

April 2020

Formative evaluation

Transformative Carbon Asset Facility

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Acronyms

BEIS	UK Department for Business, Energy and Industrial Strategy
BTR	Biennial Transparency Report
CA	Corresponding Adjustments
CCF	Climate Cent Foundation
CDM	Clean Development Mechanism
Ci-Dev	Carbon Initiative for Development
CMU	Country Management Unit
COP	Conference of the Parties
CPF	Carbon Partnership Facility
DAC	Development Assistance Committee
DNA	Designated National Authority
EESL	Energy Efficiency Services Limited
ER	Emission Reductions
ERPA	Emissions Reduction Payment Agreement
GHG	Greenhouse Gas
GP	Global Practices
ITMO	Internationally Transferred Mitigation Outcome
MRV	Monitoring, Reporting and Verification
NDC	Nationally Determined Contribution
OECD	Organization for Economic Co-operation and Development
PAD	Project Appraisal Document
PCN	Project Concept Note
PDD	Program Design Document
PIN	Program Information Note
PMR	Partnership for Market Readiness
Pre-PIN	Preliminary Program Information Note
RBCF	Results-Based Climate Finance
SEA	Swedish Energy Agency
SECO	Swiss Economic Affairs Secretariat
TCAF	Transformative Carbon Asset Facility
ToR	Terms of Reference
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
VER	Verified Emission Reductions
WB	World Bank

1 Introduction

Ipsos MORI was commissioned to undertake a formative evaluation of the Transformative Carbon Asset Facility in July 2019. The Facility was established in 2016 and declared operational 2017, and this is the first evaluation carried out. The TCAF framework foresees that, after this formative evaluation, a mid-term evaluation will follow in 2023 and a final evaluation in 2028, by the end of the work program.

1.1 Evaluation objectives

As noted in the Terms of Reference (ToR), this Formative Evaluation of the Transformative Carbon Asset Facility (TCAF) seeks to better understand the relevance of the facility and to provide early indications of effectiveness and efficiency of the activities conducted so far.

This evaluation addresses evaluation questions relating to the criteria developed by the Development Assistance Committee (DAC) of the Organization for Economic Co-operation and Development (OECD) of relevance, effectiveness and efficiency, including an assessment of the governance and management of the TCAF. As per the ToR, the objectives of this evaluation are:

- To assess early results of TCAF which will be able to feed into an assessment of what has been achieved with the Facility's resources;
- To assess progress towards program outcomes and impacts, and to identify areas that may require strengthening or modification to ensure the overall Facility is on track; this also includes assessing relevance, appropriateness of TCAF implementation processes, and value for money; and
- To provide lessons to guide and inform the shape of future result-based payments that may emerge during implementation.

This is a formative evaluation of the TCAF, focused on the first tranche ("Tranche A") of funding, which currently has approximately US\$ 215 million in committed resources and was declared operational in March 2017.

1.2 Evaluation approach and methodology

This formative evaluation focuses primarily on assessing relevance, efficiency, and effectiveness. The TCAF is a complex initiative operating in an evolving context, and its activities are at an early stage. Outcomes and impacts cannot be observed yet, hence this evaluation has looked at the outputs and the elements hindering or facilitating outcomes to materialize. We have followed a theory-based approach underpinned by an intervention logic developed during the inception phase. Theory-based approaches are normally applied at later stages of the policy cycle (e.g. mid-term and final evaluations), as they aim to test the causal links that lead from input throughout to impact in the theory of change. In this case, our evaluation has been underpinned by the principles of realist evaluation.¹ While we don't aim to provide a response on "what works, for whom, and in which contexts", as realist evaluation typically does, we provide some insights into the factors that have hindered and underpinned progress. We have done so

¹ Pawson and Tilley (2004) Realist Evaluation, British Cabinet Office

by identifying the “mechanisms”² and “contextual factors”³ of the TCAF and assessing how they are (or are not) leading to outputs and outcomes.

The realist evaluation approach has been particularly useful to evaluate the effectiveness and efficiency of the TCAF. The evaluation of relevance has been informed by an extensive literature review and a benchmarking exercise to assess the added value of the TCAF as compared with other initiatives providing Results-Based Climate Finance (RBCF) and/or piloting Article 6 of Paris Agreement.

We have also followed an “utilization-focused approach”, closely considering the needs of the users of the evaluation, with the aim to enhance the likely utilization of the findings to inform decisions and improve performance.

The evaluation responds to the evaluation questions set during the inception phase and agreed with the TCAF Trustee. The evaluation matrix is included in Annex I, and the questions are presented in the table below.

Table 1.1: Evaluation questions

Criterion	Evaluation questions
Relevance	<ul style="list-style-type: none"> ▪ Is the TCAF adequately designed to meet its objectives? ▪ To what extent is the TCAF flexible enough to adapt to changes in the international context? ▪ What is the added value provided by the TCAF, and how does it complement other international initiatives? ▪ How does TCAF align with contributors' priorities?
Effectiveness	<ul style="list-style-type: none"> ▪ What has been the progress of the TCAF so far, compared with the objectives set at the outset? Which factors have underpinned or hindered progress? ▪ How effective has been the identification of crediting programs for implementation? ▪ How effectively has the TCAF disseminated experience and good practices to the international climate community and the UNFCCC?
Efficiency	<ul style="list-style-type: none"> ▪ How fit for purpose are the governance and management of the TCAF? ▪ How efficiently have the resources been used?

Source: Inception report of the evaluation

² Mechanisms describe what it is about programs and interventions that bring about any effects. Mechanisms are often hidden, rather as the workings of a clock cannot be seen but drive the patterned movements of the hands. This realist concept tries to break the lazy linguistic habit of basing evaluation on the question of whether ‘programs work’. In fact, it is not programs that work but the resources they offer to enable their subjects to make them work.

³ Context describes those features of the conditions in which programs are introduced that are relevant to the operation the program mechanisms. Realism utilizes contextual thinking to address the issues of ‘for whom’ and ‘in what circumstances’ a program will work. In the notion ‘context’ lies the realist solution to the panacea problem. For realism, it is axiomatic that certain contexts will be supportive to the program theory and some will not.

This evaluation has been structured in three phases: the inception phase, the data collection phase, and the analysis and reporting phase.

During the **inception phase**, the following activities were carried out:

- Meeting with World Bank Group (WBG): The evaluation team held a kick-off meeting with members of the TCAF Trustee on the 7 August 2019. During this meeting, the evaluation requirements and scope were clarified, the proposed approach and evaluation framework were discussed, and Facility documents were requested.
- Familiarization interviews: Two familiarization interviews were carried out with staff from the International Climate and Energy team at the UK Department for Business, Energy and Industrial Strategy (BEIS) and the TCAF Trustee in September 2019 to clarify aspects of the TCAF governance, design and implementation approach and to gather more perspectives on the evaluation's requirements.
- Documentation review: The team reviewed internal documentation made available by the TCAF Trustee. This included background information on the Facility, technical documents, minutes of TCAF annual and semi-annual meetings and information about the TCAF portfolio.

During the **data collection phase**, the evaluation team continued reviewing internal documentation of the TCAF (mainly technical notes), and gathered evidence and information through the following sources:

- External document review: An extensive analysis of external documentation has been carried out, including TCAF public documents, evaluations of other programs managed by the World Bank (WB) in the field of climate finance, documentation related to other initiatives providing RBCF and/or piloting Article 6, technical documentation on corresponding adjustments and implementation of Article 6, documentation related to negotiations at the Conference of the Parties (COP) and other meetings and events organized by the United Nations Framework Convention on Climate Change (UNFCCC), documentation and grey literature on crediting mechanisms, and review of a small selection of target host countries' Nationally Determined Contributions (NDCs).
- In-depth interviews with staff managing WB programs complementary to the TCAF (1 interview), contributors of the TCAF (5 interviews), WB staff at Global Practice (GP) units (1 interview), and external experts (2 interviews).

Finally, during the **analysis and reporting phase**, the evaluation team delivered a presentation of key findings and potential recommendations to the Facility Board on a teleconference call held on 27 February 2020. During this call, contributors were offered the opportunity to comment on the results of the evaluation and highlight key issues for further exploration. Following this presentation, the evaluation team has prepared this draft final report.

1.3 Limitations of this evaluation

This evaluation has dealt with a high degree of complexity. TCAF operates in a context where the international rules are not defined yet, and the context is continuously changing. This complexity has been exacerbated by the fact that the scope of this evaluation has encompassed an ongoing program,

i.e. it has covered activities carried out since TCAF became operational until the date of submitting this report. This entailed keeping abreast of international negotiations and an ongoing review of TCAF's updates. For instance, the last meeting held between the Trustee and contributors was in January 2020, where key elements of TCAF's approach were discussed.

In addition to this, while the evaluation was conducted, the TCAF Trustee was reviewing its method to develop a pipeline of programs and the approach on corresponding adjustments was under discussion with the Facility Board. This has heavily impacted the data collection for this evaluation; interviews with some key stakeholders (e.g. host countries' representatives) could not be conducted due to their lack of engagement with the TCAF while the issues around corresponding adjustment were being addressed (see Section 2.6 for more information). Given the limited levels of engagement with some external stakeholders prior to pipeline development being placed on hold, the TCAF Trustee considered that it was not appropriate and/or relevant to conduct interviews with these groups. Due to the early stage of the intervention, this evaluation has relied on a very small number of interviews, and mostly with TCAF's inner circle (e.g. contributors). Therefore, the evaluation has been informed to a great extent by internal and external documentation reviewed. We would like to highlight certain elements of the evaluation where a wider set of stakeholders' opinions would have been beneficial:

- The assessment of host countries' engagement would have benefited from interviews with host countries' representatives, as well as Global Practices staff (GPs) and WB country offices staff. Only one interview with a GP staff member was conducted.
- The assessment of WB internal procedures would have benefited from interviews with WB country offices staff and more interviews with WB GP staff.

