture and storage	Where significant residual impacts remain, to compensate for or offset such impacts.	The assessment will evaluate the project's potential environmental and social risks and impacts; examine project alternatives; identify ways of improving project selection, siting, planning, design and implementation in order to apply the mitigation hierarchy for adverse environ-mental and socia impacts and seek opportunities to enhance the positive impacts of the project.

[84] Per World Bank ESS 3 sectors that may have potentially significant emissions of greenhouse gases (GHGs) include energy, transport, heavy industry (e.g. cement production, iron / steel manufacturing, aluminum smelting, petrochemical industries, petroleum refining, fertilizer manufacturing), agriculture, forestry and waste management

Table 11. IDFC Members' Screening and Categorization Requirements

IDFC Member	Screening	Categorization
DBSA	DBSA applies appropriate measures to screen for greenhouse gas emissions, climate change impacts, climate change mitigation and adaptation measures and carbon emission estimates	
JBIC		
KFW	KfW employs a stand- alone "Climate Screening" procedure by which "climate relevance" is assessed by with regard to reducing greenhouse gas emissions; climate change adaptation; and whether the FC-measure can contribute towards significantly enhancing the adaptive capacity of target groups or ecosystems; and if positive impacts of climate change could be enhanced for the project's development goals, where appropriate. In addition, KfW screens potential projects against a list of coal and other hydrocarbon-based activities that it will not support	
NAFIN		NAFIN, categorizes the Project based on the magnitude of potential environmental risks and impacts,[85] including those related to ….climate change.[86]
SRI		(SRI) screens any large power plant into the High Risk category[87]
US DFC		Projects that are considered high risk include those that could result in the significant diminishment benefits that people obtain from priority ecosystems including …carbon storage and sequestration, climate regulation, and protection from natural hazards. New investments are screened for Climate-related Risks and Climate-related Vulnerability.[88] For such projects a desk based climate vulnerability/impact assessment will utilize publically available tools and databases such as the World Bank Climate Change Knowledge Portal.[89]

[85] Such categorisation is based on the International Finance Corporation's (IFC) environmental and social categorisation process. The categories are:
Category A – Projects with potential significant adverse environmental and social risks and/or impacts that are diverse, irreversible or unprecedented;
Category B – Projects with potential limited adverse environmental and social risks and/or impacts that are few in number, generally site-specific, largely reversible and readily addressed through mitigation measures2;
and Category C – Projects with minimal or no adverse environmental and social risks and/or impacts.

[86] EPFI P1, Review and Categorization.

[87] SRI, Project Environmental and Social Management System (ESMS) Guidelines

[88] US Executive Order (EO) 13677 (September 23, 2014) requires the integration of climate-resilience considerations into all United States international development work. Although President Trump has announced his intention to rescind the EO it is unclear whether any official action has been taken to do so.

[89] World Bank, Climate Change Knowledge Portal, https://climateknowledgeportal.worldbank.org/

Table 12. IDFC Members' Use of Scoping to Identify Potential Climate Change Impacts

IDFC Member	Use of Scoping to Identify Potential Climate Change Impacts
DBSA	In addition to the direct and immediate impact of projects, derivative, secondary, and cumulative impact and impact of associated facilities are also to be examined and investigated to a reasonable extent.
JBIC	ND
KFW	ND
NAFIN	ND
US DFC	DFC reviews the risks and impacts identified by the applicant, within the applicant's defined area of influence.

Table 13. IDFC Members Mainstreaming of Climate Change into

Impact and Risk Assessment

IDFC Member	Impact and Risk Assessment
DBSA	Clients are required to detail any greenhouse gas emissions, and carbon emission estimates emanating from the project and any associated project activities. DBSA also requires the ESIA to include cumulative impact assessment which considers cumulative project impacts from relevant past, present, foreseeable developments and unplanned but predictable project related activities that may occur later or at a different location.[90] Clients are required to detail the likely climate change impacts to influence the project and detail appropriate climate change mitigation and adaptation measures to be implemented.
JICA	ND
KFW	• The objective of the climate assessments is to anticipate and appraise any foreseeable impacts and risks a project may have on the climate, and to identify, avoid and/ or minimise adverse impacts and risks to an acceptable level, or if unavoidable, to offset and compensate for these impacts and risks.[91] • With respect to the risk of climate change to the project KfW requires the client to conduct an in-depth climate adaptation assessment and consideration of the aspects related to climate change adaptation (climate resilience). • The purpose of the risk assessment is to ensure that despite the forecasted effects of climate change, the desired developmental impacts of the project measure are not threatened. • Furthermore, the assessment should analyse whether the partner country's climate adaptation capacity can be further increased within the scope of the project.
NAFIN	• The client is required to conduct a Climate Change Risk Assessment[92] to consider relevant physical risks to the project from climate change for all Category A and, as appropriate, Category B projects, and for all projects, in all locations, when combined Emissions are expected to be more than 100,000 tonnes of CO2 equivalent annually.
SRI	ND
US DFC	The following general topics, when applicable, are examined during the environmental and social assessment review: Environmental issues, including …emissions of Greenhouse Gases…

