



# Strategic Climate Change Mitigation Program

Title: Strategic Climate Change Mitigation Program  
Publisher: CAF  
Legal Deposit: Ifi74320143003764  
ISBN: 978-980-7644-64-8

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## Abbreviations

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<b>AFD</b>	French Development Agency
<b>ADB</b>	Asian Development Bank
<b>BNDES</b>	Brazilian Development Bank
<b>CAF</b>	CAF - development bank of Latin America
<b>CDB</b>	Caribbean Development Bank
<b>CDM</b>	Clean Development Mechanism
<b>CER</b>	Certified Emission Reduction
<b>CNCF</b>	CAF-Netherlands CDM Facility
<b>COP</b>	Conference of the Parties
<b>DEG</b>	Deutsche Investitions- und Entwicklungsgesellschaft (Entrepreneurial Development Cooperation)
<b>DNA</b>	Designated National Authority
<b>DOE</b>	Designated Operational Entity
<b>ECLAC</b>	Economic Commission for Latin America and the Caribbean (Spanish: CEPAL)
<b>ERPA</b>	Emissions Reduction Purchase Agreement
<b>ERU</b>	Emission Reduction Unit
<b>ETS</b>	Emissions Trading Scheme
<b>FVA</b>	Framework for Various Approaches
<b>GEF</b>	Global Environment Facility
<b>GGGI</b>	Global Green Growth Institute
<b>GHG</b>	Greenhouse Gas
<b>IBRD</b>	International Bank for Reconstruction and Development
<b>ICF</b>	International Climate Fund
<b>IDB</b>	Inter-American Development Bank

<b>IDFC</b>	International Development Finance Club
<b>KfW</b>	Kreditanstalt für Wiederaufbau (German Development Bank)
<b>LAC</b>	Latin America and the Caribbean
<b>LAIF</b>	Latin American Investment Facility
<b>LCDS</b>	Low Carbon Development Strategies
<b>LoI</b>	Letter of Intent
<b>LULUCF</b>	Land Use, Land-Use Change and Forestry
<b>MoU</b>	Memorandum of Understanding
<b>MRV</b>	Measurement, Reporting and Verification
<b>NAMA</b>	Nationally Appropriate Mitigation Action
<b>NMA</b>	Non-market Approach
<b>NMM</b>	New Market Mechanism
<b>OLADE</b>	Latin American Energy Organization
<b>PLACC</b>	Latin American Climate Change Program
<b>PMR</b>	Partnership for Market Readiness
<b>RCCC</b>	Regional Colaboration Center
<b>REDD+</b>	Reduced Emissions from Deforestation and Degradation “plus” conservation, the sustainable management of forests and enhancement of forest carbon stocks
<b>SIFEM</b>	Swiss Investment Fund for Emerging Markets (SIFEM)
<b>UNDP</b>	United Nations Development Programme
<b>UNEP</b>	United Nations Environment Programme
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VCS</b>	Voluntary Carbon Standard
<b>VER</b>	Verified Emission Reduction



# Executive Summary

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**Amongst its key objectives, CAF -development bank of Latin America-** counts the transition to low-carbon economies. Within this scope, CAF's Environmental and Climate Change Department established the Latin American Climate Change Program (PLACC) which encompasses three complimentary sub-programs related to mitigation, adaptation, and carbon markets. CAF also partner with UNFCCC to form the Regional Colaboration Center.

During the recent past, the state of play in the international mitigation policy arena has changed drastically. Meanwhile, several Latin American countries have begun to develop their own programs, policies, regulations and initiatives for climate change mitigation. However, the degree of engagement differs between countries. Some have implemented hardly any activities while others are considered as active players. In general, Latin American countries can be considered to be at the forefront of the application of new mitigation approaches and use a wide range of public policies and programs for climate change mitigation.

Within this diverse and dynamic mitigation environment, CAF seeks to develop its new climate change mitigation strategy to emphasize its role as a key player in mitigation activities in LAC and worldwide throughout the coming years. This strategic report aims at assisting CAF in the development of the structure and focus of its new Climate Change Mitigation Program for the period 2015-2017. This strategy seeks to follow CAF's vision, mission and goals regarding mitigation of climate change and ensure that CAF keeps on playing a key role in mitigation activities throughout LAC.

In chapter 1, the strategic report document briefly presents CAF's current activities related to climate change. In chapter 2, it provides an overview of the most relevant climate change mitigation activities in LAC. Up to this point, the information presented should be considered as a snapshot of the context worldwide, in the Latin American region and within CAF. Using this information as a basis and through regular interactive exchanges, several strategic options were defined, assessed and selected (chapter 3). Finally, the strategic report proposes an action plan with specific action lines and action paths to foster decarbonized economies in CAF's shareholder countries (chapter 4).

## **Introduction - CAF and its Climate Change Context**

CAF is one of the most active players in LAC's climate change arena. The bank has contributed significantly to the development of early approaches in climate change mitigation, such as the Clean Development Mechanism (CDM). Nowadays, it has become increasingly involved in the support of new mitigation approaches such as Nationally Appropriate Mitigation Actions (NAMAs) and low emission development strategies (LEDS). CAF is also involved in climate change adaptation, and has developed a specific climate change adaptation program.

Additionally, the Environmental and Climate Change Department assists all other business units of CAF in the consideration of climate change related aspects and contributes substantially to the development of general initiatives throughout the whole bank. Added to this, CAF partnered with UNFCCC to create a Regional Collaboration Centre - RCC for LAC in order to promote new niches of carbon markets, maintain and increase the use of tools of the CDM and assist CDM projects and DOEs. It is planned that before the end of 2014 the RCC be involved in other mitigation activities such as the development of NAMAs.

CAF is an active participant in the *International Development Finance Club (IDFC)*, which brings together bilateral, regional, and national development banks around the globe providing a platform for working closely together, exchanging best practices and experiences. CAF currently heads the Special Interest Group of Green and Climate Finance mapping and the Sustainable Infrastructure Working Group at IDFC, along with participating in other working groups. The Green and Climate Finance mapping report for 2013 show that together the IDFC members contributed with USD 99 billion of new commitments for green and climate projects. CAF's green and climate new commitments for 2013 totalled USD 2.77 billion, 22,9% of all new commitments for the year.

CAF is a well-respected strategic partner in climate change mitigation and has excellent relationships with internationally renowned players active in climate change. CAF aims at serving as a catalytic intermediary of international climate finance channeled to policies, programs, strategies, and projects.

## **State of Play of Climate Change Mitigation in LAC**

This report provides a comprehensive and unique overview of the mitigation potential and activities in CAF's shareholder countries. This is derived from a thorough country assessment based on quantitative data analysis as well as on questionnaires and interviews with national government institutions. Furthermore, a selected group of international financial institutions and development organizations have been examined in light of the cooperation potential in mitigation activities in LAC. Specific programs, initiatives, and potential cooperation partners are analyzed in depth and are described in more detail.

Having analyzed LAC's mitigation potential, the countries' current and planned activities and programs, the funding and co-financing opportunities and the cooperation possibilities with the main players in the region's mitigation arena, it becomes evident that LAC represents a proactive region when it comes to designing and implementing climate change mitigation programs and activities. The international climate change context varies constantly. Information presented in this report should be considered only as a snapshot of the context at the time of preparation, and the main focus should be kept on the formulation of mid-term and long-term strategies for CAF.



## Design of CAF's Strategic Climate Change Mitigation Program

The strategy development process started with the definition of the vision, mission, values and objectives of CAF's strategic climate change mitigation program. This served as a guide for the identification of the individual strategies. The strategies were selected out of a set of eight strategic options which were identified based on CAF's current expertise and experience, the analysis of the state of play of climate change mitigation activities in LAC and inputs received through interviews with climate funds and development organizations. These sources of information were combined in a match assessment for each country comparing the country's high-emitting sectors with the fields in which the country has taken mitigation action. The strategic options balance high potential countries and sectors with countries and sectors where so far little activities have been implemented.

This set of strategic options was discussed with CAF in an interactive workshop in Bogota in December 2014. The following five strategies were finally selected.

■ **Table 1**

Strategies of CAF's Strategic Climate Change Mitigation Program	
Sectorial strategies:	Programmatic strategies:
1) Energy Efficiency 2) New Renewables 3) Transportation	1) Strategic partnerships 2) NAMA development

These strategies were defined in detail with regard to their institutional aspects, technical aspects, financial aspects and synergies/interaction with other strategies.

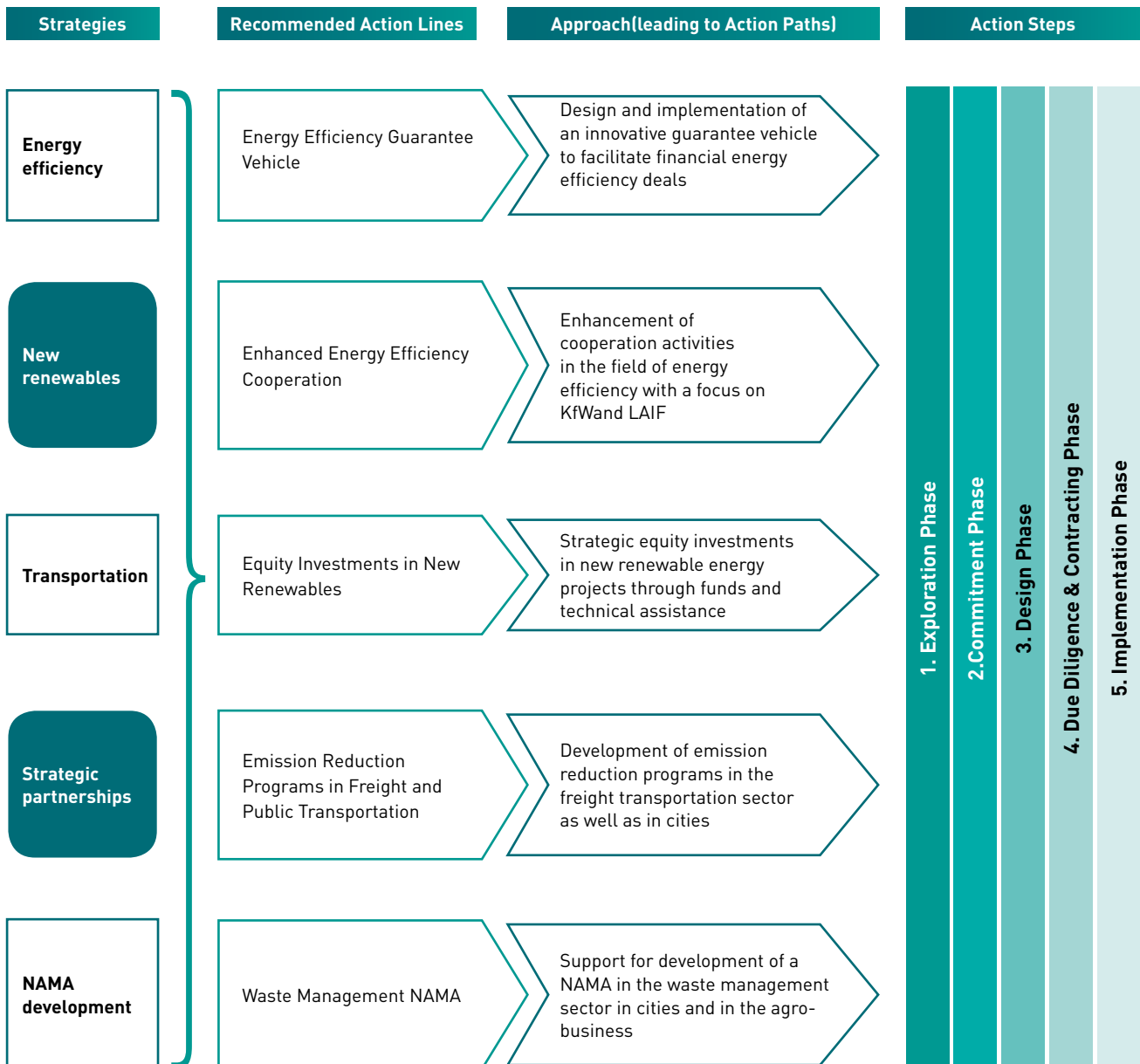
## Action Plan of CAF's Strategic Climate Change Mitigation Program

In a final step, a comprehensive action plan was developed. Based on each strategy, specific action lines were recommended, namely an *Enhanced Energy Efficiency Cooperation*, *Energy Efficiency Guarantee Vehicle*, *Equity Investments in New Renewables*, *Emission Reduction Programs in Freight and Public Transportation* and a *Waste Management NAMA*. These action lines are aimed at reflecting both, continuity with CAF's previous mitigation activities as well as a certain degree of innovation. For each of these action lines, specific action paths were identified and described in relation to their sectors, potential partners/sources of funding, target countries and specific products/services to be offered by CAF. The development process of these action

paths was organized in five phases (Exploration Phase, Commitment Phase, Design Phase, Due Diligence and Contracting Phase, Implementation Phase) and generically described in a Gantt chart throughout the lifetime of the strategy.

The following graph presents an overview of the process inherent to the elaboration of the action plan of CAF's strategic climate change mitigation program 2015-2017 and highlights its main features.