The limited number of interviews has also affected reporting. Interviews were carried out in confidentiality and responses reported in an aggregate way. In order not to jeopardize anonymity, this report has included very limited information on sources of information when these are interviewees' opinions (e.g. the type of stakeholder reporting certain opinions cannot be provided in many cases, as doing so might disclose their identity for those familiar with the TCAF).

In addition, certain objectives for this evaluation, as set in the TOR, could not be accomplished due to the mismatch between TCAF's progress to date and the evaluation objectives set. This was discussed with the TCAF Trustee during the inception phase, and the objectives were fine-tuned, as explained below:

- One of the objectives of this evaluation, as per the TOR, is to provide lessons to guide and inform the shape of future result-based payments that may emerge during implementation. However, as there are not programs being supported yet, this has not been possible. Instead, we provide lessons learned and recommendations to inform the strategy and design of the TCAF moving forwards, based on results from this evaluation.
- Similarly, assessing progress towards program outcomes and impacts is too ambitious at this stage of TCAF implementation. Nonetheless, we assess the progress made against the objectives established at the outset, and explore factors hindering or underpinning progress.

- Finally, assessing the relevance of the TCAF from the host countries' perspective was not possible given the lack of involvement of this group of stakeholders in the evaluation.

1.4 Structure of the report

The remainder of this report is structured as follows:

- Section 2 presents the evaluation team's understanding of the TCAF and the context in which it operates.
- Section 3 presents the main findings of the evaluation, per DAC criterion: relevance, effectiveness and efficiency.
- Section 4 summarizes the conclusions of the evaluation, based on the findings presented in Section 3.
- Finally, Section 5 provides recommendations for the TCAF Trustee and the Facility Board.

2 The Transformative Carbon Asset Facility (TCAF)

This section provides an overview of, and the context for, the TCAF including the main processes undertaken by TCAF and progress made to date.

2.1 The Facility and its objectives

The Transformative Carbon Asset Facility (TCAF) is a results-based climate finance mechanism (RBCF) that aims to support countries to prepare and implement mitigation measures and low-carbon development approaches. The TCAF was established by the International Bank for Reconstruction and Development and the contributors⁴ in 2016, and it is managed by the TCAF Trustee, which sits within The World Bank Group (WB).

The TCAF targets innovative greenhouse gas (GHG) emission reduction crediting mechanisms, and it provides blueprints for efficient mitigation. As stated in the TCAF Framework (2016) and reaffirmed in the Core Parameters Note (2018), the objectives of the TCAF are:

- To provide funding through emission reduction transactions in order to facilitate the generation of Verified Greenhouse Gas Emission Reductions from transformative programs by leveraging existing or future investment or policy operations, as well as other emerging mandatory and voluntary greenhouse gas mitigation mechanisms;
- To stimulate the establishment of robust regulatory frameworks for carbon pricing;
- To promote sustainable development; and
- To disseminate broadly the knowledge gained by the bank, by programs, contributors and by program developers in the development of the Facility and the implementation of programs.

The TCAF aims to support and raise mitigation ambitions of low- and middle-income countries by providing a financial incentive in the form of payments for verified greenhouse gas emissions reductions and capacity building. This aims at both stimulating action in the present and laying the foundations for future actions.

The table below summarizes the objectives of the TCAF, as per the design document and the Core Parameters Note.

⁴ TCAF Contributors include Department of Environment and Climate Change (Canada), Federal Ministry for the Environment and Nuclear Safety (Germany), Ministry of Climate and Environment (Norway), Swedish Energy Agency (Sweden), the Climate Cent Foundation and SECO (Switzerland), and BEIS (United Kingdom).

Table 1.2: Objectives of the TCAF

Objectives at participant level	Objectives at international level
<ul style="list-style-type: none"> ▪ Generate Verified GHG Emission Reductions ▪ Leverage investment into programs reducing GHG ▪ Support MRV systems and robust regulatory frameworks ▪ Support programs that seek to achieve transformational change ▪ Contribute to the development and implementation of domestic carbon pricing policies ▪ Raise mitigation ambitions of low- and middle-income countries 	<ul style="list-style-type: none"> ▪ Pilot new and innovative crediting mechanisms ▪ Promote sustainable development

Source: TCAF design document (2016)

The TCAF Logframe, revised in 2019, sets the expected results of the Facility (expected impacts, outcomes and outputs). These have informed the intervention logic that was developed during the inception phase and that is shown in Section 2.3.

2.2 Rationale for the TCAF and wider policy context

According to the information gathered through interviews with contributors, the initial rationale for an instrument like TCAF was to create a mechanism to pilot the programs designed with support of the Partnership for Market Readiness (PMR)⁵. The PMR has provided technical assistance and capacity building to low- and middle- income countries to prepare and implement climate change mitigation policies, including carbon pricing instruments. Indeed, the design document of the TCAF (2016) highlights the role of the Facility to provide support to these countries and the likelihood that they would become candidates to enter the Facility's pipeline.

"In the coming years, they [countries supported by PMR] will be in a position to transition from a readiness phase (...) to the implementation of a program (...). In the absence of clear signals from the international climate regime, the Facility will play a critical role in providing the needed financial support to move from 'readiness' to 'implementation' and to adopt more ambitious policies." – TCAF Design document (2016)

The TCAF was designed and established in 2016, one year after the Paris 21st Conference of Parties, where the Paris Agreement was adopted. The Paris Agreement (2015) set climate change mitigation

⁵ The Partnership for Market Readiness (PMR) is an initiative that provides support to low- and middle- income countries to prepare and implement climate change mitigation policies—including carbon pricing instruments—in order to scale up GHG mitigation. It brings together more than 30 countries, various international organizations, and technical experts to facilitate country-to-country exchange and knowledge sharing.

goals at the domestic level through National Determined Contributions (NDCs). This enabled countries to increase their mitigation ambition with external financial support. Article 6 of the Paris Agreement comprises three approaches for cooperation between Parties: “cooperative approaches” under Article 6.2, a new mechanism to promote mitigation and sustainable development (Article 6.4), and a framework for nonmarket approaches (Article 6.8).

The TCAF addresses the need for support to countries to achieve and go beyond their NDCs by providing results-based payments to innovative programs that are likely to produce transformational change. Building on the methodologies developed under the Clean Development Mechanism (CDM),⁶ and including new methodologies (e.g. for baseline setting and environmental integrity), the TCAF aims to support the implementation of the Paris Agreement post-2020.

2.2.1 TCAF and international climate negotiations

The TCAF has been designed to help inform the international process. The context in which TCAF operates is an as-yet undefined international climate regime with uncertain market and accounting mechanisms. Article 6.2 of the Paris Agreement recognizes the ability for Parties to engage in voluntary cooperation, which involves the use of internationally transferred mitigation outcomes (ITMOs). However, as ITMOs could be used by countries for implementation of their nationally determined contributions (NDCs), a robust accounting system and clarity in the program’s relationship with NDCs is needed to avoid double counting (of emissions and removals).

According to paragraph 36 of the COP 21 Decision, double counting shall be avoided based on “corresponding adjustments by Parties for both anthropogenic emissions by sources and removals by sinks covered by their NDCs under the Agreement”.⁷ While all Parties agree that there is a need for robust accounting, different proposals on how and when corresponding adjustments should take place have been made. As Article 6.2 focuses on NDCs, some Parties have suggested that double counting should not be a concern for emission reductions outside NDCs. However, other Parties believe that without a corresponding adjustment for all transfers, a single mitigation outcome may be counted towards two different mitigation efforts.

Agreement on the rules to implement Article 6 of the Paris Agreement was not reached at both COP24/5, with the application of corresponding adjustments an important area of divergence within the negotiations. Negotiations on this issue continue in 2020, with a view to reaching agreement at COP26.

TCAF is currently in the process of deciding on its preferred approach on the operationalization of corresponding adjustments. At the TCAF annual meeting in June 2019, it was decided that a corresponding adjustment mapping exercise should be completed and circulated to Contributors by mid-September, with a discussion during a meeting in Zurich, Switzerland on 22 October 2019. During the October 22 meeting, several key agreements were reached. Based on those, the Trustee prepared a follow up analysis on options for TCAF to use with respect to corresponding adjustments, which was

⁶ The Clean Development Mechanism (CDM), defined in Article 12 of the Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol (Annex B Party) to implement an emission-reduction project in developing countries. Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO₂, which can be counted towards meeting Kyoto targets.