[90] DBSA. ESS 1.3.3

[91] KFW, 4.1.2

[92] EPFI, P2, Environmental and Social Assessment

Table 14. IDFC Members' Climate-related Disclosure and Stakeholder Consultation Requirements

IDFC Members	Climate-related Disclosure Requirements	Climate-related Stakeholder Consultation Requirements
DBSA	ND	
JICA	ND	
KfW	For the sake of transparency, the executing agency is required to disclose relevant information on the environmental and social assessment of the FC-measure and a non-technical summary via appropriate media channels at an accessible location and in a timely, culturally-appropriate manner In relevant cases, the in-depth climate assessment (e.g. those affected, the public) should also be made accessible to the interested public.[93]	
NAFIN	The client is expected to include assessments of potential adverse climate change risks as part of the ESIA or other Assessment, with these included in the Assessment Documentation.[94]	
SRI	ND	
US DFC	If the Project is screened as Category A, Applicants are required to submit an ESIA (and for existing projects a Baseline Audit) for public disclosure on the DFC web site. ESIAs and Baseline Audits submitted for public disclosure must be in English or accompanied by an English-language translation.	

[93] KFW, 4.9.1

[94] EPFI, P10, Reporting and Transparency

Table 15. IDFC Members' Monitoring and Reporting of Climate-related Impacts and Risks

IDFC Member	Monitoring of Climate-related Impacts and Risks	Reporting of Climate-related Impacts and Risks
DBSA	• As a condition of DFC support projects quantify the significant indirect emissions associated with off-site production of electricity used by the Project. - For projects that are expected to or currently produce more than 25,000 tonnes of CO_2 equivalent annually, the client quantifies direct emissions from the facilities owned or controlled within the physical project boundary as well as indirect emissions associated with the off-site production of energy used by the project.[95] - Quantification of GHG emissions will be conducted by the client annually in accordance with internationally recognized methodologies and good practice - The quantification of emissions should consider all significant sources of greenhouse gas emissions, including non-energy related sources such as methane and nitrous oxide, among others. - Provide DBSA with project gross and net GHG emissions estimates and any emission savings (due to alternative site, technological use or other intervention) and the cost of this intervention.	• Report on emissions using a suitable methodology compliant with the United Nations Convention on Climate Change and aligned to International industrial Good Practice guidelines • The Intergovernmental Panel on Climate Change, international organisations, such as the Asian Development Bank (ADB) or IFC and or relevant host country agencies provide estimation methodologies • Provide a project Development Results Framework to the DBSA for use in its Project and GHG Tracking Tools to inform DBSA public reporting. .
JBIC	ND	
KFW	- Attention should be paid to enforceability and practicability of the monitoring tools during construction, commissioning and operation and, if relevant, also during decommissioning. - In order to monitor the environmental, social and climate impacts and risks of a project measure, it is particularly important to track the implementation of the agreed mitigation measures and monitoring procedures. If an ESMP has been developed, it will be used as a basis for monitoring. - The implementation of the mitigation measures identified in the in-depth climate assessment to avoid or mitigate adverse impacts and risks, as well as – where required – offset measures, are be stipulated as binding for the executing agency in the financing agreements. - KfW Development Bank requires regular reports upon the implementation and corrective action taken if measures have not been implemented adequately or if the objectives of these measures have not been achieved.[96]	- KFW requires that in order to implement an effective monitoring of any adverse climate impacts and risks, the executing agency and/or the recipient of the funds have/has to agree to certain reporting and notification requirements and implement appropriate monitoring tools.

[95] Refers to the off-site generation by others of electricity, and heating and cooling energy used in the project.

[96] KFW, 4.4.10

NAFIN	- NAFIN requires that GHG emissions be calculated in line with the GHG Protocol [97] to allow for aggregation and comparability across Projects, organisations and jurisdictions. Clients may use national reporting methodologies if they are consistent with the GHG Protocol. The client will quantify Scope 1 and Scope 2 Emissions.[98] - Aggregate greenhouse gas emissions from all facilities should be quantified annually in accordance with internationally recognized methodologies in particular those contained in the following World Bank EHSGs: Liquefied Natural Gas Facilities; Onshore and Offshore Oil and Gas Development.
SRI	ND
US DFC	- DFC requires applicants to demonstrate that measures to reduce significant, Project-related Greenhouse Gas emissions were evaluated and that technically and financially feasible and cost effective measures were incorporated into the final design of their Project: - As a condition of DFC support, all projects that are expected to produce or currently produce Direct Emissions exceeding 25,000 metric tonnes of CO_2eq per year must quantify and annually report to DFC the Direct Emissions from their Project. - As a condition of DFC support projects quantify the significant indirect emissions associated with off-site production of electricity used by the Project. - For projects that are expected to or currently produce more than 25,000 tonnes of CO2equivalent annually, the client quantifies direct emissions from the facilities owned or controlled within the physical project boundary as well as indirect emissions associated with the off-site production of energy used by the project.[99]

[97] The GHG Protocol is based on a comprehensive globally standardized framework to measure and manage greenhouse gas (GHG) emissions from operations. Available from ghgprotocol.org.

[98] EPFI, Annex A: Quantification and Reporting

[99] Refers to the off-site generation by others of electricity, and heating and cooling energy used in the project.