**Figure 1**







# Introduction

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## CAF and its Climate Change Context

**CAF -development bank of Latin America-** is a multilateral financial institution with a global vision that has supported sustainable development and regional integration in Latin America and the Caribbean (LAC) for more than 43 years. The bank is owned by 18 shareholder countries from Latin America, the Caribbean and Europe. It is one of the leading development banks in financing infrastructure and energy projects in LAC.

As part of its support in the design and implementation of public policies in LAC, CAF's Environmental and Climate Change Department, through its Latin American Climate Change Program – PLACC, seeks to contribute to the Mitigation and Adaptation of global climate change and promotes sustainable and low carbon development of Latin America. To advance with this approach, CAF is developing three strategic programs: the Adaptation Program, the Climate Change Mitigation Program, and the Carbon Markets Program. The Climate Change Mitigation Program will be designed to assist Latin American countries in the development of cost-effective and innovative actions in the economic sectors that have the potential to reduce emissions of greenhouse gases, staying in line with the countries' sustainable development goals, and optimize and act as a catalytic actor of international funding channeled to policies, plans, strategies, and projects for mitigation of climate change in Latin America. It will use the region's current climate change mitigation strategies (e.g. Nationally Appropriate Mitigation Actions (NAMAs)) and international climate finance opportunities as a basis for this plan.

## Specific Activities for Climate Change Mitigation

To date, CAF has been an active promoter of the transition to low-carbon economies in LAC, mostly focusing on the Clean Development Mechanism (CDM). Through the *CAF-Netherlands CDM Facility (CNCF)* the *Iniciativa Iberoamericana de Carbono (IIC)*, two CDM funds for European compliance buyers, and own CDM portfolios, CAF has been able to develop, structure, and manage a portfolio of over 40 CDM projects on various sectors, such as sustainable urban transport, renewable energies, energy efficiency, forestry, and waste management. This has helped avoid the emission of about 26 million tons of CO<sub>2</sub>e, which represented a potential financial input to the projects of USD 275 million.

More recently, CAF has become active in the design and implementation of NAMAs, mainly in cooperation with European development banks such as KfW and through funding from the European Commission's Latin American Investment Facility (LAIF). LAIF represents a financial mechanism that combines subsidies (from EU donors) and loans (from EU and LAC public financial institutions) earmarked for low carbon development with general investments in energy and transport infrastructure, energy efficiency, and renewable energy generation.

CAF is an active participant in the International Development Finance Club (IDFC), which brings together bilateral, regional, and national development banks around the globe providing a platform for working closely together, exchanging best practices and experiences. The IDFC seeks to contribute to, and help shape, the international development and green finance agendas. IDFC's current work program for 2014-2015 focuses on green growth, clean energy, social and economic inclusion, and sustainable development. CAF currently heads the Special Interest Group of Green and Climate Finance mapping and the Sustainable Infrastructure Working Group, along with participating in other working groups.

Additionally, in 2013 CAF partnered with UNFCCC to create a Regional Collaboration Centre - RCC for LAC in order to promote new niches of carbon markets, maintain and increase the use of tools of the CDM and assist CDM projects and DOEs. It is planned that before the end of 2014 the RCC be involved in other mitigation activities such as the development of NAMAs.

CAF also participates as an observer to multiple climate change related platforms, such as the World Bank's *Partnership for Market Readiness*, the Green Climate Fund, and UNFCCC's Standing Committee on Finance and Climate Technology Centre and Network.

CAF also participates in the Regional Platform for Latin America and the Caribbean of the Low Emissions Development Strategies (LEDS) Global Partnership, an initiative that strives for climate-resilient low emission development through coordination, information exchange, and cooperation among programs and countries in the region, working to advance low emissions growth.

## **Specific Activities Linked to Climate Change**

CAF is also active in initiatives that have a clear link to climate change mitigation without having it as main priority. These include:

- CAF's Adaptation Program: It focuses on financing operations in industry, infrastructure, social development, environmental management, and corporate sectors. Its main objective is to promote and support adaptation planning processes for sustainable development. It consists of 5 main lines of action:
  1. Promote access to financial resources for adaptation measures,
  2. Institutional strengthening for both public and private sectors,
  3. Promotes concrete adaptation measures,

4. Knowledge management on adaptation, and
  5. Develops actions to strengthen CAF's "climate change" capacities within all areas of the bank.
- CAF and the UNFCCC Secretariat established a Regional Collaboration Centre (RCC) in Bogota, Colombia, that aims to provide direct support to governments, non-governmental organizations and the private sector in the following topics related to emission reduction markets:
    1. Identification of priority areas for the development of standardized baselines based on the emission profile of given countries in Latin-America and the Caribbean and direct support to relevant institutions in said countries for the development and submission of proposed standardized baselines;
    2. Identification of specific project activities and programs which would benefit from such standardized baselines and direct support for the preparation of project design documents for such projects;
    3. Identification of potential CDM project activities and CDM programs of activities and direct support for the development of project design documents for such projects and programs; and
    4. Direct support to proposed CDM project activities undergoing validation in order to address the issues identified by the appointed designated operational entity.
    5. Identification and promotion of new niches of market for CERs.

## **Climate Change in General Financing Activities**

The Environmental and Climate Change Department of CAF and its Climate Change Program (PLACC) also act as technical advisors for other areas within CAF. Programs/activities/initiatives being carried out by other Departments in CAF with a clear climate change component include:

- Green Economy Strategy: CAF plays an active role in promoting green economies. Between 2012 and 2013 an estimated USD 5.75 billion, representing 27% of new commitments for CAF were related or had a component related to green economy. Out of this, USD 1.47 million went to green energy and mitigation of GHG projects, and USD 1.74 million to adaptation to climate change projects. An estimated USD 374 million were destined to projects with both mitigation and adaptation components. Finally, USD 2.17 million were destined to other green projects such as sustainable infrastructure, water treatment, and waste management. CAF sees the following

roles as decisive: i) support for governments to setup the necessary regulations, policies, institutional settings that favor green economies (e.g. NAMAs, development plans for cities, legislation), ii) support and development of new projects in the arena of green economies (e.g. concepts and feasibility studies for project apt for green certification) and iii) channeling appropriate finance resources into projects that support the transition in green economy in the region (to comply with the special risk profile of these pilot projects especially guarantees and insurances can be applied).

- Energy Efficiency Program: CAF and KfW have designed a new Energy Efficiency Program, to assist in the identification, structuring, and financing of energy efficiency projects in Latin America. The program has different tools that combine technical assistance and concessional loans. The Environmental and Climate Change Department of CAF and PLACC will act as a support to the identification and origination of potential projects and the implementation of technical assistance funding for prefeasibility studies.
- Cities with Future (Ciudades con Futuro): This is an overarching strategy of CAF that makes available financial instruments for cities to support all of the bank's interventions in urban areas, under an integrated and multisectorial approach. It deems to have coordinated actions within the different departments and units of CAF. The main objective of this initiative is to promote sustainability in the context of cities in LAC, this through four main components:
  1. Inclusive urban development through i) urban planning and land management, ii) physical and social infrastructure, iii) accessibility, mobility and urban logistics, iv) information and communication technologies (ITCs), and v) equitable social sustainability.
  2. Productive transformation to enhance dynamics and competitiveness in local economies through improving i) business and investment climate, ii) clusters, value chains and SMES, and iii) human capital and employment.
  3. Environmental Sustainability to construct a viable city model that mitigates the impacts of climate change on cities, through adequate and efficient planning of natural resource use by i) environmental management, ii) resilience and adaptation to the effects of climate change, and iii) low carbon growth and climate change mitigation.
  4. Institutional strengthening and security, to improve capacities within the public sector and civil society through the modernization of public policy development and strategic coordination, while promoting public participation so investment on public services is catalyzed.



- Latin American Investment Facility (LAIF): Along with KfW, CAF is participating in various initiatives with LAIF. PLACC is directly involved as a technical support area in LAIF initiatives related to climate change in three specific sectors; cement industry, cogeneration, and energy efficiency on the demand side. Also, there are two LAIF initiatives developed to incentivize new carbon market and performance-based mechanisms in different sectors.

Moving forward, CAF is developing this new program taking into account its current activities and the international climate policy developments related to Post Kyoto negotiations beyond the CDM.

## **Objectives and Guiding Principles**

CAF wants to contribute to a low-carbon economic development in LAC. The Strategic Climate Change Mitigation program is developed as the leading effort to achieve this goal. This report is meant to provide the cornerstones of the program as follows:

- An overview of the most relevant climate mitigation activities worldwide and in the Latin American and Caribbean region, and
- A proposal for a strategic program to foster decarbonized economies in CAF's shareholder countries

Based on the above, the report follows two major guiding principles:

1. Focus on mitigation strategies and climate finance and examine carbon markets rather as a secondary option, and
2. Elaborate on the future role of a regional development bank like CAF in the context of climate change mitigation



# State of Play of Climate Change Mitigation in LAC

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## Status of International Agreements to Mitigate Climate Change

**The United Nations Framework Convention on Climate Change** (UNFCCC), adopted in Rio de Janeiro in 1992, lays out the overarching framework for international action to address climate change. There, the UNFCCC establishes the core principles on which climate action must be based<sup>1</sup>, establishes a number of institutions in charge of facilitating efforts to address climate change<sup>2</sup> and defines procedures for the adoption of protocols.

Though the UNFCCC already sets out a large number of ‘obligations’ for parties, in truth these are rather ‘soft’ obligations. The adoption of tangible emission reduction or limitation commitments was left to subsequent protocols. To date, one such protocol has been adopted – the Kyoto Protocol of 1997. The Kyoto Protocol applies defined emission limitation or reduction commitments for the period 2008-2012 for developed country parties.

Since the thirteenth meeting of the COP in Bali in 2007 (COP 13) negotiations have been focused on the agreement of mitigation commitments that go beyond the end of the first commitment period of the Kyoto Protocol in 2012. At the heart of this debate is the discussion over the principle of common but differentiated responsibilities (CBDR). While it is generally agreed that this means developed countries should take the lead in mitigation action, there remains debate over the form and extent of commitments they will assume and, crucially, whether advanced developing countries should also make commitments. Disagreements on these and other issues led to Parties at COP 15 in Copenhagen failing to reach their goal of agreeing on commitments for the post-2012 period.

At COP 17 in Durban in 2011, the Parties reached an important step in moving towards a new agreement. Firstly, developed countries agreed to a second commitment period of the Kyoto Protocol, to run from 2013-2020, an essential achievement for many developing countries. At the same time, Canada, Russia, Japan and New Zealand decided not to participate in the second commitment period anymore, and the commitments agreed by the other Parties that are still included do not go beyond what had already been - at least politically – announced before. This achievement is therefore arguably more symbolic than practical, though it does facilitate the continued operation of the Protocol’s flexible mechanisms, namely the Clean Development Mechanism, International Emissions Trading and Joint Implementation.

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<sup>1</sup> These include the principles of precaution, sustainable development and, crucially, common but differentiated responsibilities and respective capabilities.

<sup>2</sup> These include the Conference of the Parties (COP), which is the main decision making body; two technical bodies – the Subsidiary Body for Implementation (SBI) and the Subsidiary Body for Scientific and Technical Advice (SBSTA); and the UNFCCC Secretariat as the administrative backbone of the UNFCCC system.

Secondly, the Parties agreed to initiate a process to conclude a new agreement by 2015. Importantly, this new agreement refers to agreeing on the “highest possible mitigation efforts by all Parties”, implying an evolving interpretation of the CBDR principle that may lead to the adoption of some form of commitments by advanced developing countries, including several countries within Latin America. On this basis, the Parties currently negotiate about such an agreement in the context of the Ad-hoc Working Group on the Durban Platform (AWG-DP). Recent negotiations under the AWG-DP have been for the most part positive, with progress made on a range of important issues. At the same time, Parties have yet to begin discussions on tangible commitments and it remains too early to predict what form of agreement, if any, will be reached in Paris in 2015.

## Cities and Climate Change Mitigation

Cities are the major source of demand for energy, products, services, transport, and it is there where the main sources of emissions of greenhouse gases lie.

In addition, city-level mitigation action may lower national costs of mitigation, and cities may represent a large number of financially attractive mitigation options. The OECD states that sound urban policies can lower the long-term costs to meeting international carbon emission targets<sup>3</sup>.

Climate finance, either consisting of earmarked financial aid or by rewarding emission reductions through a carbon market, has had a moderate impact on city-level mitigation policies in the first commitment period of the Kyoto protocol. There are five main reasons for this:

1. Climate change mitigation priorities continue to be set mainly at the national level. Local governments' role continues to be very much dependent on national government's action.
2. Cities' climate change mitigation potential might not be enough to cover the high transaction costs involved in participating in market mechanisms. The mitigation potential of projects in a single sector in a single city can be too small to cover the transaction costs of voluntary or compliance carbon market mechanisms. Very few CDM projects have been developed comprising cities, including here the CDM programmatic approach. Even if NAMAs cover some example of cities, this instrument has not proved either to be fully adequate for cities to implement mitigation actions. Nevertheless, large cities or urban areas, most of them located in industrializing countries with high mitigation potential, could potentially palliate the transaction costs involved in participating in climate market instruments.