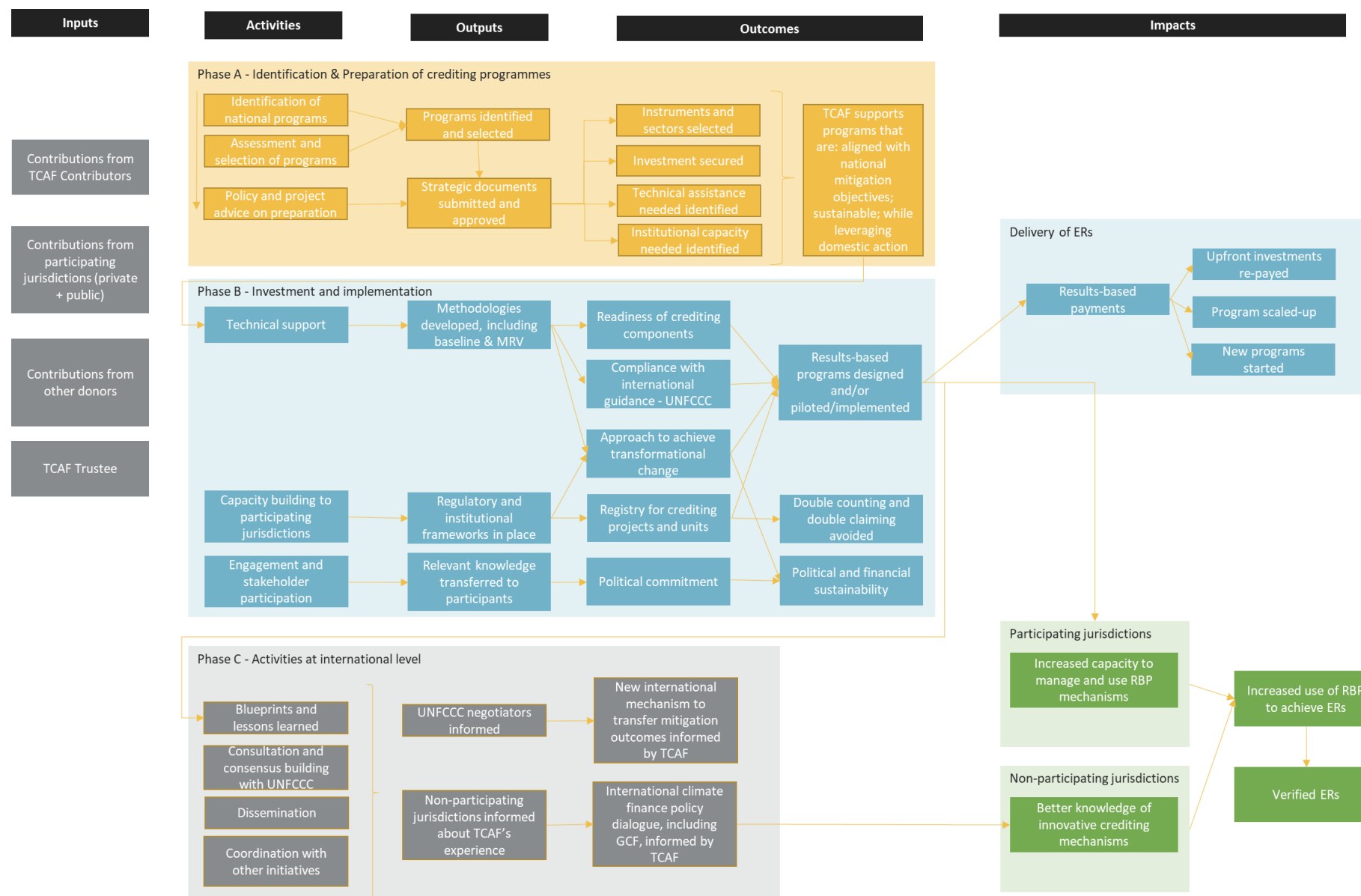
⁷ “Report of the Conference of the Parties on its twenty-first session, held in Paris from 30 November to 13 December 2015”. Available at: <https://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf>

discussed with the Facility Board in January 2020 in Vienna. As of the writing of this report, a decision had not yet been taken on TCAF's operational methodology to address corresponding adjustment.

2.3 Intervention logic

Figure 2.1 displays an overall logic model that was developed in the inception phase to guide the evaluation, outlining the intended inputs, activities, outputs, outcomes and impacts of the TCAF. It builds on the TCAF Logframe dated March 2019 and the TCAF Design Document,⁸ as well as findings from the formative interviews. We have divided TCAF's activity into several phases, defined by the state of preparation or implementation at which it will operate.

⁸ TCAF design document

Figure 2.1: Intervention logic

Source: Ipsos MORI

The text below provides a narrative description of the intervention logic. Both the diagram (Figure 2.1) and the text are divided in phases. However, these phases should not be understood as sequential (e.g. the TCAF identifies programs at the same time as it develops activities at the international level).

2.3.2 Phase A - Identification and preparation of crediting programs

In its preliminary phase and in order to build its pipeline of programs, the activities undertaken by TCAF concern the identification, assessment, and selection of national programs, as well as policy and program advice on preparation. Based on TCAF's assessment criteria, programs are identified and selected, and the relevant program documents are submitted by countries and reviewed by the TCAF Trustee and approved Contributors. TCAF aims to support programs that are aligned with national mitigation ambitions, are sustainable and innovative, leverage domestic action and have the potential to achieve transformational change. The outcomes of this preparatory phase are the selection of the appropriate instruments and sectors, the securement of investment from the counterpart, if applicable,⁹ and the identification of technical assistance and institutional capacity needs.

Assumptions:

- The TCAF Trustee identifies programs that fit within the selection criteria, and these criteria are relevant and fit for purpose
- There are needs in terms of technical and institutional capacity in recipient countries that can be met through the TA resources provided by the Facility and other resources
- Countries are willing to seek support from the Facility for their emissions reduction projects and to achieve their national mitigation targets

2.3.3 Phase B - Investment and implementation at the national level:

In the operational phase of the program, TCAF activities provide technical support to the implementing agency, such as the hiring of external consultants, which allows methodologies to be developed for baseline setting and MRV systems. Through the activities of capacity building to participating jurisdictions, the TCAF supports the establishment of regulatory and institutional frameworks, while the engagement of stakeholders encourages the transfer of relevant knowledge to participants in the program.

The outcomes resulting from this phase are of different kinds. The development of crediting methodologies helps countries progress their readiness components and ensures compliance with UNFCCC guidelines. Regulatory and institutional frameworks, together with knowledge transfer and stakeholder participation, ensure there is political commitment and set the basis to achieve transformational change. In addition, it allows countries to create a registry for crediting projects, to be used within and beyond TCAF, avoiding the risk of double counting and double claiming emission reductions (ERs). Crediting programs are then designed and/or piloted in the receiving country.

The longer-term impacts of this phase concern results-based payments, which allow upfront investments to be repaid, programs to be scaled up, and new programs to be started.

⁹ Policy crediting does not involve investment.

Assumptions:

- There is an appropriate political, regulatory and legal infrastructure, as well as political will, in recipient countries to design and implement the program
- Host countries agree with TCAF general conditions, including TCAF's and Facility Board's positions on corresponding adjustments
- Resources and staff are available at country level to provide the necessary support
- The Facility is well connected with and complements other mitigation initiatives and activities taking place at the same time
- The Facility will be able to provide World Bank resources and external consultants with the relevant skills to deliver the needed technical assistance

2.3.4 Phase C - Activities at the international level

TCAF involves a number of activities at the international level. First, the development of results-based payments (RBP) mechanisms at the national level allows the creation of blueprints and lessons learned to be shared more widely in the international arena. In parallel, the TCAF Trustee is involved in consultations with the UNFCCC, dissemination of knowledge, and coordination with other initiatives, such as the PMR. The outputs of these processes consist of informing the UNFCCC negotiations and making non-participating jurisdictions aware of TCAF's experience. The main outcomes concern informing new international mechanisms to transfer mitigation outcomes and the international climate finance policy dialogue. In the longer term, impacts for participating jurisdictions will include increased capacity to manage and use RBP mechanisms, while non-participating jurisdictions are expected to gain a better knowledge of innovative RBP mechanisms and ultimately, to implement these themselves. Both aim to result in an increased use of RBP mechanisms, implementation of large-scale transformative mitigation policies/actions, and the achievement of verified emission reductions (VERs).

Assumptions:

- TCAF's activities at the national level maintain relevance at the international level over time; its activities remain complementary to other initiatives, and the methods and lessons learned it develops are not outpaced by other developments
- Participating and non-participating jurisdictions are informed about TCAF activities and lessons learned
- Participating and non-participating jurisdictions are willing to share blueprints and lessons learned
- TCAF is able to access international fora such as the UNFCCC, and knowledge to inform negotiations and international parties is shared in an effective way

2.4 Progress made to date by TCAF

This section provides an outline of the progress that has been made by TCAF on different aspects. To date, the Trustee had presented thirteen pre-PINs (Vietnam (Industrial EE and Solar), Mexico, Morocco, Colombia, Southeast Asia: Transport, India: EESL, Indonesia, Brazil, Philippines, Nigeria, Southern Africa Power Pool, Cote d'Ivoire). Eight of the thirteen pre-PINs presented to date received no objection from Contributors and therefore moved to PIN stage (Vietnam (EE and Solar), Morocco, Mexico, Colombia, India, Philippines, Cote d'Ivoire). The Trustee has also developed a series of guidance notes to define the key design parameters of crediting framework to pilot Article 6 under Paris Agreement. A set of analysis and strategy note were developed to communicate with the contributors how to select the priority countries and sectors and evaluate their readiness to develop large-scale crediting program. At the same time, as part of the Knowledge Management Strategy of the TCAF approved in May 2018, three sectoral crediting blueprints (transport, demand-side EE, climate-smart agriculture) were prepared to inform the opportunities and strategies to develop transformative crediting programs in these three sectors. Two sets of workshops were held between 2018 and 2019, one at the Global Designated National Authority (DNA) Forum in Bonn and the other in Switzerland and Sweden as in-country workshops.

2.4.1 Pre-PINs and PINs

The only program at the PIN approval stage is the **Rural Residential Lighting Energy Efficiency Scale-Up Program** in India. Its main objective is to scale up energy savings in residential lighting sector in rural areas through financing and delivery of energy efficiency solutions led by Energy Efficiency Services Limited (EESL), a public-sector energy company. The World Bank assessed the PIN submitted in August 2018 by EESL and its compliance with TCAF parameters, as per the guidance provided in the TCAF Core Parameter Note agreed between the Trustee and the TCAF contributors. These included parameters of transformational change, baseline setting, MRV, additionality, avoidance of double counting, and sustainable development (including as part of transformational change). The pre-PIN was presented on the 7th of March 2017, and the Facility Board approved it with no objections, while the draft PIN was presented on the 30th of January 2018 and approved at the semi-annual meeting on the 30th of January 2019. In June 2019, the prospective EESL program entity presented the TCAF engagement opportunity to India's Ministry of Environment, Forest and Climate Change (MOEFCC). During that meeting, the MOEFCC made it clear that India's priority is to mobilize unconditional climate finance to support NDC implementation and that TCAF's requirement for the host country to undertake CA is not aligned with that priority. Therefore, the MOEFCC has instructed that the EESL program be placed on hold. The table below summarizes the projects presented so far and the information on progression.