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<sup>3</sup> Low Carbon Futures, The Economics of Low Carbon Cities, A Mini-Stern Review for the Leeds City Region (Leeds, 2009)

3. Climate change mitigation is no common practice in city policies<sup>4</sup>. Cities have not internalized climate aspects into their policies to the extent that national governments have. National governments have been the focus of capacity building and support with emission reporting and mitigation strategy development. As a result, climate is also less often a rationale for the adoption of sustainable policies at city level. More often arguments like air quality, traffic congestion or energy expenses prevail over climate concerns.
4. Climate market instruments design does not incorporate relevant drivers for cities such as health and environmental aspects. Cities do not see climate change in isolation of social, economic or other environmental aspects. Mitigating climate change in cities is often an argument with less urgency than local air quality or traffic congestion. Connecting cities with a new market-based mechanism should also incorporate drivers for mitigation action other than climate.
5. Climate finance has been centralized in national agencies with little understanding of climate mitigation at city level. Climate finance is generally disbursed by a central agency which tends to direct climate finance to projects designed and conceived by national agencies. The central agency in charge of disbursing the funds has often limited notion of the mitigation opportunities under the mandate of local authorities. Local authorities are also not well organized so that they can exercise influence and press their governments to commit a percentage of the climate funds to the city level. Cities are facing barriers to the identification and financing of mitigation actions. This also affects the ability of cities to attract climate finance.

Many of the barriers typically brought forward in this context apply just as well to the national governments. Examples are budget constraints, lack of financial standing, complex administrative procedures and consequent high transaction costs and lengthy lead times, and quite often also a lack of transparency and credibility of relevant government institutions. Some of the challenges unique to cities are:

- Overlapping jurisdictions
- Lack of knowledge about climate finance
- Lack of high credit rating & budget constraints
- Conventional market approaches do not consider cross/sectorial mitigation actions
- Prohibitive complexity of administrative procedures
- Short term political mandates

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<sup>4</sup> OECD, OECD Green Growth Studies – Green Growth in Cities, (Paris, 2013).

Like national governments, local governments can play an important role in coordinating a holistic approach to emissions reductions within their geopolitical boundaries. However, unlike national governments, legal authority available to local governments varies widely from country to country (and even within countries). For instance, a 2011 survey of 40 global mega-cities<sup>5</sup> demonstrated that just 17 cities have the legal authority to regulate private buildings within their cities. Just 13 cities in this same sample have the power to regulate their metro system.

However, the same report established that at least half of city mayors own or operate key infrastructure in five sectors: existing buildings, transport, waste, outdoor lighting and urban land use. A 2013 survey of 110 global cities on climate change conducted by CDP suggested that the most common mayoral power sectors correlate closely with the sectors in which cities take mitigation action. The transport, buildings, waste, and urban land use were the most common sectors of emissions reduction activities reported by cities.<sup>6</sup>

The sectors that show the most mitigation activity in both the C40 report and in the CDP data are typically also the sectors with the highest abatement potential. The transport sector has the highest greenhouse gas abatement potential in cities.<sup>7</sup> An abatement option with relatively attractive financial returns is energy efficiency in buildings.

Some of the climate change mitigation initiatives where LAC cities are involved in include ICLEI<sup>8</sup> which is an association of cities and local governments in 86 countries dedicated to the promotion of sustainable development, the C40<sup>9</sup> network of the world's megacities taking action to reduce greenhouse gas emissions, the UN-HABITAT Cities and Climate Change Initiative<sup>10</sup> and the Clinton Climate Initiative (CCI) Cities program<sup>11</sup>. A few cooperation accords have also been made during meetings of city representatives in Latin America including "Pacto de la Ciudad de México" (Mexico City's Pact) and the Bogotá – International Seminar "Ciudades y Cambio Climático: Acciones urbanas para la mitigación y la adaptación" (Cities and Climate Change: Urban Actions for Mitigation and Adaptation) amongst others.

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5 "Climate Action in Mega-Cities," C40 and Arup, 2011.

6 "CDP Cities 2013 Summary Report on 110 Global Cities," CDP and AECOM, 2013. <https://www.cdproject.net/CDPResults/CDP-Cities-2013-Global-Report.pdf>

7 See "CDP Cities 2013: Summary report on 110 global cities," CDP, 2013. Figure 24.

8 [www.iclei.org](http://www.iclei.org)

9 [www.c40cities.org](http://www.c40cities.org)

10 [www.unhabitat.org](http://www.unhabitat.org)

11 [www.clintonfoundation.org/our-work/clinton-climate-initiative/programs/c40-cci-cities](http://www.clintonfoundation.org/our-work/clinton-climate-initiative/programs/c40-cci-cities)

## Match between High-Emitting Sectors and Policies or NAMAs

Our findings show a diverse level of advance in the LAC region with regards to the design and implementation of climate change mitigation policies, programs and legislation. The LAC region is in its early stages of development of coherent climate change mitigation agendas and plans, with some countries more advanced than others. There is still much technical, legal and financial support needed, and this support needs coordination.








Table 2 below summarizes whether the existing mitigation policies, programs or NAMAs that were identified in Latin America do actually match with the sectors per country that are high-emitting. The rationale behind it is that high-emission sectors that are well covered by mitigation activities perhaps require less attention and support than high-emission sectors where no or little policies, NAMAs etc. are being implemented.

CAF's intention is to support policies and NAMAs and further mitigation activities especially in high-emitting sectors where so far little has been done.








Countries with little developed activities in general are the Dominican Republic, Jamaica, Panama, Paraguay, and Trinidad and Tobago. However, most initiatives in various countries are in nascent phases of development and seek financial support for their design and further implementation.

From the high-emitting sectors, that are often underrepresented, transport and agricultural (without forestry) sectors have so far been little developed in terms of mitigation policies and NAMAs. Energy (renewable energy and energy efficiency) is usually a commonly supported sector. Exceptions are Colombia and to a less degree Brazil and Mexico, with all three having transport on the agenda. Within the agricultural sector in Latin America, livestock enteric fermentation is largely present as a significant source of GHG. However, it also seems to be greatly underrepresented within governmental efforts to reduce this type of emissions.

**Table 2: Match between high-emitting sectors and policies or NAMAs**

Country	Match between high-emitting sectors and policies or NAMAs	
Argentina		CAF is involved in the Probiomasa initiative. A sector with high GHG emissions in which not much is being done is the livestock sector.
Bolivia		No information available.
Brazil		Especially the transport and agricultural sectors seem underrepresented while the forestry sector is well covered. Altogether Brazil realizes comprehensive programs and activities with regard to mitigation.
Chile		Altogether medium match: Especially transport and energy sector seem to be underrepresented.
Colombia		Energy (transport, energy industries and manufacturing) and agriculture are the largest GHG emitting sectors. Transport and energy are high on the agenda. Agriculture is not.
Costa Rica		Good match in LULUCF, little match in transport sector.
Dominican Republic		Energy sector is the largest source of GHG emissions. The government is supporting waste to energy NAMAs, but all in very nascent phases.
Ecuador		The main emission sources like agriculture and LULUCF do not seem to be covered.



Country	Match between high-emitting sectors and policies or NAMAs	
Jamaica		Mitigation activities are rather at low level development, several development oriented organizations do fund these. Especially with regard to transport the match seems low.
Mexico		Comprehensive actions are taken both, with regard to policies etc. and NAMAs etc. Agriculture is somewhat underrepresented. Match is good with the exception of agriculture.
Panama		According to the information provided, there are very few regulations and NAMAs. Especially the high-emitting sources (transport, industry and agriculture) are not covered. Match is low due to little activities.
Paraguay		Altogether, there is a low match of policies and NAMAs with high-emitting sectors, due to very few activities.
Peru		There are several initiatives being carried out mainly in cities and related to the waste and energy sectors. Transportation is also being addressed
Trinidad & Tobago		The largest source of CO2 emissions in Trinidad & Tobago is the petrochemical and heavy industry sector. Point Lisas is where most of the country's GHG emissions are produced. The Carbon Reduction Strategy which has a focus on carbon capture and sequestration takes place in the Point Lisas industrial estate.
Uruguay		CAF is involved in the promotion of co-generation systems. Agriculture is by far the largest source of GHG emissions. The government promotes NAMAs focused on renewable energy, EE, and waste biomass to energy in the agriculture and agroindustry production chains. Enteric fermentation emissions are not addressed yet.



No match



Low



Medium



High



Full match

## Climate Finance

Climate finance is a rather fuzzy term used differently for the national, regional or international financing of projects, programs and activities related to mitigation of or adaptation to climate change.

While sometimes used for financing structures designed for concrete mitigation of climate change (for instance the Climate Investment Funds administered by World Bank or the not yet operative Green Climate Fund decided on by parties to the UNFCCC<sup>12</sup>) and multilateral development banks,<sup>13</sup> the term can also be used in bigger scope including particularly financing by the private sector. With this latter notion of climate finance, it becomes evident that the private sector contributes the most substantial portion of mitigation related finance streams through private equity, and market rate loans. The broader term includes finance of all activities that are related to mitigation, like for example traditional renewable energy investments by utilities, even though these are not necessarily perceived as additional.

According to *The Landscape of Climate Finance 2013*<sup>14</sup> published by the Climate Policy Initiative, large amounts of climate finance were realized by the private sector, especially corporations able to plan and implement renewable energy projects. According to the report, the private sector covered around USD 224 billion in 2012 or approximately 62% of a total estimated amount of climate finance mounting to USD 356 - 363 billion.

Public and private intermediaries, the former being especially national development banks, played an important role in raising and channeling global climate finance (USD 110-120 billion). Governments were crucial in supporting the creation of a favorable environment for private sector investment by providing the necessary regulations, legal frameworks, institutional settings and incentives. Most investments were received by developing countries and especially countries in transition. In 2012, roughly USD 177 billion was invested in developed countries (49% of the global total) and USD 182 billion was invested in developing countries (51%). A significant share of capital is usually raised and invested domestically in the context of national development mandates.

Multilateral finance institutions (MFI) or multilateral development banks<sup>15</sup> have a special role in the context of climate finance for mitigation. Most financial flows from MFI went into renewable energy projects, energy efficiency and sustainable transport.

Public finance institutions play an important role in supporting and leveraging pri-

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<sup>12</sup> See for instance: Climate Finance Fundamentals 6, Climate Funds Update, Heinrich Böll Stiftung, November 2013

<sup>13</sup> <http://www.climatefundsupdate.org/global-trends/10-things-to-know-about-climate-finance-in-2012>

<sup>14</sup> See: <http://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2013/>

<sup>15</sup> MFIs are not necessarily development –oriented. This is why the distinction is made here.

vate sector finance by, for example, subsidizing interest rates, supporting feed-in tariffs, transforming the maturity of loans from short-term/mid-term to long-term and taking high risk portions in loans for the private sector. Often characterized by high investment ratings as government backed institutions, their re-financing is less problematic than in other financial institutions.

An important thematic focus of governments and public finance institutions are the so called green economies (Green Finance Mapping Report 2013<sup>16</sup>) or green growth initiatives. These activities usually foster structures, information and capital flows that lead to sustainable and robust transitions towards green economies or growth. A major factor here is the establishment of the necessary institutional arrangements, policies and regulations but also on the setup of crucial information and capital flows between actors, e.g. vertically between municipalities and federal governments but also horizontally e.g. between public and private sector.

Annex I Parties have promised to make available funding for “climate” investments of USD 100 billion per year by 2020. CAF is interested in playing a key role in managing climate investment funds in the LAC region. CAF may fulfill the role of mobilizing such investments while supporting climate finance “readiness” in the countries of the region.

CAF’s new Climate Change Mitigation Program will provide continuity to its climate change mitigation activities, and funding opportunities that the bank offers to its shareholders and clients, providing clear social and environmental benefits and striving for eco-efficiency and sustainability in its operations.

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<sup>16</sup> [http://www.idfc.org/Downloads/Publications/01\\_green\\_finance\\_mappings/IDFC\\_Green\\_Finance\\_Mapping\\_Report\\_2013\\_11-01-13.pdf](http://www.idfc.org/Downloads/Publications/01_green_finance_mappings/IDFC_Green_Finance_Mapping_Report_2013_11-01-13.pdf)



# Design of the Climate Change Mitigation Program

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## Definition of the General Program

**In the context of the Strategic Climate Change Mitigation Program**, the following vision, mission, values and objectives have been defined in close collaboration with CAF. These definitions are to serve as guidelines in the implementation of the strategies to be elaborated subsequently.

### Vision

CAF is a financial key player in the Latin-American and Caribbean (LAC) region, contributes to a sustainable development on the continent and represents an important cooperation partner on an international level. CAF's Strategic Climate Change Mitigation Program is the bank's proactive approach to offer financial resources and strategic advice to projects, programs and policies that can help reduce greenhouse gas emissions in its shareholder countries. CAF initiates, enhances and supports promising and innovative mitigation activities that ensure a low- to zero-carbon development in the LAC region on a mid- or long-term basis respectively. CAF's ambitions place the LAC region at the forefront of climate change mitigation action worldwide.

### Mission

CAF's mission is to foster economic, social and ecological development within its shareholder countries in order to improve the livelihoods and life quality of the population. In the context of long-term engagements, the bank's main financial and human resources are allocated to the support of specific infrastructure projects such as in the energy or transportation sector. To ensure that economic and social development addresses environmental challenges resulting from global climate change, CAF has taken a three-folded action focusing on mitigation, adaptation and carbon markets. The Strategic Climate Change Mitigation Program covers a mid-term time frame from 2015 to 2017. The Mitigation Program has been designed through sectorial and programmatic approaches where CAF follows five selected strategies in the fields of energy efficiency, new renewables and transportation as well as partnership and the development of NAMAs respectively.

### Values

Cooperation to implement CAF's Strategic Climate Change Mitigation Program is based on the following core values:

- Focus on core business
  - Focus on climate change mitigation projects that are in close relation with CAF's main business areas, i.e. investments in infrastructure (mainly energy and transportation)

- Continuity
  - Based on long-term engagements, CAF aims at adding a new dimension to its traditional infrastructure by considering crucial aspects of climate change mitigation
- Cooperation
  - Continuation of well-established and initiation of promising partnerships with national and international institutions that can complement CAF's resources and skills in climate change mitigation
- Synergies
  - Building on internal long-term experience with infrastructure and well-established partnerships with external players, CAF seeks to exploit synergies in order to increase its impact and reach for effective and efficient mitigation action
- Local circumstances
  - Following the selected strategies, CAF always considers the specific situation of each shareholder country with regard to climate change mitigation in order to optimize the appropriateness of each country approach

## Objectives

Cooperation to implement CAF's Strategic Climate Change Mitigation Program aims at reaching the following objectives:

- External objectives
  - To substantially contribute to a sustainable economic and social development in CAF's shareholder countries by promoting low- to zero-carbon development
  - To make the Latin American region a best-practice example for substantial and innovative climate change mitigation worldwide
  - To use CAF's funds for climate change mitigation in the most efficient and effective way
  - To help leverage public and private climate finance to mitigation activities in LAC
  - To significantly reduce greenhouse gas emissions in the LAC region at low costs

- To enhance CAF's international branding as LAC's leading institution in climate change mitigation
- To consolidate CAF's reputation as proactive, knowledgeable and experienced co-operation partner for climate change mitigation action on an international scale
- Internal objectives
  - To inscribe climate change mitigation considerations in all business activities and throughout all project cycles of CAF
  - To ensure a smooth and efficient collaboration with the adaptation and market programs
  - To raise awareness at CAF for the importance of mitigation considerations in the financial sector and to inform about CAF's substantial contributions to mitigation

## Identification of Strategic Options

The identification of strategic options for CAF's future engagement in climate change mitigation builds to a large extent on the comprehensive data collection process whose results are presented in chapter 2. Most data and information was received from country representatives, financial institutions and potential cooperation partners in analyzed organizations. All data and information was analyzed, reorganized and synthesized in overview tables and finally evaluated according to the following main criteria:

- A. Emissions in different sectors in the analyzed countries to identify high-emitting sectors with significant potential for emission reductions
- B. Existence of regulations, policies and governmental initiatives that do address specific sectors in each analyzed country
- C. Existence of NAMAs, footprinting programs, or offsetting initiatives that do address specific sectors in each analyzed country

This information was combined in order to assess whether the high-emitting sectors with large mitigation potential identified are actually well addressed in the countries' mitigation efforts or not (Table 2: Match between high-emitting sectors and policies or NAMAs). To be effective and efficient, CAF's future engagement in mitigation should be at least partially directed towards sectors that are either barely covered by mitigation activities or that still offer high potential for mitigation despite existing coverage. Ideally, high-priority sectors to be targeted are those with little

coverage as well as high mitigation potential and a clear potential for financing by CAF's business areas.

It is important to notice that CAF might have regulatory difficulties to become active in such high-priority sectors in countries where only very few mitigation measures have been taken so far. The risk exposure, required efforts made and to a certain degree the drawbacks resulting from such isolated actions (since barely any other actors are active in these sectors) would not justify a strategy that focuses merely on these. Thus, the strategy needs to be well balanced, with engagement in some countries and sectors with low-developed mitigation activities, but to the larger extent in countries and sectors where significant action has already been taken which could be further supported and developed.

In addition, the identification of strategic options took into account current needs for financing and financial support in case of NAMAs and further offset programs. This information was given by (most) country representatives.

A further main input for the identification of strategic options was the identification of CAF's recent local, regional and global engagement with regard to climate change that comprises concrete project finance and funding activities, involvement in organizations and initiatives, support of governmental initiatives and a strong network of cooperation partners. The analysis of CAF's current engagement in mitigation was made in close cooperation and through regular exchange with CAF. Consequently, it also included an internal view on CAF's preferences in the past, present and near future. Naturally, CAF's engagement and priorities, including experience with or interest in strategic partners, were carefully considered. They played a central role in the strategy selection process.

Further, the findings of the analysis and interviews with financial institutions and funds and the organizations were considered in the identification of strategic options, especially in terms of promising strategic partnerships and cooperation. Again, it was emphasized whether these (potential) partners do already engage in high-priority sectors.

This approach led to the identification of eight relevant strategic options that are presented in the next chapter.

## **Presentation of Strategic Options**

An important guiding principle in the selection of the eight strategy options was to identify strategies that are highly relevant and effective in terms of climate change mitigation, and that at the same time balance well sectors with high emissions and few ongoing activities (high value added, for example agriculture) and high-emitting



sectors with many existing activities that allow to build on CAF's and potential strategic partners' experiences (e.g. new renewables and transport in specific countries).

In addition, the strategic options cover in principle all countries, a wide array of sectors and also distinguish between different programmatic approaches. It is evident that considering all strategic options would lead to a too diverse and too little focused strategy. Therefore, the different strategic options had to be prioritized in order to choose a final set of selected strategies. This process will be described in the following chapters.

All eight strategic options identified are presented in Table 3 below with a short description of their rationale (e.g. relevancy, priority sector, CAF's past involvement and strategic partnerships).

**Table 3: Presentation of identified strategic options and their rationales**

Strategy number	Strategic theme	Rationale
Sectorial options		
1	Transportation	<ul style="list-style-type: none"> <li>• High-emitting sector in LAC, but underrepresented in mitigation activities of most countries</li> <li>• Continuity with transport infrastructure as core business of CAF</li> <li>• Experience with transportation in CAF's CDM projects</li> <li>• Large potential for synergies with other business areas</li> </ul>
2	Agriculture	<ul style="list-style-type: none"> <li>• High-emitting sector in LAC, but totally underrepresented in mitigation activities of most countries</li> <li>• Opportunity for unique selling proposition (USP) for CAF as other organizations are not very active in the field</li> <li>• Chance of fostering cooperation between mitigation and adaptation teams</li> <li>• Large synergies with adaptation program</li> </ul>

Strategy number	Strategic theme	Rationale
3	New renewables	<ul style="list-style-type: none"> <li>• Continuity with energy infrastructure as core business of CAF</li> <li>• Renewables as main objective for most national policies and programs: ambitious targets, but often weak activities</li> <li>• Most national and international funds available for new renewables, old renewables not promoted anymore</li> <li>• High-emitting sector in LAC</li> </ul>
4	Energy efficiency	<ul style="list-style-type: none"> <li>• Potential for enhancement of energy efficiency program between CAF and KfW</li> <li>• Identified need for capacity building at local banks to finance EE projects</li> <li>• Problem that energy efficiency projects can be small-scale what makes them non-attractive for investments by large funds</li> </ul>
Programmatic options		
5	NAMA development	<ul style="list-style-type: none"> <li>• LAC is worldwide the leading region with regard to the development of NAMAs</li> <li>• Significant capacity building has already been done by other organizations in this field</li> <li>• Continuity with and exploitation of comparative advantage of LAC in climate change mitigation</li> <li>• Broadly funding needed to kick-start and finance implementation of NAMAs</li> </ul>
6	Cities with Future	<ul style="list-style-type: none"> <li>• Promotion and enhancement of an overarching strategy where mitigation can play a key role</li> <li>• Special importance of urban development for LAC as most urbanized region worldwide with 80% of the population living in cities (see “Ciudades con Futuro” (Cities with Future), Strategy Document, p. 6)</li> <li>• Cities as important GHG emission source</li> <li>• Large potential for synergies with CAF’s existing initiative “Ciudades con Futuro” (Cities with Future)</li> <li>• Mitigation actions do not only reduce GHG emissions, but do improve life quality of many people in general</li> </ul>

Strategy number	Strategic theme	Rationale
7	Support for “low-mitigation” countries	<ul style="list-style-type: none"> <li>• CAF’s wish to support shareholder countries that are not very active in climate change mitigation activities</li> </ul>
8	Strategic partnerships	<ul style="list-style-type: none"> <li>• High interest expressed by nearly all interviewed funds and organizations to cooperate with CAF</li> <li>• Cost-effective opportunity to complement CAF’s funds and expertise</li> <li>• Maintenance and enhancement of existing excellent network on an international scale</li> </ul>

## Selection of Strategic Options

In the context of an interactive workshop, all eight strategic options were presented and discussed in detail with the aim to prioritize them and to choose a final set of high-priority strategic options. For this step, it was of utmost importance to combine the authors’ “outside view” with CAF’s “inside view”:

- The outside view refers to the information gathered in work stream I, including all further data analysis and synthesis results. Accordingly, the outside view provides a comprehensive overview of the heterogeneous climate change mitigation context in Latin America, including actions, programs and initiatives, networks and cooperation partners. One major goal of the strategy development is to optimally position CAF in this context for the next two to three years.
- The inside view deals with CAF’s inner context, including past, current and near future mitigation activities, internal cooperation, financing instruments, sector and country focuses. The inner view also reflects CAF’s preferences and priorities, and hence, inherent values.

In order to design and determine a practical, effective and sustainable mitigation strategy, the two views must be diligently combined. This was done throughout work stream I and also during the workshop where both views were brought together. The strategic options presented were consequently discussed and refined by looking at them from outside and from CAF’s inner context. Within this scope, the following aspects were taken into consideration:

- **Strategic theme (e.g. transportation, NAMAs):** The strategic themes were divided in sectors (e.g. transportation, new renewables) and programmatic themes (e.g. NAMAs, strategic partnerships).

- **Rationale** describing inter alia context, relevancy, and mitigation potential, i.e. the reason for consideration
- **Strategic focus:** Within the strategic themes, strategic focuses were defined that should be considered as they are either highly relevant or so far little recognized despite a high mitigation potential.
- **Internal partners/synergies:** Cooperation and synergies between different departments of CAF, funding options, funds, decision processes etc.
- **External partners/synergies:** Different strategic options provide or require different cooperation types with partner institutions or organizations from CAF's external network.
- **Geographic focus:** Priority countries or regions
- **CAF's services and products:** This describes concrete services and products, especially funding products CAF could and should focus on regarding a strategic option.

After in-depth discussion of the strategic options, it was agreed to consider the following strategies for CAF's Strategic Climate Change Mitigation Programme.<sup>17</sup>

Based on the four criteria financial viability, mitigation potential, ease of MRV and commitment of partners, it was furthermore decided at the workshop to introduce the following priority order:

**Table 4: Selected strategies with priority order**

Strategies of CAF's Strategic Climate Change Mitigation Program	
Sectorial strategies:	Programmatic strategies:
Sectorial strategies: 1) Energy Efficiency 2) New Renewables 3) Transportation	Programmatic strategies: 1) Strategic partnerships 2) NAMA development



<sup>17</sup> It is important to mention that although the programmatic strategy "Cities with Future" was recognized by CAF as a high priority topic, it was not retained in the context of this report. This is due to the reason that an involvement of the Climate Change Program in the "Cities with Future" Program was expected anyways. Within this scope, a specific strategy to deal with climate change from an urban perspective is supposed to be developed by CAF in the near future.

## Definition of Individual Strategies

An overview of the definition of the individual strategies can be found in Figure 2.