Table 2.1: Pre-PINs and PINs

Program	Summary	Counterpart(s)	Status	Date pre-PIN presented	Outcome	Expected timeline
PIN						
India Rural Residential Lighting Energy Efficiency Scale-Up Program	Its main objective is to scale up energy savings in residential lighting sector in rural areas through financing and delivery of energy efficiency solutions led by Energy Efficiency Services Limited (EESL), a public-sector energy company.	Energy Efficiency Services Limited (EESL)	PIN	07/03/2017	No objections (07/03/2017); PIN presented (30/01/2018); PIN approved (30/01/2019)	TCAF team negotiating commercial terms.
Preparing PIN						
Vietnam Industrial Energy Efficiency Program	The program aims to support an accelerated introduction of additional solar installed capacity, through a feed in tariff for solar energy and an auction scheme. TCAF payments are proposed to support the structuring of solar auctions and maximize the financing leverage.	Ministry of Industry and Trade (MOIT), Ministry of Planning and Investment (MPI), Vietnam Electricity (EVN), and the National Power Transmission corporation (NPT).	Preparing PIN	07/03/2017	No objections (07/03/2019) pending review of Vietnam NDC	PIN preparation (June 2018 – January 2020)
Morocco Energy Policy Crediting	The end goal is to develop a policy-based carbon finance program that will cover energy pricing reform, energy efficiency, and renewable energy policies within the scope of Morocco's National Energy Strategy.	Ministry of Energy, the Ministry of Finance, MASEN (renewable energy), ADEREE (energy efficiency), and the Ministry of Environment	Preparing PIN	07/03/2017	No objections (07/03/2017)	PIN preparation
Cote d'Ivoire Energy and Transport	The program consists in a tariff adjustment for power generation, energy efficiency, more efficient transport and emissions tests. Cote d'Ivoire commitment is to reduce 28% emissions by 2030 compared to business-as-usual through sustainable forest management and energy sector changes (such as electricity tariff reform, fuel tax).	The Ministry of Budget and Ministry of Environment and Climate Change	Preparing PIN	11/06/2019	No objections (12/06/2019)	Timeline to be finalized

Colombia Clean Energy Scale up Program	The pre-PIN was developed based on a CTF Colombia Clean Energy Development Project, a guarantee operation.	Ministry of Energy and financial institutions	Preparing PIN	March 2017	No objection (December 2017)	PIN preparation
Mexico Energy in Agriculture	Promotes the adoption of renewable energy (RE) and energy efficient (EE) technologies for agribusinesses producers through differentiated incentive structure (such as grants)	The Secretary of Energy (SENER), the Secretary of Agriculture and Rural Development (SADER) and Secretariat of Environment (SEMARNAT).	Preparing PIN	12/06/2019	No objections (12/06/2019)	PIN preparation (February 2020); PDD (August 2020); ERPA signing (October 2020)
Pre-PIN approved, project on hold						
Philippines GHG Reduction in agriculture sector	The program's objective is to provide financial incentives and technical support to rice farmers to encourage them to switch from continuous flooding to Alternate Wetting and Drying (AWD) practices, thereby increasing food security, promoting irrigation water saving, and reducing GHG emissions.	Department of Agriculture	Pre-PIN approved, project on hold	30/01/2018	Decision postponed (30/06/2019);	Contributors provided feedback on PIN improvement by 28/06/2019 PIN is being revised
Nigeria Flare Gas Reduction and Utilization Program	The project is focused on reducing gas flaring at oil production sites and unlocking the country's significant gas potential.	Ministry for Petroleum Resources	Pre-PIN approved, project on hold	April 2018	Pre-PIN will be revisited if the guarantee lending operation is advanced	Timeline to be finalized
Southern African Power Pool	The objective is to advance the preparation of selected priority regional energy projects in the Southern African Power Pool participating countries.	Development Bank of Southern Africa	Pre-PIN approved, project on hold	30/01/2019	Decision postponed (30/01/2019)	N/A

Dropped						
Southeast Asia Sustainable Urban Transport Program	Information on the program not available	N/A	Dropped (objection to pre-PIN)	07/03/2017 (pre-PIN)	Objection (attempting to coordinate a program across multiple countries/jurisdictions/cities would be too complex with high transaction costs.)	N/A
Indonesia National Solid Waste Management Program	The program aims to support the implementation of the government's national program to improve solid waste management services for selected urban populations across Indonesia.	N/A	Dropped (objection to pre-PIN)	07/03/2017 (pre-PIN)	No objections (07/03/2017); Dropped (November 2017)	N/A
Brazil Streetlighting and Industrial EE	The project will focus on two urban sectors that have the potential to attract private sector investment at scale: efficient street lighting and industrial energy efficiency.	Caixa Economica Federal (CEF)	Dropped	30/01/2018 (pre-PIN)	Dropped (30/01/2018)	N/A

Source: minutes from the Facility Board meetings and annual report 2019.

2.4.2 Knowledge Management Strategy

The first draft of the Knowledge Management (KM) strategy was presented at the TCAF semi-annual meeting in January 2018 and was approved in May 2018. The KM strategy aims to disseminate broadly the knowledge gained by the World Bank, programs, contributors and program developers in the development of the Facility, sharing lessons learned on methodologies, environmental integrity, and sustainable development, and to contribute to selected international events, including UNFCCC negotiation sessions and international workshops.

Development of guidance notes and sectoral crediting blueprints

As part of the progress made, the Trustee developed a series of guidance notes on the TCAF's core characteristics, covering the attribution of emissions reductions to TCAF operations, the determination of the crediting period, the core parameters for TCAF operations, and options for corresponding adjustments.

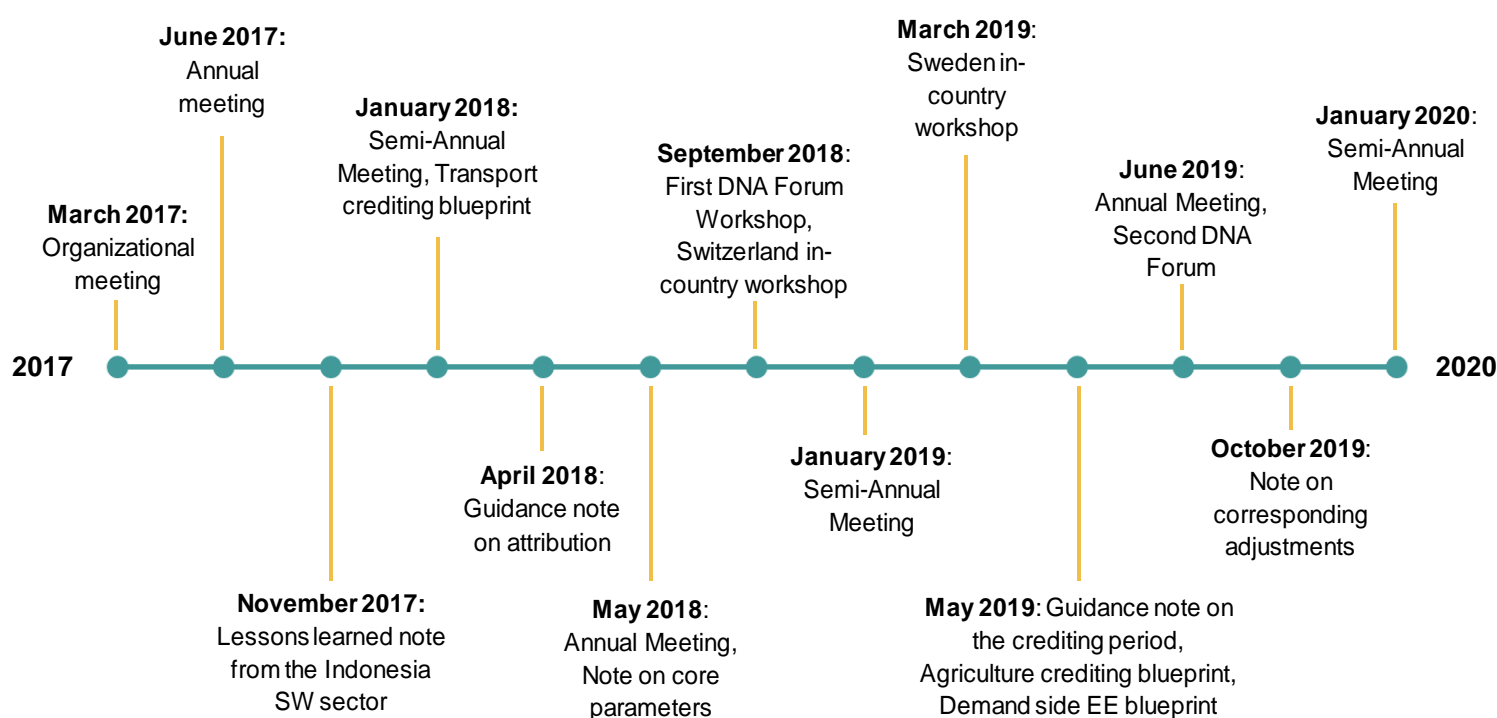
- **Core parameters:** this document was finalized in May 2018. As negotiations of Paris Agreements progress, updates will be made as necessary. The note translates TCAF objectives and portfolio selection criteria from the Framework into parameters for operation, distinguishing them into methodological and operational parameters. Methodological parameters include: 1) transformational change; 2) baseline setting; 3) additionality; 4) Monitoring, Reporting and Verification; 5) avoidance of double counting; and 6) sustainable development. Operational parameters refer to: 1) crediting parameters; 2) safeguarding against regrets (overselling risk); and 3) pricing.
- **Attribution of ERs to TCAF operations:** this guidance document was produced in April 2019 to provide operational guidance on how to proportionally attribute emission reductions, as well as TCAF approach to additionality. The TCAF will only purchase emission reductions going beyond host countries' NDC targets and mitigation efforts funded by international climate finance. The document also outlines proportional attribution of emission reductions and the maximum TCAF ERPA volume.
- **Determination of the crediting period:** the note from May 2019 defines start dates and length of main stages of crediting mechanisms and provides a rationale for decisions on TCAF operations length. The crediting period is the period a mitigation program can generate emission reductions that may be used for NDC target achievement. For TCAF programs, the earliest start date will be the submission of the first NDC, and the length limited by the end of the NDC target period. However, the lifetime of mitigation activities will not need to coincide with the crediting period, they can start earlier.
- **Corresponding adjustments (CA):** TCAF's deliverables on corresponding adjustments are a discussion paper produced in October 2019 and a note produced in November 2019. The discussion paper responded to the request of TCAF contributors at the annual meeting in June 2019 to elaborate a note with more detail on corresponding adjustments, and it also incorporates lessons learned from the DNA Forum workshop. The paper contains general considerations on corresponding adjustments, comparisons between the Kyoto Protocol and the Paris Agreement, and the pros and cons of different CA options. The note produced in November 2019 suggests an approach on corresponding adjustments for TCAF operations, to be followed in absence of guidance from the UNFCCC. It also examines challenges related to host countries' readiness and willingness to do corresponding adjustments.