**Figure 2: Overview of individual strategies**

Theme	Focus	Key Players	Products/Services
Energy efficiency	Improving energy efficiency enhances competitiveness, generates employment, contributes to the reduction of poverty and inequality, and mitigates climate change.	<b>Internal</b> - Vice-Presidency Energy - Vice-Presidency Productive Sectors - DR Financial Resources & Special Funds <b>External</b> - Local commercial banks & other development banks - Private sector and public agencies	<ul style="list-style-type: none"> <li>• Credit lines</li> <li>• Guarantees</li> <li>• Technical cooperation</li> </ul>
New renewables	Increase engagement in new renewables in high-priority countries across available technologies (wind, solar, geothermal, biomass) with selected partners, supporting private sector	<b>Internal</b> - Vice-Presidency Energy - DR Financial Resources & Special Funds <b>External</b> - DEG, SIFEM (co-financing) - Private sector (funds, direct investments)	<ul style="list-style-type: none"> <li>• Direct (co-) investments</li> <li>• Co-investments in renewable</li> <li>• Energy funds</li> <li>• Structuring new investment</li> <li>• Vehicles in case of marginal</li> <li>• Technologies in selected countries</li> </ul>
Transportation	Increased support for transportation initiatives, including promotion of hybrid and electric vehicles, introduction of congestion charges, freight transport optimization, new infrastructure, and NAMAs	<b>Internal</b> - Vice-Presidency Infrastructure - DR Financial Resources & Special Funds - conventional business areas - "cities with future" initiative <b>External</b> - Municipalities & national governments - Local commercial banks & other development banks	<ul style="list-style-type: none"> <li>• Co-financing and re-financing of up to USD 100 million</li> <li>• Guarantees</li> <li>• Technical cooperation</li> <li>• Financial intermediary</li> </ul>

Theme	Focus	Key Players	Products/Services
 <p>Strategic partnerships</p>	<p>Enhancement of existing partnerships and initiation of new partnerships in order to tap additional sources of funding and contribute to continuity and trust building in work relationships</p>	<p><b>Internal</b></p> <ul style="list-style-type: none"> <li>- Vice-Presidency Infrastructure</li> <li>- DR Financial Resources &amp; Special Funds</li> <li>- Conventional business areas</li> <li>- "Cities with future" initiative</li> </ul> <p><b>External</b></p> <ul style="list-style-type: none"> <li>- Municipalities &amp; national governments</li> <li>- Local commercial banks &amp; other development banks</li> </ul>	<ul style="list-style-type: none"> <li>• Co-financing and re-financing of up to USD 100 million</li> <li>• Guarantees</li> <li>• Technical cooperation</li> <li>• Financial intermediary</li> </ul>
 <p>NAMA development</p>	<p>Support for nationally-led initiatives tailored to each country's specific needs in RE, EE, transport and waste management. CAF will provide funding for design, kick-start and implementation of NAMAs.</p>	<p><b>Internal</b></p> <ul style="list-style-type: none"> <li>- Vice-Presidency Energy, Infrastructure &amp; Social Development</li> <li>- DR Financial Resources &amp; Special Funds</li> </ul> <p><b>External</b></p> <ul style="list-style-type: none"> <li>- National governments</li> <li>- UNDP, KfW, GGGI</li> </ul>	<ul style="list-style-type: none"> <li>• Credit lines</li> <li>• Guarantees</li> <li>• Technical cooperation</li> </ul>

## Energy Efficiency

The promotion of measures to increase energy efficiency in Latin America is amongst the top priorities of CAF. Improvements in energy efficiency represent an essential element of climate change mitigation. Energy efficiency does not only imply savings in energy bills and operational costs, but also increased productivity as well as reduction of greenhouse gas emissions. In fact, energy efficiency can be considered as the most cost-effective way to reduce pollution and improve climate control.

Tackling energy efficiency is crucial for LAC as the continent's economies grow. The economic sectors propelling this growth - sectors that constantly demand new generation capacity with a more efficient use of resources - need support to evolve in a strategic and environment-friendly way. Improving their energy efficiency also enhances their competitiveness in global markets, generates employment and contributes to the reduction of poverty and inequality. Large-scale energy efficiency efforts not only improve productivity, but also reduce the current and future carbon footprint.

## *General Aspects*

### *Strategic focus*

Considering CAF's expertise, experience and successful track record, the strategic focus of energy efficiency could be set on the following fields of action:

- Guarantees to facilitate the financial deals of energy efficiency projects
- Efficiency in energy generation (e.g. industrial cogeneration as through LAIF-KfW-CAF)
- Efficiency on the demand-side of industry (e.g. general cooperation with high-emitting sectors like cement or specific cooperation with multinationals like Philips)
- Efficiency in urban contexts

## *Institutional Aspects*

### *Internal partners/synergies*

Internal synergies with conventional financing business areas of CAF include the following:

- Vice-Presidency Energy
- Vice-Presidency Productive Sectors
- Directorate Financial Resources
- Directorate Special Funds.

### *External partners/synergies*

- Cooperation with local commercial banks in order to strengthen the financial sector in LAC,
- Cooperation with other international/multilateral development banks with energy efficiency objectives (such as DEG or KfW),
- National energy efficiency official agencies (e.g. UPME in Colombia),
- International donor agencies (e.g. USAID), and
- Multinationals active in the sector (e.g. Philips and public sector lighting)

### *Technical Aspects*

CAF's strategy on energy efficiency aims to address the obstacles for the widespread implementation of energy efficiency measures, including the financial availability obstacle, the knowledge obstacle, and the technical obstacle. From a supply point of view, CAF aims to provide funding and knowledge on how to analyze, design, structure and market energy efficiency transactions, while providing clarity about the risks and potential returns on investments. On the demand side, businesses which might have a large potential for benefiting from energy efficiency measures often lack the knowledge and experience to understand these benefits. Even if they do, it is difficult for them to access finance to carry out needed measures. The ability to take on financial and technical risks beyond normal lines of business is limited.

CAF will take the following steps:

- Enhance cooperation in energy efficiency programs such as cooperation with KfW,
- Support 1st tier local banks in capacity building to finance energy efficiency measures (demand side),
- Act as a guarantor for transactions in energy efficiency in order to make energy efficiency deals for 1st tier banks more attractive (offer), and
- Provide technical assistance for industry (demand side)

### *Geographical focus*

Geographically, CAF will focus on countries with potential for energy efficiency gains, and where the financial sector struggles with financing energy efficiency activities due to lacking expertise or size. Initial focus will be on Mexico, Colombia, Peru and Uruguay.

### *Financial Aspects*

#### *Required amount of funding*

Corporate financing in the order of magnitude of minimum USD 2 million is envisaged. Project finance is not interesting in financial terms.

#### *Potential sources of funding*

Sources of funding may come through CAF's involvement in capital markets, member country contributions and through strategic partnerships in order to enhance CAF's financial capacities.

#### *Financial products and non-financial products*

The financial products to be used will be enhanced or new credit lines will be developed between CAF and its partners in the public sector, industry and financial sectors.

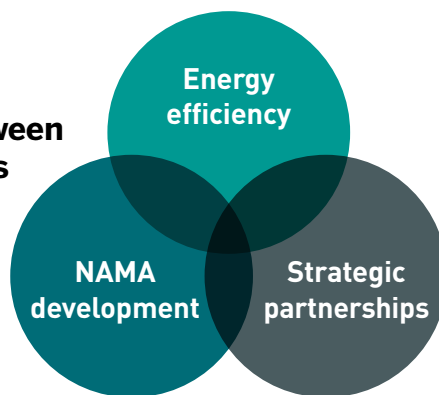


CAF will provide non-reimbursable technical cooperation funds from international sources such as LAIF of up to USD 200,000 for the identification, conceptualization and design of energy efficiency programs, provided there are Memorandums of Understanding (MOUs) and concrete compromise from benefitted counterparts. CAF may also act as a provider of guarantees.

### *Synergies/Interactions with other Strategies*

The energy efficiency strategy has overlaps with the other strategies, mainly with strategic partnerships and NAMA development (Figure 3).

**Figure 3: Synergies/interactions between energy efficiency and other strategies**



## **New Renewables**

It goes without doubt that renewable energy, and in particular new renewables are in the main focus of many mitigation strategies, be it in LAC or other regions like Europe. Usually, engagement in new renewables combines several advantages like substitution of limited fossil fuels, more independent energy supply for countries with high imports of fossil fuels, increase in industrial production and creation of new jobs, and, of course, mitigation of climate change. Renewable energy programs, therefore, play a major role in mitigation strategies, and many governments around the globe have formulated ambitious renewable energy programs. Since there are many different economic, political and environmental interests or aspects attached to increase energy production through new renewables, it is obvious that the international financial streams, be it from private or public sources, are immense here.

### *General Aspects*

#### *Strategic focus*

As mentioned above, the focus here is on new renewables including wind power, solar power (photovoltaic and solar thermal), geothermal, small scale hydropower (especially run-of-river), biomass to energy (e.g. wood residues like pellets, residues from agro-business (rice husk), but also humid biomass (biogas)).

## *Institutional Aspects*

### *Internal partners/synergies*

The internal synergies are essential and are mainly with:

- Vice-Presidency Energy
- Directorate Financial Resources
- Directorate Special Funds

There is in-depth know-how and long-term experience with financing renewables within CAF. This experience is extended to several countries and involves several strategic partners. It is evident that by following this strategic option, CAF builds on its experience.

### *External partners/synergies*

In the past, CAF has already been cooperating with several external partners when it comes to financing new renewables. These include mostly public and private public organizations and funds rather than funds from the “pure” private sector.

Generally, there is a large amount of climate finance channeled into renewables, and there is large potential for synergies with financial organizations (such as DEG). In addition, new renewables attract especially private sector finance which gives opportunity for private sector engagement and cooperation with e.g. pro-active private sector project developers.

Concrete examples of extending existing cooperation include for instance:

- DEG (check area of responsibility with KfW, in order to avoid conflicts of interest)
- LAIF (with a focus on further geothermal projects, for example)
- Cleantech and Greentech funds, including the Moringa fund

## *Technical Aspects*

### *Geographical focus*

The geographical focus should on one side be on countries with strong renewable energy targets and programs that do stress the importance of new renewables.

CAF is clearly open here and is not focusing on one or two countries. In principal, all member countries are eligible for CAF's engagement here. Nevertheless, a special

focus can be set on Panama, Ecuador, and Mexico, and a second priority for Brazil, Colombia, and Peru.

In addition, CAF is open to engage in all the above-mentioned technologies and is flexible to look at different funding sources and finance cooperation. In other words, decisions for engagement are made case-by-case while there is no predefined set of selection criteria or a restrictive focus.

## *Financial Aspects*

### *Required amount of funding*

While new renewables attract a large amount of international private sector finance and funds from national or multinational development banks, the required funding is usually high. In most cases and countries, new renewables are outcompeted by fossil fuels (or nuclear energy in those countries that do use it) in terms of delivered energy price and hence need governmental support, often through feed-in tariffs, tax exemptions, or energy price supports. Private sector finance, on the other hand, focuses on project development, implementation and operation.

In general, there will be many opportunities for CAF to engage in new renewables, starting from direct project financing, engagement in thematic funds or support like the mentioned subsidies or price support.

### *Potential sources of funding*

According to The Landscape of Climate Finance 2013<sup>18</sup>, private sector represents the largest source of funds for mitigation of climate change. Renewables forming a major part here, private sector finance will also be the major contributor to finance new renewables. Besides private investment funds and especially the private project developers, there are also governmental financial institutions that target the private sector active in the field of financing new renewables (these include e.g. DEG and SI-FEM). Furthermore, the national (e.g. BNDES being a major investor into renewables in Brazil) and multilateral development banks (like IDB, CAF, and WB) play a major role in investing into renewables. Finally, infrastructure funds as from World Bank or EIB have been contributing to renewable energy projects, including in LAC.

### *Financial products and non-financial products*

The major financial products that could be offered by CAF, besides concessional loans are direct investments and investments in funds and investment vehicles. New renewables provide a very good opportunity to extend existing or establish new co-operation and apply a series of financial products, including equity investment funds, mezzanine and debt finance products, but also subsidies and energy price signals. Besides the debt finance, an enhanced engagement in equity funds or direct equity

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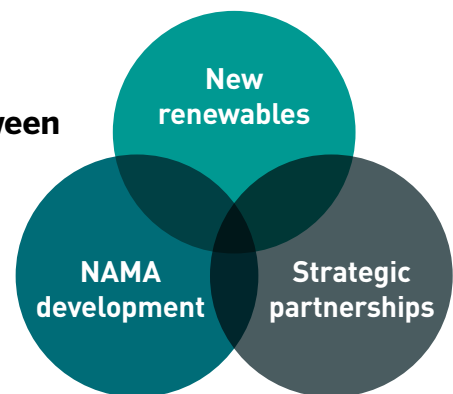
<sup>18</sup> <http://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2013/>

investments, for instance with a partner like DEG, could play a more important role within the strategy. The concrete elaboration of such products will occur in cooperation with the co-financing partners. Through the Climate Change Program, CAF can also leverage technical assistance from climate change funds for the identification, conceptualization, and design of sectoral renewable energy programs with a climate change mitigation component.

### *Synergies/Interactions with other Strategies*

The synergies with other strategic options are mainly with strategic partnerships and with NAMA development. A strong synergy could be with partners, especially extending existing or establishing new cooperation with financial institutions that manage renewable energy targeted funds or invest directly in projects. An extension with DEG should especially be considered as the fund is very active in renewable energies in several of CAF's high-priority countries. Thus, a long lasting cooperation experience exists already. New renewable energy projects can be developed within national policies or sectorial programs with a climate change mitigation focus. Although not precisely a NAMA, the Climate Change Program of CAF can help leverage technical assistance for the development of sectorial activities and identification of mitigation potential for renewable energy projects.

**Figure 4: Synergies/interactions between new renewables and other strategies**



### **Transportation**

The transport sector plays a central role in LAC's economic growth; hence, it should play a role in the region's emission reduction strategies. It is a high-emitting sector, but so far underrepresented in mitigation activities of most countries. A wide range of transport-related measures have been identified in the region, including the development of national urban transport policies, promotion of hybrid and electric vehicles, introduction of congestion charges, freight transport optimization, new and improved infrastructure, etc. Meanwhile, a number of transport sector projects, programs and NAMAs are under development together with donor partners, while several cities are developing and expanding their Integrated Massive Transportation Systems.

While national governments are taking steps to reduce emissions from the transport sector through the development of policies and programs, the implementation of transport policies and measures remains mostly with cities (municipalities) and their management entities. Their decisions and actions will be crucial to ensuring the long term sustainability of the transport sector. Incentivizing long-term emission reductions among municipalities is thus a key component of a sustainable transport policy implementation.

### *General Aspects*

#### *Strategic focus*

Three main fields of intervention could be imagined:

- Public mass transit
- Climate-friendly freight transport
- Non-motorized transportation

### *Institutional Aspects*

#### *Internal partners/synergies*

Internal synergies with other developments and initiatives at CAF are key:

- “Cities with Future”,
- Conventional financing business areas of CAF,
- Vice-Presidency Infrastructure,
- Directorate Financial Resources, and
- Directorate Special Funds

#### *External partners/synergies*

There is a large potential for synergies in the transport sector. External partners and synergies include the cooperation with:

- Municipalities,
- National governments,
- LAC’s financial sector, and

- Other international/multilateral development banks with similar interests and international donor agencies (e.g. LAIF investments in transport infrastructure, and IDFC working group on sustainable infrastructure, where CAF plays a key role).

CAF can build on its past cooperation experiences with CDM transport projects in public mass transit systems. Also there can be several useful synergies for the yet mostly unexploited non-motorized transportation.

CAF could work with ADB's Sustainable Transport Initiative to mutually learn from best practices and lessons learned. It will find synergies with initiatives such as SLoCaT, Transport2020 Bridging the Gap or GIZ TRANSfer Project.<sup>19</sup>

### *Technical Aspects*

This strategy aims to provide continuity to its work with transport infrastructure as a core business of CAF and to build upon its CDM expertise in BRT. Its main focus will be on public mass transit and climate friendly freight transport, and will also include non-motorized transportation.

### *Geographical focus*

Geographically, CAF will focus on countries with transportation as high-emitting sector. Initial focus will be on Mexico (NAMA cargo), Chile (taxi fleet), Argentina (rail transport Belgrano), Colombia (freight transport optimization), Peru (possible partnership with GIZ) and Panama.

### *Financial Aspects*

#### *Required amount of funding*

Interventions in the transport sector usually require large amounts of funds. Therefore, it is especially important to enhance and initiate partnerships that share the same goals and interests.

#### *Potential sources of funding*

CAF will provide its own resources and in most of the cases will benefit from accessing additional funds to increase its financial capacities through the partnerships. CAF's cooperation with strategic partners in the transport sector is crucial.

#### *Financial products and non-financial products*

CAF will provide non-reimbursable technical cooperation funds of up to USD 200,000 for the identification, conceptualization and design of transport initiatives, provided there are Memorandums of Understanding (MOUs) and concrete commitment from

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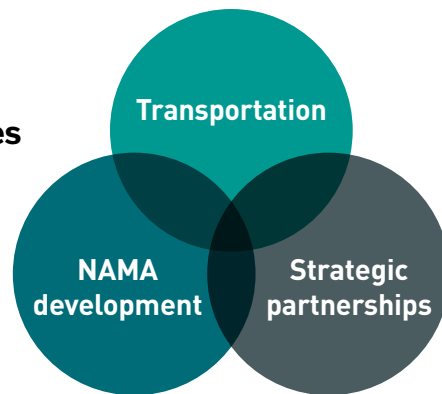
<sup>19</sup> Actually, CAF is already working with GIZ in TRANSfer analyzing the development of a NAMA concept in the transportation sector of Peru.

benefitting counterparts. CAF may also act as a provider of guarantees. CAF will also provide co-financing and re-financing up to amounts of USD 100 million. CAF may also be the financial intermediary for governmental organizations and other financial institutions.

### *Synergies/Interactions with other Strategies*

The transport strategy has overlaps with the other strategies, mainly with strategic partnerships and NAMA development (Figure 5).

**Figure 5: Synergies/interactions between transport and other strategies**



## Strategic Partnerships

### *General Aspects*

#### *Strategic focus*

Based on previous experiences with existing partners and in the light of the potential for cooperation with new partners, it is recommendable that the Strategic Climate Change Mitigation Program pursues and develops the concept of strategic partnerships. Within this context, it seems important to find a good balance between the enhancement of existing partnerships and the engagement in new ones.

### *Institutional Aspects*

#### *Internal partners/synergies*

The strengthening or initiations of partnerships in the field of climate change mitigation will not only be beneficial for CAF's climate change team, but it will also help other areas at CAF by contributing to the crucial trust building between CAF and its partners. The internal partners to be considered are:

- Directorate Financial Resources
- Directorate Special Funds

### *External partners/synergies*

Concerning the external partners, a special focus should be set on the following players on a short- or mid-term basis:

- Enhancement of existing partnerships:
  - Intensified cooperation with KfW and local banks in the field of energy efficiency (idea of ensuring continuity and increasing trust)
  - Intensified cooperation with AFD and JICA (enhancement of respective credit lines)
  - Stronger cooperation with UNFCCC
- Initiation of new partnerships:
  - Trial cooperation with UNDP in the field of innovative NAMA development
  - Trial cooperation with GGGI on institutional arrangements regarding topics like green economics, green growth or green cities
  - Trial cooperation with DEG and SIFEM with regard to the promotion of new renewables in selected countries (e.g. co-investments by DEG)
  - Trial cooperation with the Brazilian bank Caixa to get more engaged in local financing in Brazil
  - Multilateral cooperation in the context of the International Development Finance Club (networking and knowledge exchange)
  - Direct cooperation with LAIF in order to enhance current access via intermediaries<sup>20</sup>

Table 5 provides an overview of the different relationship types that CAF should seek with regard to the potential partners identified.

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<sup>20</sup> The Directorate Special Funds of CAF is already working such a direct cooperation. However, an additional boost from the Climate Change Department that can take advantage from its specific experience with the GEF and the issues of adaptation is recommended.



**Table 5: Overview of relationship types with potential partners**

	Potential source of funding for CAF	Potential target of funding by CAF	Other benefits for CAF
<b>KfW</b>	Enhanced credit lines (focus on energy efficiency)	-	-
<b>AFD</b>	Enhanced credit lines	-	-
<b>JICA</b>	Enhanced credit lines	-	-
<b>UNDP</b>	-	Support for “experimental” NAMA activities	-
<b>GGGI</b>	(Support in mobilization and structuring of additional external funding)	-	Support in establishment of institutional setups for private sector mitigation action
<b>DEG</b>	Co-investments in new renewables	-	-
<b>Caixa</b>	-	Delivery of funding to local entities in Brazil	-
<b>IDFC</b>	-	-	Networking and knowledge exchange

### *Technical Aspects*

#### *Geographical focus*

The geographical focus strongly depends on the specific partner, the specific field of cooperation and the specific program in which the cooperation takes places.

### *Financial Aspects*

#### *Required amount of funding*

Enhancing and initiating partnerships does not require important funds. However, partnerships usually need considerable time investments for maintaining existing contacts, initiating contacts and general networking.

### *Potential sources of funding*

In most of the cases, the goal of the partnerships will be to access additional funds in order to increase CAF's financial capacities. In few cases, CAF's cooperation with strategic partners aims at taking advantage from their technical skills (e.g. UNDP) and/or local presence (e.g. Caixa). In a special case, the partnership might not have any financial aspect involved (e.g. GGGI) but a clear possibility of a joint direct impact with governmental institutions at national and local level.

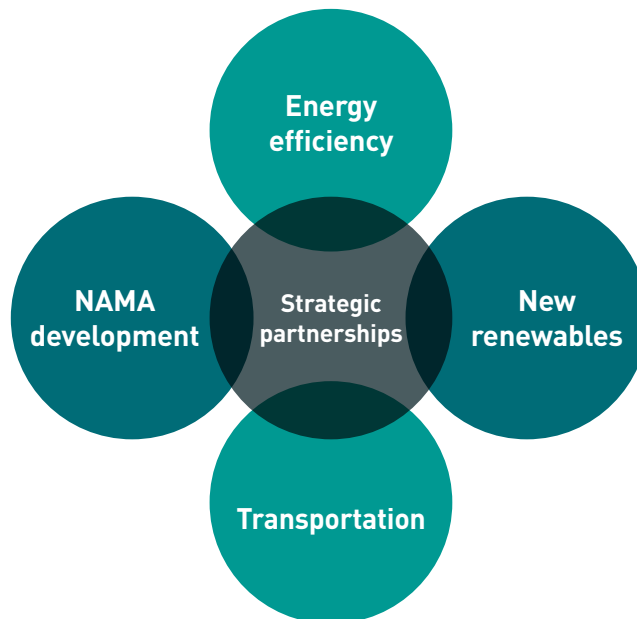
### *Financial products and non-financial products*

The financial products to be used will be enhanced or new credit lines will be developed between CAF and its partners, as well as resources of technical cooperation for policy and program development.

### *Synergies/Interactions with other Strategies*

The strategy of enhancing and initiating strategic partnerships has many overlaps with the other strategies presented above and below. Actually, as illustrated by Figure 6, this strategic approach should not be stand-alone, but should be combined with all other strategies in order to exploit their full potential. Please refer to the other strategies for details on the specific strategic partnerships to be pursued in the individual strategies.

**Figure 6: Synergies/interactions between strategic partnerships and other strategies**



## NAMA Development

Nationally Appropriate Mitigation Actions (NAMAs) are becoming fundamental means for promoting low carbon development worldwide as they are driven by the conviction that adequate national policies and activities can mobilize public and private investment. NAMAs vary considerably in scope and size and can be financed both domestically and internationally, and share the same objective: overcoming barriers to achieve significant emission reductions of CO<sub>2e</sub>. A NAMA is an instrument that does not attempt to impose a one-size-fits-all solution, but rather builds on nationally-led initiatives tailored to each country's specific needs. Promoting and developing NAMAs implies a process where a multitude of actors are involved and multiple challenges are faced, but also brings new alternatives for solutions, cooperation, and financing. Countries in Latin America are global leaders with regards to NAMA development. However, and even though significant capacity has been gained, there is still important work ahead.

In a broad sense, LAC countries have been active with the identification of NAMAs, but lack funding for their design, kick-start and especially for their implementation. CAF aims to play a prominent role in this aspect.

### *General Aspects*

#### *Strategic focus*

The development of NAMAs supported by CAF is possible in any sector, as long as there is a real demand for financing and concrete commitment by the government entities and other partners involved. The initial focus will be on the following:

- Energy efficiency
- Transportation
- Renewable energy
- Waste and waste water treatment in cities

### *Institutional Aspects*

#### *Internal partners/synergies*

All departments in CAF are potential partners with whom synergies can be created. However, there is a widespread need for internal capacity building so that these other departments clearly understand what is meant by a NAMA, by the different sectors and approaches, by their related risks, and by the related funding possibilities that complement the traditional financing channels of the bank. CAF's Environment and Climate Change Department has good knowledge about NAMAs, and will provide

capacity building and better internal communication channels to convey the idea that a NAMA is beneficial because it complements the current business opportunities of other departments at CAF. Thus, there is a strong need for regular and direct communication with other business areas at CAF to persuade them of the potential benefits of NAMA approach. Such an approach might complement existing business lines.

Key internal partners include:

- Vice-Presidency Energy,
- Vice-Presidency Infrastructure,
- Vice-Presidency Social Development,
- Directorate Financial Resources,
- Directorate Special Funds

#### *External partners/synergies*

A special focus should be set on UNDP which has explicitly expressed its interest in working together with CAF on NAMAs where UNDP does the experimental, conceptual work and CAF ensures the financing. Also the extension of existing NAMA cooperation with KfW-LAIF should be considered.

For NAMAs to be successful, CAF will enhance cooperation with the national and subnational government agencies responsible to oversee the development of NAMAs per sector.

#### *Technical Aspects*

##### *Geographical focus*

There are no limits with regards to the geographical focus for CAF's promotion of NAMAs: all member countries in LAC are included. Initially, CAF will focus on ongoing initiatives such as promoting cogeneration in the industrial sector, supporting use of renewable biomass for energy generation, and waste and wastewater management.

#### *Financial Aspects*

##### *Required amount of funding*

The amount of funding necessarily depends on the type of NAMA intervention foreseen. These can range from large-scale initiatives costing tens of millions of dollars, to single pilot projects. This has to be analyzed on a case-by-case basis.

### *Potential sources of funding*

NAMAs are a vehicle that may have several potential sources of funding that provide wide-range support. Funding can take various forms to support their development, including the design of broad policy strategies, program implementation, capacity building, awareness-raising campaigns, pilot projects, and technical assistance. In other words, they can take the form of monetary and/or non-monetary incentives.