In addition, three sectoral crediting blueprints (transport, demand-side EE, climate-smart agriculture) were prepared to inform the opportunities and strategies to develop transformative crediting programs in these three sectors that are important to climate mitigation but haven't reached their full potential due to various barriers.

Knowledge dissemination

As part of the TCAF Knowledge Management Strategy, two sets of workshops were held between 2018 and 2019:

- Workshops at the Global Designated National Authority (DNA) Forum in Bonn:
 - September 20-21, 2018: “Technical Workshop adjunct to the Global DNA Forum Meeting: New approaches to carbon crediting – from the CDM towards new international crediting mechanisms.” It was aimed at introducing the concept of the standardized crediting framework and explaining the difference between programmatic, sectoral and policy crediting, and present and discuss some first experiences with designing sectoral crediting for renewable energy expansion and policy crediting for energy sector reform.
 - June 13-14, 2019: this technical training workshop was aimed to help DNAs to prepare for new carbon crediting opportunities and challenges under the Paris Agreement. It discussed options for domestic crediting strategies and governance, methodological approaches including CDM transition, and corresponding adjustments including registry/reporting requirements.
- In-country workshops, in Switzerland and Sweden. This series of workshops was aimed at getting a sense of domestic climate policy and engaging with the private sector.
 - Switzerland, 24-25 September 2018: the workshop was held at SECO in Bern and participants were parliamentarians, members of the administration, private sector and civil society. The workshop discussed the mission and goals of TCAF, the challenges to the implementation of Article 6, risks and opportunities of international carbon markets.
 - Sweden, 25-26 March 2019: the workshop was held at SEA's headquarters in Eskilstuna and in Stockholm. The agenda consisted in a Discussion on Sweden's perspective regarding UNFCCC negotiations on Article 6, an overview of World Bank's climate initiatives focusing on carbon funds and result-based finance programs, technical discussions on new approaches to carbon crediting, and meetings with the Ministry of Environment and representatives from National Investigation on Negative Emissions.

Figure 2.2: Timeline of TCAF meetings and knowledge sharing activities

Source: Ipsos MORI, based on TCAF Meeting minutes, technical notes, blueprints

2.5 Main processes

TCAF provides financial support to emissions reduction programs that are in the readiness phase, or that intend to transition from readiness to implementation phase. In a readiness phase, the recipient country completes activities to prepare or lead to a crediting program. In an implementation phase, TCAF supports the recipient country to develop regulatory, institutional, financial and technical components and consists of physical investments or policy changes, where payments for emissions reductions can be made.

This section provides an overview of the processes the TCAF follows.

2.5.1 Preliminary sourcing of potential countries and programs

To identify a preliminary list of promising programs for inclusion in the TCAF portfolio, the TCAF Trustee conducts an initial intake of program ideas. This is informed by the analysis of emissions profiles by sector and by countries' NDC commitments, as well as the Parties' intention to use international carbon markets to help meet their target and their position on corresponding adjustments. The TCAF team also screened all the World Bank's Development Policy Operations (DPOs) with prior actions on subsidy reform and/or tariff adjustment in the energy sector that were approved since 2017 or that are scheduled for approval by the end of June 2019. Other sources of information used by the TCAF Trustee to inform pipeline development is reaching out to Contributors and Global Practices (such as the Agriculture GP) for a strategic discussion on promising projects. Any external party is welcome to submit a proposal, and existing programs already supported by the World Bank can incorporate TCAF in their activities.

The identification of programs undergoes a quick screening based on desk research to identify potential red flags: whether the program lacks the potential to generate five million ERs over the crediting period of 5-7 years; the lack of interest in piloting market mechanisms; whether the proposed role of carbon is

weak or not relevant to enhancing mitigation actions; whether the program is unlikely to generate ERs by 2020; whether the pre-PIN is aligned with the CPF and the Global Practice has an interest in moving the program forward.

For its assessment processes, in addition to the red flags, the Facility has in place a framework of six guiding criteria:¹⁰

1. Transformational impact and ability to catalyze domestic action: programs need to demonstrate their ability to generate long-term greenhouse gas mitigation impacts and the ability to leverage domestic action.
2. Sustainability: this criterion is understood in the TCAF design as either the expected capacity of a program to become self-sustaining (continuing without external support) or the expected ability to secure other sources of financial support.
3. Financing: the ability to secure financing through the identification and commitment for underlying investments if the mitigation activities in the sectoral/policy crediting program require investment.
4. Enabling environment and governance: programs need to demonstrate their alignment with the country's climate mitigation strategy and targets.
5. Diversity, innovation and learning value: TCAF seeks ambitious crediting programs in terms of variety of mitigation actions and of sectors of the economy.
6. Core crediting components of the programs: this includes the status of infrastructure (such as reliable accounting techniques) and associated regulation.

2.5.2 Project cycle

The Facility follows the project cycle of identification, preparation, appraisal, and supervision. Figure 2.3 illustrates the main steps in the TCAF project cycle.

Step 1 - Selection of projects and project design¹¹: After the initial list of programs has been compiled, the TCAF team shares the list with Contributors. For programs that align with the objectives of TCAF according to the Trustee and the Contributors, the World Bank engages with the relevant counterparts in Global Practices and project countries. The TCAF team prepares a **pre-PIN** that is given a no-objection by Contributors.

Once the Pre-PIN has been judged against 4 'red flags'¹² and approved, the TCAF team meets the relevant implementing agencies and starts to design the project, such as hiring external consultants, developing crediting methodologies, setting baselines, etc. The Global Practices prepare a **Project Concept Note (PCN)** containing the context and main project components, which it is reviewed by the World Bank

¹⁰ To ensure a transparent pipeline building effort, the Trustee communicates widely the establishment of the Facility and its program assessment framework based on the six guiding criteria

¹¹ This is referred to as "Identification" in the TCAF Design document. However, as this process is distinct from the initial pipeline scoping, we have referred to this as "Selection."

¹² A) Is the proposed program unlikely to implement the scaled-up mitigation action, indicated by the potential to generate five million ERs over the purchase period of 5-7 years? B) Does the host country government lack interest in piloting market mechanism(s) under the Paris Agreement (PA)? C) Is there no potential for transformative change? D) Is the program highly unlikely to generate ERs by 2021?

Country Management Unit. In parallel, the implementing agency prepares the **PIN**. A program enters officially into the pipeline of TCAF through the approval by the Contributors of the PIN. The program selection criteria are the following:¹³

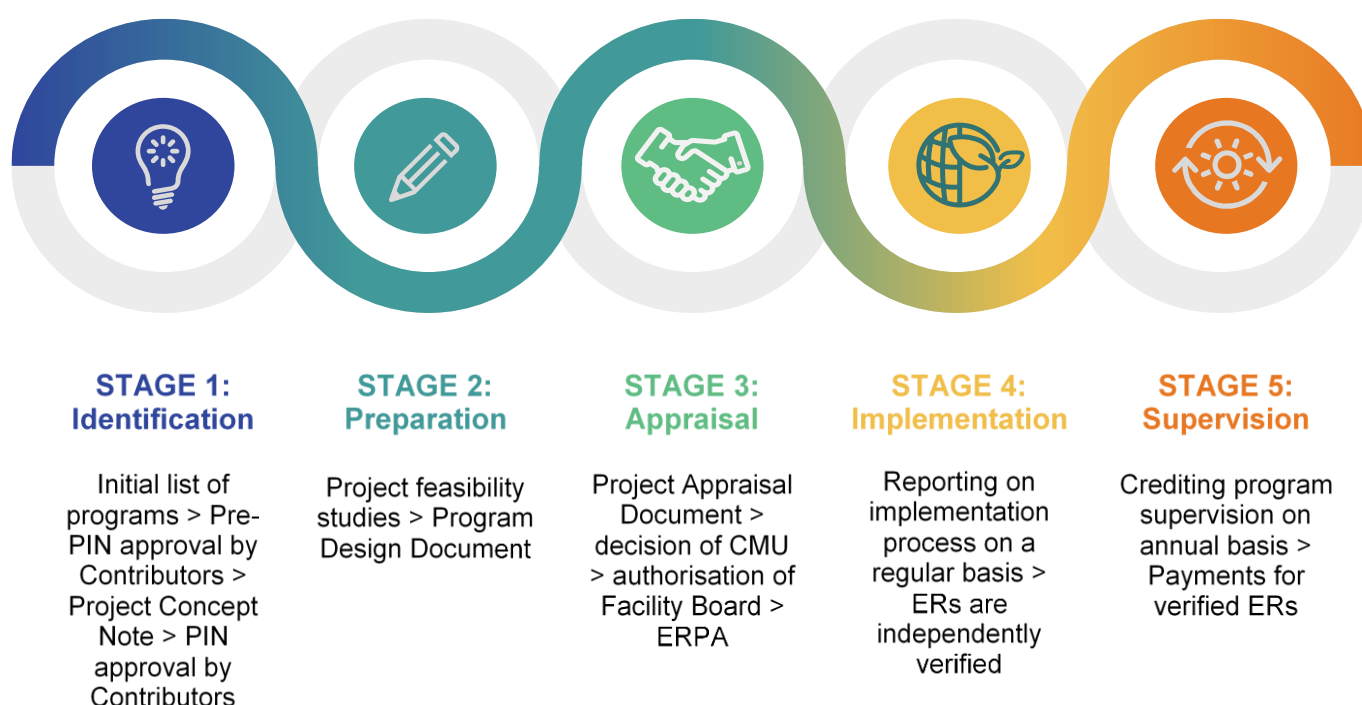
1. **Coherence with national mitigation aims:** programs need to demonstrate countries' commitments to GHG mitigation, by being consistent with the country's NDC.
2. **Support increased domestic ambition:** programs should demonstrate that they enable the country to increase its mitigation target or enhance the implementation of mitigation actions.
3. **Achieve a lasting impact:** a credible path for the program to become self-sustaining or to ensure sustainability of emission reductions after support ends.
4. **Support sustainable development and maintain environmental and social safeguard standards:** programs shouldn't conflict with the WB country's engagement strategy or UN Sustainable Development Goals.
5. **Environmental integrity:** emissions reductions should be consistent with the evolving framework and principles of UNFCCC rules at the time of implementation.
6. **Avoid any direct distortionary effects** on the sector's international competitiveness and adverse incentives on the sector's GHG emissions.
7. **Possibility to establish a robust baseline for the program**
8. **Readiness for implementation**