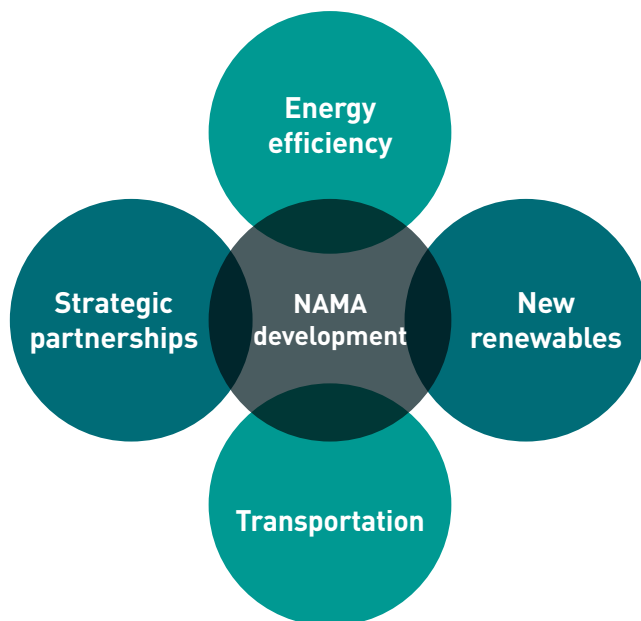
### *Financial products and non-financial products*

The financial products to be used will include current or new credit lines between CAF and its partners in the public sector, industry and financial sectors, depending on the specific needs of each NAMA and country. CAF will also provide non-reimbursable technical cooperation funds of up to USD 200,000 for the identification, conceptualization and design, implementation and operationalization of NAMAs, provided there are Memorandums of Understanding (MOUs) and concrete compromise from partners and counterparties.

### *Synergies/Interactions with other Strategies*

The NAMA development strategy also has many overlaps with the other strategies presented. As illustrated by Figure 7, this strategic approach should be stand-alone, but should be combined with other strategies in order to exploit its full potential.

**Figure 7: Synergies/interactions between NAMA development and other strategies**





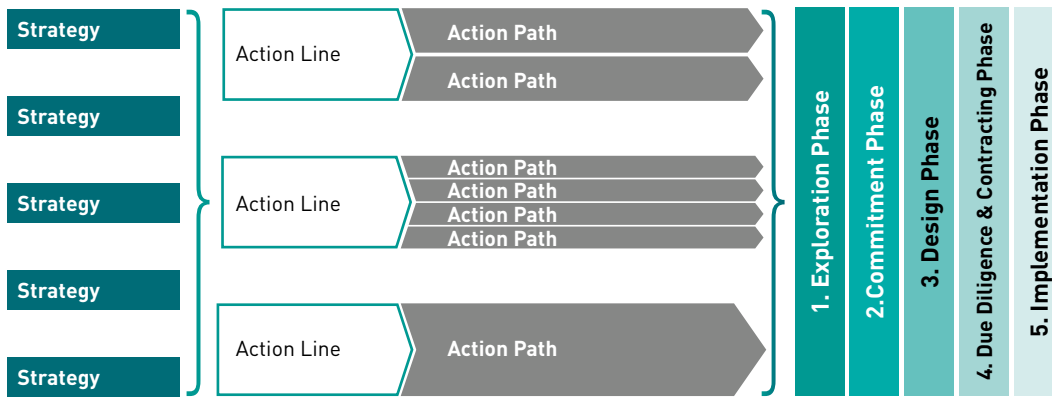
# Action Plan of the Climate Change Mitigation Program

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## General Overview

The strategies selected and described in chapter 3.5 lead to specific action lines whose rationales are described in the following. These action lines (chapter 4.2) may imply several action paths (4.3)<sup>21</sup>. Additionally, there are a general structure, general phases and general action steps in which the action paths are organized. Figure 8 presents this structure and the main phases.

**Figure 8: Overview of Elaboration Process for Action Plan**



Furthermore, Table 6 describes in more detail the phases and action steps that the action path follows on its way to become a concrete investment opportunity. These generic action steps refer to activities involving project finance or fund investments. In case of potential analysis or conceptual analysis, for instance, the phases and action steps may need to be adapted. Naturally, there may also be concrete examples where phases or action steps can be short cut or extended by auxiliary steps.

<sup>21</sup> The wording wants to be coherent with the term “Action plan”. As Figure 8 shows, Strategies are more generic than action lines, and these are more generic than action paths. They can be similarly understood like strategies, project types (corresponding to action lines) and project opportunities (action paths).

**Table 6: Overview of Action Steps according to Phases**

N°	Phase	Action Step	Explanation
1	Exploration Phase	<b>Coordination and communication</b>	The action plan as a whole and each pursued action line require internal (CAF departments involved) and external (with potential partners) coordination and communication – optimally by a tandem team.
		<b>Initial portfolio</b>	Together with internal and external partners, an initial portfolio of action paths, i.e. potential opportunities, is determined for each pursued action line.
		<b>Initial evaluation</b>	In workshops with internal and external partners, the portfolio of action paths is evaluated and the most promising ones are selected.
		<b>Final portfolio</b>	The final portfolio of action paths is documented, including the rationales.
2	Commitment Phase	<b>Internal commitment</b>	CAF and the partner(s), respectively, present a final portfolio internally to receive the internal commitment and support to continue the process.
		<b>Partner commitments</b>	Based on this commitment to continue, CAF and the partner(s) express their mutual commitments by means of MoUs or LoIs for the further development and implementation of the action paths.
3	Design Phase	<b>Elaborate action paths in detail</b>	The opportunities are described in detail, including, as examples, context analysis, required finance, (political) commitment, mitigation effect, replication potential.
		<b>Structuring projects</b>	The action paths are structured in concrete projects (phases, project finance instruments and structures, fund investments etc.). This may include feasibility studies, where applicable, and their finance.
		<b>Management of projects</b>	In addition to structuring the projects, the concrete management and roles are defined. The structuring of projects and setup of management lead to business plans or investment plans, where applicable.
4	Due Diligence & Contracting Phase	<b>Perform due diligence</b>	The properly defined projects undergo a due diligence.
		<b>Investment decision</b>	The due diligence outcome leads to a well-informed investment decision (within the project structure and within CAF and partner).
		<b>Final Contracting</b>	A positive investment decision leads to the final contracting between partners and further stakeholders, beneficiaries, as applicable.
5	Implementation Phase	<b>Implementation plan</b>	Following the implementation plan the project is to be implemented.



The specific timing of these action steps related to CAF's strategic mitigation program can be found in chapter 4.4 . There, it is illustrated by a Gantt chart (Figure 15).

## Action Lines

Based on the five individual strategies of the strategic mitigation program defined in chapter 3.5, specific action lines have been selected and developed in order to establish a comprehensive action plan. Given the quantity and quality of information gathered in Work Stream I (chapter 2) and the intense exchanges with CAF, the selection process aimed at taking advantage from all the relevant inputs received, rather than following a mechanic and rigid evaluation method (e.g. quantitative multi criteria assessment).

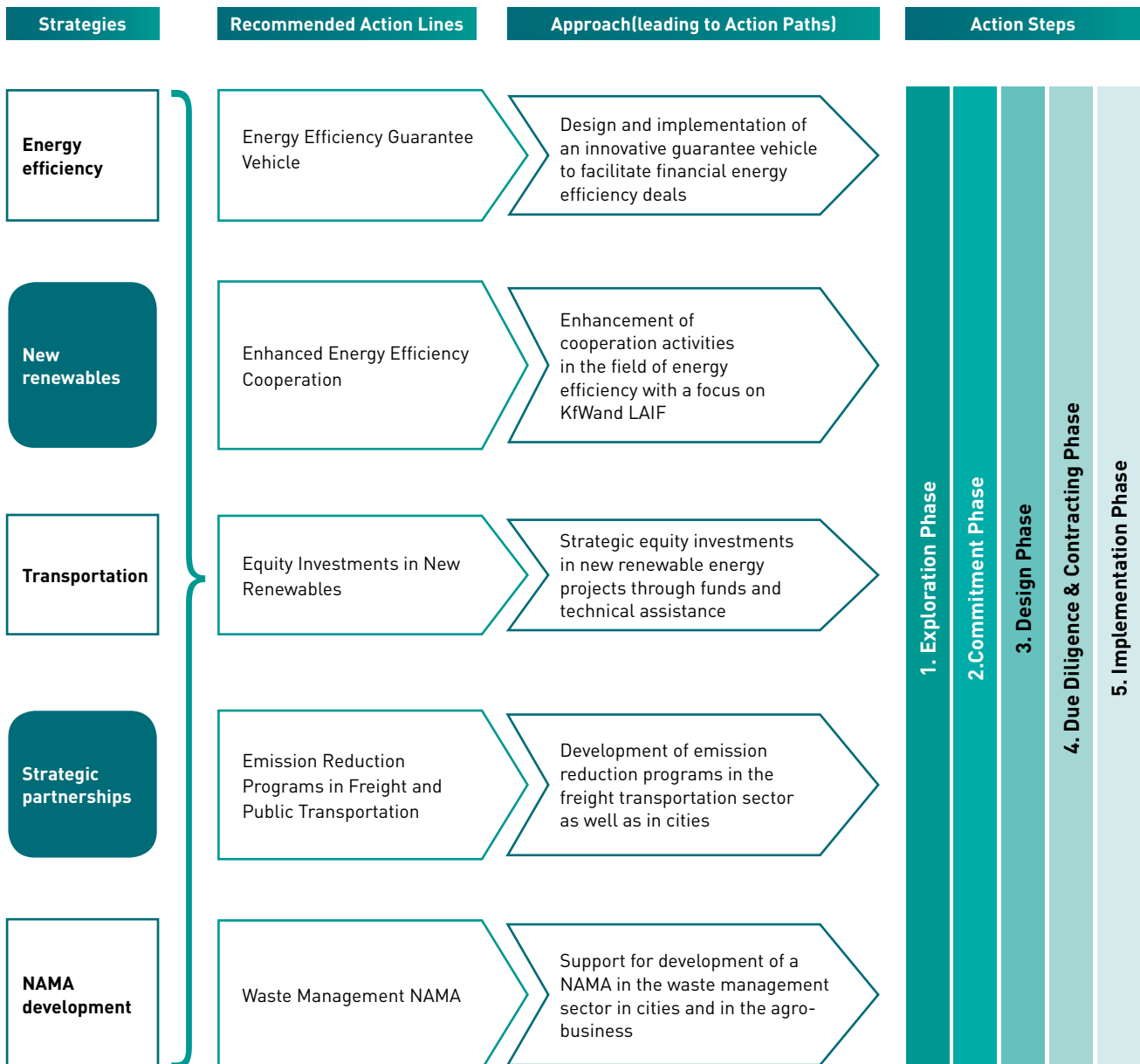
The following key aspects were taken into consideration in the selection process of the action lines. These key aspects served as essential guiding principles to develop a well-balanced action plan.

- Ensure presence of all **individual strategies** in the action lines and whenever possible combine these.
- Reflect CAF's priority order for the sectorial and programmatic strategies, by considering inputs from the workshop and further exchange (e.g. institutional preferences, financial requirements, etc.)
- Cover primarily **high-priority countries** and **high-emitting sectors**. Priority countries can also be those that have so far implemented few activities related to mitigation.
- Support the main **mitigation approaches of LAC**
- Enhance well-established successful partnerships and initiate new promising ones with **committed partners**
- Ensure **continuity** and benefit from CAF's previous track record and experiences, but also try to engage in innovative **pioneering activities**
- Align action lines with the **vision, mission, values and objectives** defined

These key aspects were all considered, but not explicitly weighted. It is evident that the action lines had to be chosen out of a large universe of possible options. The individual strategies and their manifold combination possibilities allow for a multitude of opportunities. Consequently, any recommendation list can never be exhaustive and more action lines can be imagined which could be considered and develop at a later stage by CAF.

In the end, the five following action lines – each of them implying several action paths that seem worth being explored – have been retained and are to be recommended. Figure 9 provides an overview of these action lines and illustrates the overall strategic context in which they are embedded:

**Figure 9: Overview of recommended Action Lines**



The recommended action lines have been selected in such a way to optimally encompass the key criteria presented above. They were supposed to reflect both continuity with CAF’s previous mitigation activities and a certain degree of innovativeness.

Table 7 briefly explains the rationale for each action line:

**Table 7: Presentation of Recommended Action Lines and their Rationales**

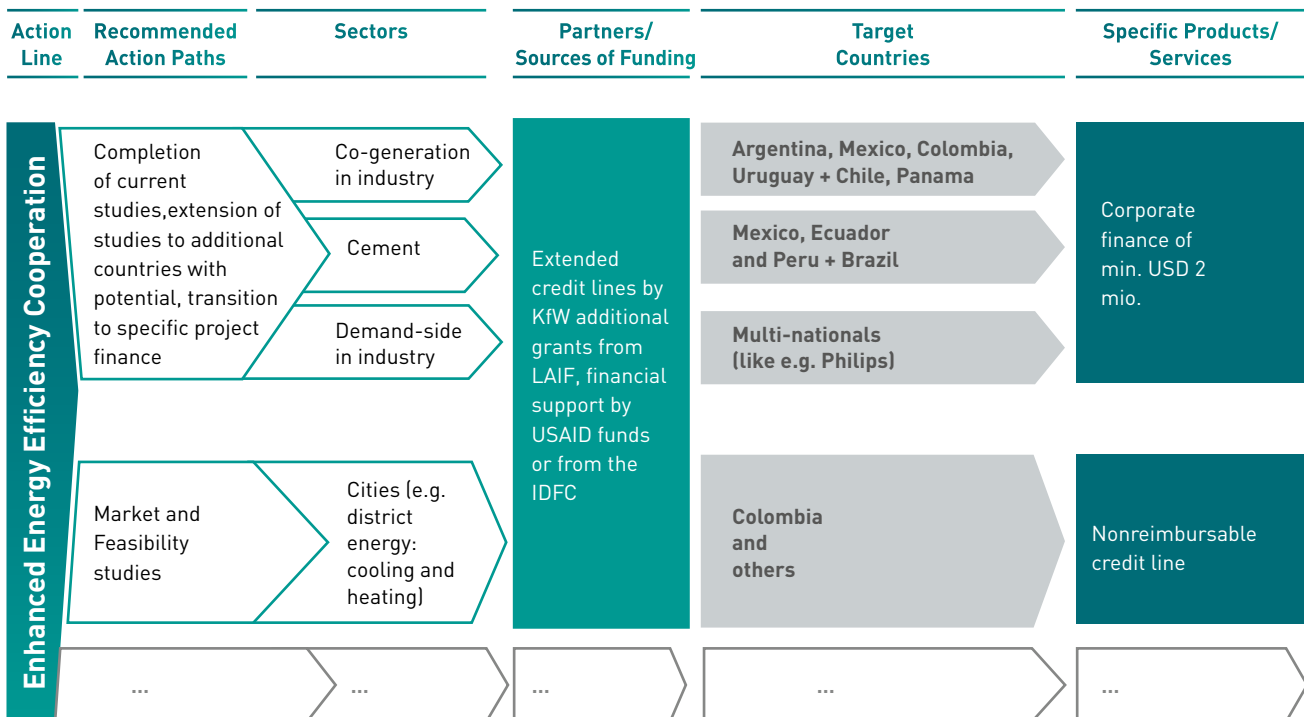
N°	Action Line	Rationale for recommendation
1	<b>Enhanced Energy Efficiency Cooperation</b>	Energy efficiency as top priority sectorial strategy for CAF Continuity of an established, well working partnership with KfW Transfer of promising approaches to new countries Introduction of the new city component to benefit from possible synergies with initiatives at CAF (e.g. Cities with Future)
2	<b>Energy Efficiency Guarantee Vehicle</b>	Energy efficiency as top priority sectorial strategy for CAF Innovative approach that goes beyond current activities Large potential for emission reductions Opportunity for “pioneer” branding of CAF
3	<b>New Renewables Cooperation</b>	New Renewables as one of CAF’s sectorial strategies, mainly at VP Energy High potential for existing and new cooperation and internal synergies with VP Energy New renewables show high mitigation potential and are prominent in mitigation programs Possibility of climate financing being channeled to renewable energies and experience of CAF’s Climate Change Program managing specialized technical assistance CAF’s explicit expression of interest in equity investments and green bonds
4	<b>Emission Reduction Programs in Freight and Public Transportation</b>	Transportation as one of CAF’s sectorial strategies Promising initiatives with regard to freight transportation available in LAC Clear synergies with CAF’s core business and other initiatives (e.g. Cities with Future)
5	<b>Waste Management NAMA</b>	NAMA development as one of CAF’s programmatic strategies Waste management with large potential for replication Additional synergies with CAF’s other initiatives (e.g. Cities with Future) Opportunity for branding of CAF as NAMA developer in innovative sector Already working in the development of a performance based initiative in the waste treatment sector in Ecuador with LAIF financing.

## Action Paths

Having presented the action lines in their general strategic context, the following chapters are to lay out the details of the different action lines. For each action line, this refers to the following aspects: recommended action paths, sectors, partners/sources of funding, target countries and specific products/services.

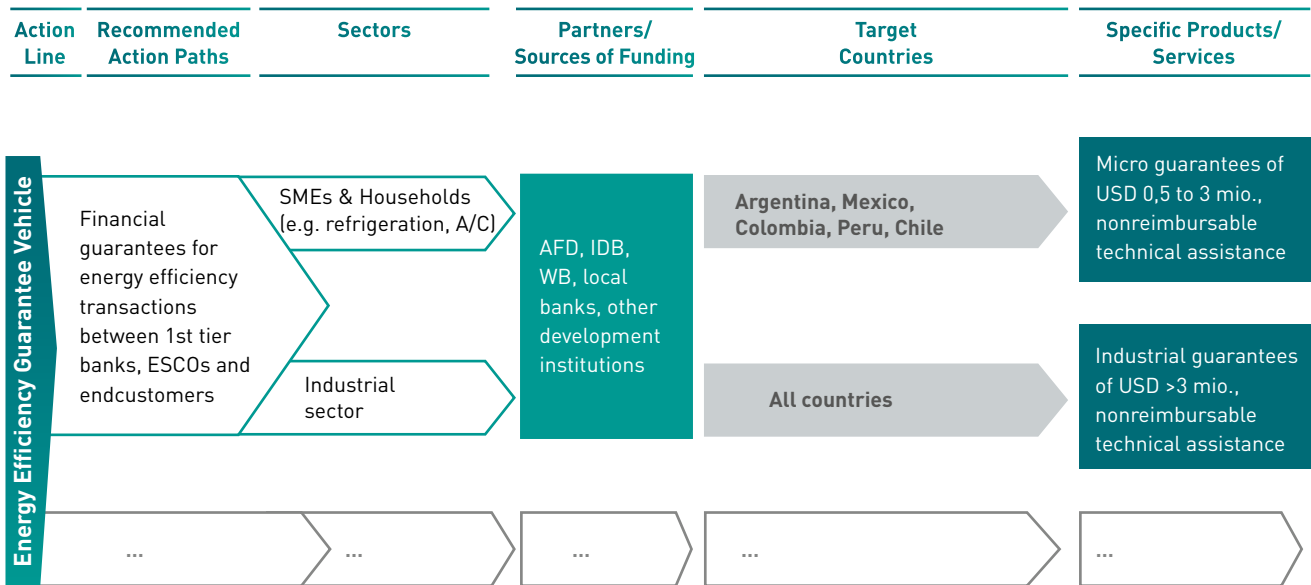
### Enhanced Energy Efficiency Cooperation

**Figure 10: Detailed Action Line – Enhanced Energy Efficiency Cooperation**



## Energy Efficiency Guarantee Vehicle

**Figure 11: Detailed Action Line – Energy Efficiency Guarantee Vehicle**



## Equity Investments in New Renewables

**Figure 12: Detailed Action Line – Equity Investments in New Renewables**

Action Line	Recommended Action Paths	Sectors	Partners/ Sources of Funding	Target Countries	Specific Products/ Services
New Renewables Cooperation	Technical assistance to equity investments in mitigation strategies and projects (in cooperation with VP Energy)	New renewables, clean tech funds, green energy funds	DEG, SIFEM Perfoma Investimentos (Perfoma Clean Tech Fund)	Panama, Ecuador, Mexico Brazil	Technical assistance for mitigation strategies and leveraging of finance to projects
		Small-scale hydros, biomass to energy, geothermal	LAIF, GEF, GCF, other climate funds	Ecuador, Peru, Brazil, Colombia, Panama	
	Technical assistance to investments in climate change strategies and green bonds (in cooperation with Directorate Financial Resources)	All new renewables/ specific new renewables to be selected according to preferences	Issuers of green bonds (e.g. development banks, corporates, local authorities) and green bond investors (e.g. private banks, central banks, pension funds, asset managers)	Colombia, Peru, Brazil, Mexico, Panama	Technical assistance to investments in climate change strategies and green bonds (in cooperation with Directorate Financial Resources)
...	...	...	...	...	...

## Emission Reduction Programs in Freight and Public Transportation

**Figure 13: Detailed Action Line – Emission Reduction Programs in Freight and Public Transport**

Action Line	Recommended Action Paths	Sectors	Partners/ Sources of Funding	Target Countries	Specific Products/ Services
Emissions reduction programs in Freight and Public Transportation	Improvement of national freight Transportation	Fleet efficiency (e.g. technology, logistics, ecodriving trainings)	SLoCaT, Transport2020 Bridging the Gap, GIZ TRANSfer Project, other financial partners	Argentina, Mexico, Colombia, Peru, Chile and Panama	Credit lines, cofinancing, refinancing up to USD 100 mio., nonreimbursable technical cooperation
		Improve modalsplit (e.g. more railway, maritime and fluvial transport)			
	Improvement of public transit in cities	Extension of public transport offer	AFD	Colombia, Mexico, Chile	
Introduction of public e-fleets					
...	...	...	...	...	...

## Waste Management NAMA

**Figure 14: Detailed Action Line – Waste Management NAMA**

Action Line	Recommended Action Paths	Sectors	Partners/ Sources of Funding	Target Countries	Specific Products/ Services
Waste Management NAMA	Design and funding of a NAMA related to waste management	Municipal waste water management (biogas capture)	KfW, UNDP, GGGI, national governments and municipalities	Colombia, Ecuador, Costa Rica, Dominican Republic, Panama	Credit lines, non reimbursable technical cooperation, cofinancing and refinancing up to USD 100 mio.
		Municipal solid waste management (LFG biogas capture and use)		Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Panama, Peru	
		Composting mio. (residuals from agro-business sector)		Chile, Colombia, Ecuador, Uruguay	
	...	...	...	...	

## Timeline

The essential action steps that the action plan of the strategic mitigation program 2015-2017 should follow have already been defined and explained in chapter 4.1. Figure 15 now shows these steps in practice by recommending a specific timeline for the action plan. This timeline aims at benefitting from the next two years to actively pursue the suggested strategies, action lines and action paths so that the implementation of the first concrete projects can take place in 2017.



**Figure 15: Suggested Timeline for Implementation of Action Lines and Action Paths**

Phase	Generic Action Steps	Coordination and Communication		2015			2016				2017				2018
		Internal	External	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1-Q4
1. Exploration Phase	<b>Coordination and communication</b> Define coordination and communication team	●		■											
	<b>Initial portfolio</b> Setup portfolio of concrete opportunities Workshop with partners on concrete opportunities	●	●	■	■										
	<b>Initial evaluation</b> Evaluate, prioritize and select opportunities	●	●			■									
	<b>Final portfolio</b> Present portfolio internally and to partners	●	●			■	■								
2. Commitment Phase	<b>Internal commitment</b> Internal commitment from decision makers	●				■	■								
	<b>Partner commitments</b> Commitment from strategic partners (MoU, LoI) Commitment from beneficiaries (MoU, LoI)		●				■								
3. Design Phase	<b>Elaborate action paths in detail</b> In-depth description of selected opportunities	●					■	■							
	<b>Structuring projects</b> Structure concrete projects	●	●					■	■						
	<b>Management</b> Define roles and responsibilities for projects	●						■	■						
4. Due Diligence & Contracting Phase	<b>Due diligence</b> Conduct due diligence for projects	●							■	■					
	<b>Investment decision</b> Take a well-informed investment decision	●	●							■	■				
	<b>Final contracting</b> with partners with beneficiaries with other relevant stakeholders	●	●								■	■	■		
5. Implementation	<b>Implementation plan</b> Start implementing projects	●	●											■	

# Annex

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## Methodology

**The main methodological challenge is that the development** of a climate change mitigation strategy involves the analysis of a large number of countries, actors, and international financial institutions. This required a pragmatic and sound methodology for data collection, data analysis, and synthesis, complemented by selected interviews with country officials and experts.

The following methods were applied to gather and process the data and information required.

A **meta-analysis** provided an overview and description of the state of the play of climate change mitigation at the international level and more specifically in LAC. It required the analysis of political trends in the international arena of mitigation and in-depth analysis of selected country initiatives in LAC. With regards to the latter, mitigation trends and potential were investigated by using, inter alia, emissions inventories, UNFCCC reports and databases, UNEP Risoe CDM pipeline and information available at DNAs and other public sources such as the Ecofys NAMA Database.<sup>22</sup>

The collection of data about ongoing activities was conducted in close cooperation with respective country officials, mostly from DNAs or responsible ministries. These experts were asked to shortly describe the countries' activities with regard to e.g. mitigation-relevant policies, legislation and programs, but also NAMAs and offset programs etc. The description was done in structured tables. Based on this, **interviews with key staff** were performed in order to complement what was gathered in the tables and elaborate in more detail on those activities that are relevant for CAF.

A selection of high-priority activities and institutions was done in coordination with CAF. These were analyzed in-depth, mainly through an initial desk research accomplished by expert's interviews.

Data collection was accomplished by **desk-research and literature review** concerning mitigation policies and country activities, development oriented institutions and on international climate finance. In addition, all countries were analyzed by desk review on the mitigation activities, carbon emission inventories, emission-relevant sectors, and the CDM project and NAMA pipeline.

The outcomes of the country-based meta-analysis and investigations of development oriented organizations and financial institutions were presented in the interim workshop at CAF. The definition of strategic options that lead to the main strategies was largely based on the information gathered and the outcomes of work stream I.

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<sup>22</sup> <http://www.nama-database.org>



# Strategic Climate Change Mitigation Program