Step 2 - Preparation: Following a preparatory phase which includes project feasibility studies and social and environmental impact assessments carried out by the implementing agency with the support of the Global Practices team, the World Bank TCAF team develops a **Program Design Document (PDD)**.

Step 3 - Appraisal: The Global Practice team will prepare a draft **Project Appraisal Document (PAD)** to conclude whether the project meets requirements on technical and/or policy design, institutional capacity and implementation arrangements. A decision meeting will be chaired by the CMU to make decision for appraisal. The project is then presented to the Facility Board which will review and authorize the project for commercial negotiations. If the commercial negotiations with the country are successful, the **Emissions Reduction Payment Agreement (ERPA)** is signed and the project moves to the implementation phase.

Step 4 - Implementation and Supervision: The World Bank supervises the crediting program implementation, reporting annually on the project's progress. The implementation phase can entail technical assistance from the World Bank for closing any gaps in the core crediting component. Examples of projects' milestones during the implementation are the adoption of a low-carbon policy by the cabinet or ministry, or the signature of a regulatory approval and financing agreement for the projects. Emissions reductions are independently verified on a pre-determined schedule and payments are made to implementing agencies.

¹³ Framework establishing the TCAF, 16 November 2016

Figure 2.3: Steps in the project cycle

Source: Ipsos MORI

2.6 Key actors of the TCAF

The TCAF is constituted as a World Bank multi-contributor programmatic trust facility. The World Bank acts as the Trustee of the TCAF, managing the Facility and liaising with both Contributors and implementing agencies in receiving countries.

Within the World Bank, the teams taking part in the TCAF processes are:

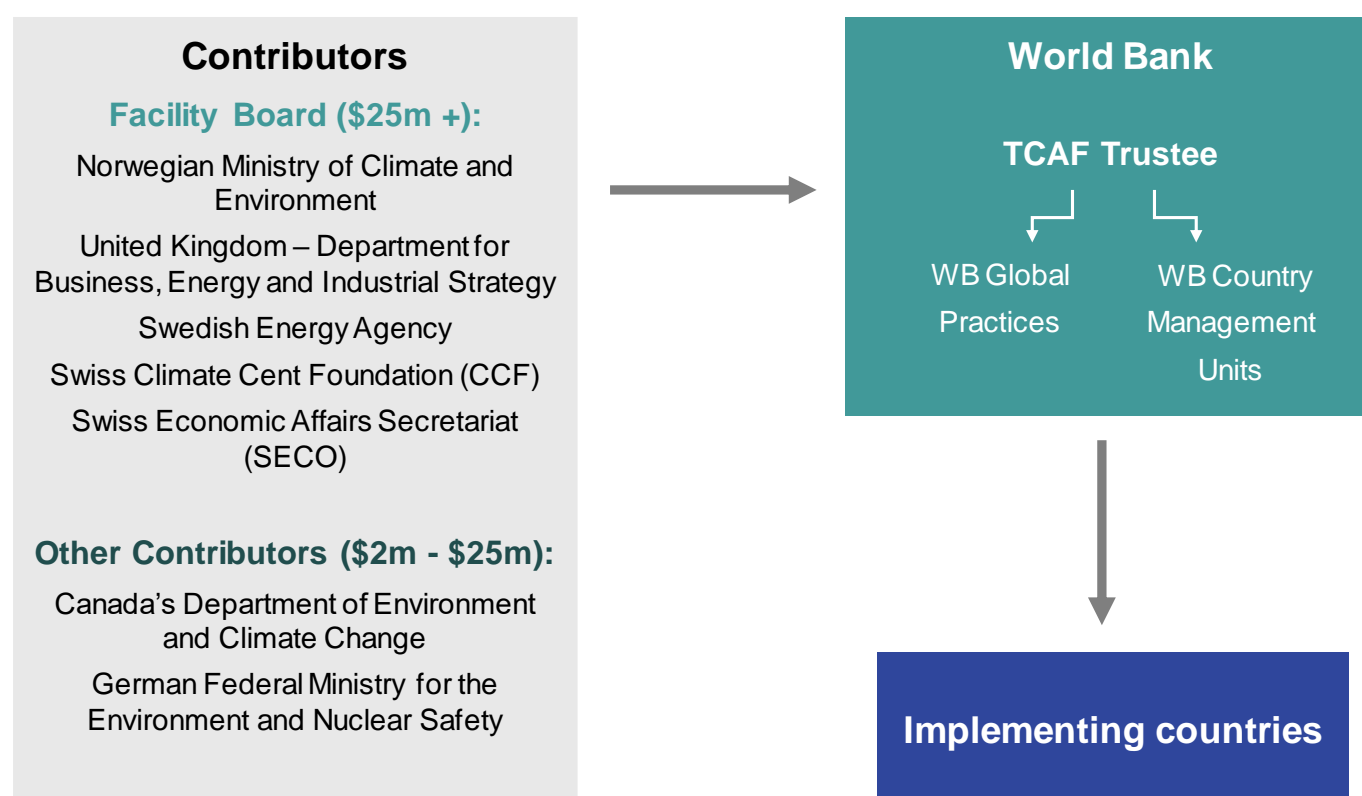
- The TCAF Trustee (also referred in the Design Document as TCAF Team): coordinates TCAF activities, carries out an assessment of the overall design of the program and portfolio development, as well as engaging with parties at the international level to disseminate lessons learned etc.
- The World Bank's Global Practices (GPs): The GPs are World Bank units that have sectoral and thematic expertise (such as Energy, Urban, Agriculture, and Transport). They have an operational role and they can also contribute to the identification of projects. They are mostly centralized in Washington but provide support to Country Management Units.
- The Country Management Units (CMU): are based in country offices and directly support implementing agencies with projects, e.g. in developing project proposals.
- Implementing agencies are the counterparts in recipient countries that will take the selected project forward. They are mostly Ministries and government departments and are mainly responsible for

preparing and submitting a Program Information Note (PIN) and they work closely with GPs and CMUs when preparing and designing the crediting proposal.

- TCAF Contributors are Canada, the Climate Cent Foundation, Germany, Norway, Sweden, Switzerland, and the United Kingdom.¹⁴ Contributors set the priorities for the operational work program and provide operational guidance, including on the TCAF portfolio (selection of programs that go through PIN process) and on the eventual selection of third-party auditors. The minimum contribution is at least \$2 million (Canada and Germany). Contributors who have contributed at least \$25 million (Norway, the UK, Sweden and Switzerland) constitute the Facility Board, which makes decisions on which programs are included in the TCAF as well as the commercial terms associated with each program. The Facility Board has met twice per year at semi-annual and annual meetings, in addition to holding interim calls. In addition, representatives from Japan and Spain attend TCAF meetings as observers.

The Trustee and the Contributors meet at a minimum of once per year, where Contributors also approve the TCAF's work program and budget for the following year. The Trustee also organizes semi-annual meetings in the first years of the Facility's operation and prepares an annual progress report. Figure 2.2 illustrates the governance of the TCAF.

Figure 2.4: TCAF Governance



Source: Ipsos MORI

¹⁴ The Contributors' respective contributions are: Norway (\$80m); UK (£60m); Sweden (\$25m); Swiss Climate Cent Foundation (CCF) and the Swiss Economic Affairs Secretariat (SECO) (jointly - \$25m); Canada (\$3m CAD); Germany (\$2m)

3 Main findings of the evaluation

This section presents the main findings of the evaluation per evaluation criteria: relevance, effectiveness and efficiency.

3.1 Relevance

The evaluation of the TCAF's relevance includes an assessment of the following:

- TCAF's alignment with contributors' priorities
- TCAF's flexibility to adapt to changes in the international context
- Adequacy of its design to meet its objectives
- Added value of the Facility and its complementarity with other initiatives

The approach to evaluate the relevance of the facility relied heavily on external literature review conducted of grey literature related to: crediting mechanisms, RBCF and Article 6, assessments of host countries' NDCs, evaluations of other climate finance programs, technical documents on corresponding adjustments, and other wider literature. This assessment has been also informed by interviews with contributors (in particular, for the assessment of the alignment of TCAF with donors' priorities), external experts, and staff at other WB programs. Finally, a benchmarking of eight initiatives similar to the TCAF was conducted to understand the added value of the Facility (see Annex II).

Key findings:

- TCAF emerged as an initiative to respond to global priorities. However, only contributors were involved in design. Barriers for implementation in host countries have not been assessed.
- Host countries are not as prepared as initially thought to implement TCAF. Host countries' NDCs are under revision, there is a lack of understanding of technical concepts in Art. 6, including the issue of corresponding adjustments, and the overall level of readiness is low.
- Most TCAF target countries have previously received support from the PMR. However, the main source of programs for TCAF pipeline is the WB lending operations. The link with the PMR has not been as strong as initially planned in TCAF's design document, due mainly to changes in the PMR (support at early stages of readiness).
- TCAF has been both reactive (e.g. note on CA) and proactive (e.g. sectoral blueprints) to changes in context.
- TCAF remains relevant due to its unique combination of supporting the implementation of sectoral and policy crediting programs, aiming to piloting Article 6 and achieving transformational change.

3.1.1 TCAF's relevance and alignment with contributors' priorities

In 2019, the United Nations Environment Program (UNEP) published their latest report comparing where greenhouse gas emissions are headed with compared to where they should be to avoid the worst

impacts of climate change.¹⁵ In its report, UNEP warned that even if all countries meet their unconditional targets (NDCs), the world is still on course for a 3.2°C temperature rise. To reach the 2°C goal, we must triple our mitigation ambition. Cooperative mechanisms under Article 6 of Paris Agreement may help increase overall mitigation ambition.¹⁶ Initiatives pursuing cooperation among parties, such as TCAF, are therefore not only relevant, but also necessary to progress towards the 2°C goal.

As explained in Section 2.2, the TCAF was designed, in principle, as an RBCF mechanism, while its design document recognized that the resulting mitigation outcomes would be of value to international buyers or for domestic schemes. The desire of TCAF contributors to pilot cooperative mechanisms was made more explicit in the TCAF framework, which stipulated that mitigation outcomes would be distributed among contributors.

Table 1.3: TCAF design

TCAF Design document (2016)	TCAF Framework (2016)
Looking at the longer term, beyond the support provided by the Facility, many countries have expressed an interest in market-based climate mitigation approaches. The scaled-up climate mitigation instruments piloted by the Facility, and the resulting mitigation outcomes (i.e. emission reductions) the programs will generate, would therefore be of value to international buyers or for domestic schemes alike.	The Verified Greenhouse Gas Emission Reductions generated by a Program will be distributed among the Facility Contributors pro rata of their Contributions, and can be either transferred to the Facility Contributor or cancelled by the Trustee on behalf of a Program Entity and/or a Facility Contributor, or a Facility Contributor and the Trustee may decide on any other act regarding the Verified Greenhouse Gas Emission Reductions, or any combination thereof.

Source: TCAF Design document (2016) and TCAF Framework (2016)

The note “Core parameters for TCAF operations”, in addition, indicates that “TCAF will purchase verified emission reductions (VERs) and aim for recognition of those VERs under Article 6 of the Paris Agreement.” It is precisely the opportunity to pilot Article 6 that triggered contributors’ participation in TCAF in the first place, and the main added value of the TCAF as reported by contributors.

“TCAF is completely in line with our strategy and vision on carbon pricing activities. Especially the idea of piloting new activities in the context of the Paris Agreement (...) There is interest to test whether Article 6 works.” - Contributor

The governance model of the TCAF, explained in Section 2.6, ensures contributors’ buy-in and alignment of priorities. Contributors are involved in shaping TCAF’s approach on an ongoing basis through their participation in the Facility Board.

The relevance of the TCAF to contributors’ priorities also relies on the fact that it supports crediting programs that: (a) aim to achieve a large volume of emission reductions, i.e., at least 5 m t over 5-7

¹⁵ UN Environment Program (2019) Emissions Gap Report 2019, available at:

<https://wedocs.unep.org/bitstream/handle/20.500.11822/30797/EGR2019.pdf?sequence=1&isAllowed=y> (accessed on 5 March 2020)

¹⁶ See, for instance, Kreibich (2018) Raising Ambition through Cooperation. Using Article 6 to bolster climate change mitigation, JIKO Policy Paper No. 02/2018, Wuppertal Institute, available at:

https://epub.wupperinst.org/frontdoor/deliver/index/docId/7122/file/7122_Raising_Ambition.pdf

years, and (b) have potential to achieve transformational change, defined by the required structural change of the world economy to achieve the temperature stabilization goal defined in the Paris Agreement. The latter is measured by several indicators, including the sustainability of the program in the long term, its capacity to leverage host country's additional mitigation ambition, and its support to domestic carbon prices policies.

The objectives of the TCAF are very ambitious and results will be observed in the long term. Raising funds for initiatives that won't provide short term results is frequently difficult. However, the TCAF has secured the Tranche A with contributors who actively contribute to shape its design and approach, who consider TCAF's objectives are in line with their national priorities and have expressed a long-term commitment with the TCAF.

3.1.2 TCAF's flexibility to adapt to changes in the international context

The rules under which Article 6 of the Paris Agreement will operate have not yet been agreed among the Parties. Without clear rules that avoid double counting and that ensure integrity for all transfers of ITMOs, a single mitigation outcome may be counted towards two different mitigation efforts. According to paragraph 36 of the COP 21 Decision, double counting shall be avoided based on "corresponding adjustments" by Parties.

The issue of how to operationalize corresponding adjustments emerged for the first time at TCAF in 2018¹⁷, and it has substantially impacted the Facility's progress towards building a pipeline of programs (see Section 3.2). Since then, the TCAF Trustee has been working with contributors on an approach towards corresponding adjustments for TCAF operations, which at the time of writing this report is in the process of being discussed and agreed.

The TCAF has been described by interviewees as both a reactive and proactive program when it comes to responding/anticipating to changes in the international context. Examples of activities where the TCAF has been proactive, i.e. anticipating to future needs, are the sectoral blueprints. Three blueprints have been developed in the sectors of transport, agriculture, and energy efficiency in industry and buildings. Their aim is to inform about the mitigation potential and crediting opportunities in these sectors, build awareness, knowledge and capacity of the public, and to prepare countries with NDC targets to explore crediting opportunity through collaboration. According to some interviewees, the purpose of these sectoral blueprints is also to build the rationale for TCAF intervention and scope the contexts in which TCAF is suitable. They aim to inform WB teams (Global Practices Units) as well as final audiences (i.e. host countries and the public more broadly) about opportunities provided by the TCAF in order to facilitate progress on pipeline development. (As noted in Section 1.3, the relevance of these outputs to GPs and final audiences could not be assessed as these groups were not interviewed.)

On the other hand, the technical notes are an example of TCAF's capacity of reaction to changes in the international context. In particular, the notes on attribution of GHG ERs and on corresponding adjustments have been developed in response to the lack of progress at the Conference of the Parties to reach an agreement on the Paris Rulebook.

It is also worth to note that one of the objectives of the TCAF is to transfer knowledge to targeted non-participants, including UNFCCC negotiations, by effectively sharing TCAF blueprints and lessons learned. In this case, the technical notes developed, notably the note on corresponding adjustments, are

¹⁷ The Trustee recognized the issue of corresponding adjustments when it was brought up in September 2018 during the Switzerland in-country workshop. They realized it was going to have significant implications for TCAF and the issue was raised with contributors.

considered by interviewees particularly relevant since, if effectively shared, they may inform the negotiations on Article 6. In addition, the sectoral blueprints may inform decarbonization pathways and countries' NDCs.¹⁸

3.1.3 Adequacy of TCAF's design to meet its objectives

TCAF emerged as an initiative to respond to global priorities, but its design and implementation have been mainly shaped by contributors (mainly the Facility Board) and the TCAF Trustee. TCAF operations build on experiences of other WB programs (e.g. it follows the same operational steps as Carbon Partnership Facility, CPF), on desk-based research conducted by the TCAF Trustee (mainly, review of GHG emissions for countries and sectors, a screening of readiness and capacity of host countries, and analysis of NDCs), and on TCAF's engagement with experts in climate finance. Host countries have not directly fed into the TCAF's design. In fact, host country representatives are only engaged in their own programs once the pre-PIN has received no-objection from the Facility Board.

In the opinion of the evaluators, more consultation at the outset would have helped the Facility understand host countries' barriers for implementation and the demand for a TCAF-like instrument. Had feedback been sought from the outset of the Facility, some changes on TCAF's design might have been scoped to address host countries' needs earlier. Barriers for implementation are analyzed in Section 3.2.

Examples of elements of the TCAF design that have been shaped without host countries' involvement include technical notes (e.g. the parameters for baseline setting and attribution, and the approach for corresponding adjustments), as well as strategic elements (e.g. knowledge management and capacity building). While recognizing that contributing to the technical notes requires in-depth understanding of technical issues that host country representatives may or may not have, these notes could have been informed by, for instance, wider consultations with host countries during COP and DNA Forums. These documents set only wide objectives (e.g. "one in-country workshop for policy makers in developing countries"), whereas more specific targets could be set if previous analysis are conducted on what is needed and for whom.

Such analysis and consultations could have also been used to evaluate overall host countries' readiness for a TCAF-like instrument. As noted in the TCAF annual reports, it has become apparent that host countries are less prepared than initially thought to implement TCAF. In some cases, they lack infrastructure (e.g. MRV systems), and have not fully scoped how their NDCs will be implemented, the opportunities provided by Article 6, and the challenges of doing corresponding adjustments. Currently TCAF only provides capacity building to existing programs, i.e. once the ERPA has been signed. Given the lack of readiness among host countries, capacity building at earlier stages might have helped progress PINs at a faster pace.

Overall, although the main technical characteristics of the TCAF are adequate to meet its purpose and in-depth and sound research underpins its core parameters, more research would be advisable in the "soft" elements of its design to better adapt TCAF to host countries' needs. This includes research on barriers for implementation (technical barriers, as well as barriers related to capacity and capability of host countries), level of readiness, appetite for cooperative approaches, and plans for NDC implementation. Given that carrying out this research is a resource intense task, countries and sectors

¹⁸ These findings have not been assessed sufficiently with wider audiences, e.g. DNA representatives, and therefore should be treated with caution.

would need to be prioritized. The depth of the research may also vary depending on the country and the purpose of the study.

3.1.4 Added value of the facility

The added value of the TCAF has been assessed via a benchmarking of initiatives piloting Article 6 and/or providing RBCF (see Annex II). This entailed a light review of eight programs/projects operating at the international level.¹⁹ The approach we followed to select initiatives for comparison with TCAF was informed by the following steps:

- The added value of TCAF was explored in interviews. Interviewees across all groups of stakeholders were asked about other initiatives with similar objectives, scope and or approach to the TCAF. These initiatives were included in the benchmarking.
- Desk-based research of initiatives that aim to pilot international market-based cooperation approaches under the Paris Agreement²⁰, and/or that provide RBCF was undertaken.

Initiatives such as the SEA Virtual Pilots, the Klik Foundation Program, the NPI Peru Conceptual Pilot, and the World Bank's Standardized Crediting framework are all focused on piloting cooperative approaches to transfer ITMOs under the Paris Agreement.

The most similar initiatives to the TCAF are purely conceptual: the *SEA Virtual Pilots* and the *NPI Peruvian Solid Waste Sector Conceptual Article 6 Pilot*. They both aim at piloting Article 6 in selected countries to provide examples and contribute to ongoing discussions regarding the Paris Rulebook. However, these pilots are still abstract and aim to understand beforehand how Article 6 could be implemented, without contractual agreements. The NPI Peruvian pilot also aims to prevent double counting through corresponding adjustments. However, the RBCF mechanism differs substantially from TCAF: it uses a call option, by which the purchaser has the right but not the obligation to purchase ITMOs.

Other initiatives that have been reviewed also present some similarities to the TCAF. For example, the *Klik Foundation international cooperative approach program* shares similar objectives. It aims to pilot Article 6 through international transfer of mitigation outcomes, to support host countries increase their mitigation ambition, to build capacity through staff training, and to achieve transformational change. Differently from TCAF, it is a government-to government approach focused only on one particular sector for Switzerland. Until the binding rules for the recognition of international emission reductions are defined, the program builds its portfolio only on a provisional basis, without entering into financial commitments. The *Nordic Initiative for Cooperative Approaches (NICA)* shares with TCAF the objective of promoting knowledge sharing on market-based cooperation approaches, focusing on workshops and stakeholder engagement as part of its activities. However, NICA's activities are mainly developing studies and sharing knowledge, while TCAF is designed to support programs in their implementation phase and in generating internationally transferrable mitigation outcomes.

Another initiative that is worth mentioning is the Joint Crediting Mechanism, a bilateral agreement between the government of Japan and partner countries, according to which emission reductions and

¹⁹ The initiatives reviewed were the following: World Bank Standardized Crediting Framework (SCF), Nordic Initiative for Cooperative Approaches (NICA), NPI Peruvian Solid Waste Sector Conceptual Article 6 Pilot, commissioned by Nordic Environment Finance Corporation (NEFCO), Klik Foundation program, Swedish Energy Agency Virtual Pilots, World Bank Carbon Partnership Facility (CPF), Japan's Joint Crediting Mechanism (JCM). The review was conducted based on public information of the initiatives, gathered mainly from their websites.

²⁰ NEFCO, Landscape of Article 6 Pilots <https://www.nefco.org/wp-content/uploads/2019/05/NICA-Article-6-mapping-study-April-2019.pdf>

carbon credits issued are allocated directly to the parties. The mechanism was established in 2010, hence it is pre-Paris Agreement, and it does not involve internationally tradable mitigation outcomes. However, its relevance lies in the aim to transition into an Article 6.2 cooperative approach, reflecting requirements of the Paris Agreement in the bilateral cooperation, including robust accounting through correspondent adjustments.

We have found that, despite the recent emergence of these initiatives, the TCAF still provides added value given that it supports sectoral and policy crediting programs, while aiming to pilot Article 6 and achieve transformational change, a combination that none other initiative brings.

3.2 Effectiveness

To evaluate the effectiveness of the TCAF, this evaluation has assessed, in the main, the progress of the Facility compared with the objectives set in the framework. This entails an analysis of the effectiveness of the identification of crediting programs for implementation, as well as an analysis of the effectiveness of TCAF's knowledge management strategy.

As explained in Section 1.2, this assessment has been guided by the principles of realist evaluation. The evaluation team mapped the mechanisms or processes involved in TCAF's operations and identified the main contextual factors that may have affected TCAF's effectiveness. Subsequently, the team assessed how they have contributed (or not) to the outputs observed.

The identification and analysis of contextual factors and mechanisms has been carried out via in-depth interviews, analysis of internal documentation and review of evaluations of other programs managed by the WB. Some information, however, could not be triangulated due to the limited number of interviews that have informed this evaluation. For instance, the analysis of delays produced due to WB internal processes would have benefited from further exploration in interviews with WB staff at the GP and country offices. Similarly, the analysis of the factors related to host countries' engagement would have been strengthened with interviews with host countries' representatives.

Key findings:

- Pipeline development has been slower than expected due to internal TCAF factors related to its design and implementation (processes and governance), as well as external contextual factors, including lack of progress in international negotiations and lack of readiness in host countries.
- Lack of host country readiness is affecting programs moving from pre-PIN to PIN. However, capacity building has not been delivered yet to host countries.
- The TCAF has generated extensive and in-depth knowledge on technical aspects for the implementation of Article 6, but this knowledge has not been promoted outside of TCAF's inner circle.
- Technical notes have been used by other initiatives set up by TCAF contributors, which may be an early indication of outcomes being achieved (use of TCAF design elements by other interventions).

3.2.1 Pipeline development

The TCAF Logframe includes an output relative to the pipeline development, measured through three different indicators: (a) number of programs at PIN and pre-PIN stage, (b) percentage of programs that

move from pre-PIN to PIN, and from PIN to ERPA, and (c) Number of ERPA terms that are approved by the Facility Board. The table below summarizes the objectives set for 2020 and the evidence observed against these objectives.

Table 1.4: Output on pipeline development

Output	Objective by March 2020	Evidence
Results-based finance provides necessary incentive to allow implementation of new and innovative GHG emission reduction crediting mechanisms	<ul style="list-style-type: none"> 11 pre-PINs presented to Trustee 5 PINs presented to Trustee 1 ERPAs approved by FB 	<ul style="list-style-type: none"> 13 pre-PINs presented, of which 5 received no-objection 1 PIN (India) approved, 2 PIN under preparation (Morocco, Philippines), 2 PIN on hold (Colombia, Vietnam) No ERPAs approved

Source: TCAF Logframe and annual reports

The number of pre-PINs presented has exceeded the target. However, the progress from pre-PIN through to ERPA has been slower than expected. Overall, stakeholders interviewed in this evaluation consider that progress in pipeline development has been slow due to a number of factors, while also recognizing that the objectives set at the outset were too ambitious. There are several factors that explain the slow progress, which we have framed around the following four broad areas:

- Contextual factors
- Mechanisms related to TCAF governance and processes
- Mechanisms related to WB processes
- Mechanisms and contextual factors related to host country engagement

The main **contextual factor** that has affected TCAF's progress, as already mentioned, is the lack of agreement on the Paris Rulebook and the uncertainty on how Article 6 will be implemented. Lack of common rules meant that the TCAF had to develop its own approach (for instance, for baseline setting, attribution of Emission Reductions (ERs), and corresponding adjustments). This has impacted TCAF's progress given that, on the one hand, this required resources to be dedicated to the development of technical notes instead of, for instance, progressing pre-PINs and PINs. On the other hand, discussions at the Facility Board also had to focus on setting a common ground and agreeing on the approach, which required time. In the meantime, as the approach was unclear, engagement with host countries was put on hold.

Contextual factors at country level have also affected progress. This includes changes in host countries' government as a result of elections, or policy changes in the field of climate finance (e.g. host countries' position on corresponding adjustments). Buy-in of the program is needed at both the technical and the political level within host countries. Changes in government may require re-starting conversations with new political/technical leaders. Changes in policy direction, on the other hand, may result in host countries' disengagement with TCAF, lack of willingness to pilot Article 6, or lack of willingness to use cooperative approaches to meet NDCs.

The slow progress is also partially due to **TCAF's governance**, especially with regards to lack of progress on decision making on the issue of corresponding adjustments. As explained above, the issue of corresponding adjustments arose in 2018, and at the time of writing this report an approach to CA has not been agreed yet by the Facility Board. Without an approach to CA, the WB (GP and TCAF Trustee) cannot progress PINs or ERPAs and can also lose momentum if programs that receive no-objection at pre-PIN stage are not followed up.

Lengthy decision-making processes have not been unique to TCAF's approach on CA. There has been one case in which the lack of agreement among Facility Board members on the suitability of a PIN has also led to the program being put on hold for one year.

There are also elements (mechanisms) related to **TCAF and WB processes** that may be hindering progress. As explained in sections 2.5 and 2.6, the TCAF relies on WB teams (GPs and country units) to source programs and engage host countries. This poses the following main challenges:

- The TCAF covers a wide range of sectors, and therefore the TCAF Trustee need to engage different GPs (Macro Economics, Energy, Agriculture, Urban, and Transport), which is a resource-intensive task for the TCAF Trustee. The TCAF is a complex program to communicate and understand (except for some WB staff who may be more familiar with climate finance instruments) and does not have streamlined processes as other WB operations may have. These factors may have hindered the ability of the TCAF Trustee to effectively engage GPs.
- There have been staff changes at one WB country office in one country where a PIN is being developed, which put the PIN on hold temporarily.

TCAF processes are normally lengthier than in other WB programs. As explained in Section 2.5, one of the processes to source TCAF crediting programs is the WB Development Policy Operations (DPOs). However, the length of the processes required to design and agree on TCAF policy crediting programs with host countries does not match the length of DPO operations. The time estimated to prepare a PIN between the host country, the TCAF Trustee and the GP is between 9 and 12 months, whereas discussions on DPO operations take typically 6 months. This mismatch implies that the TCAF does not have enough time to do upstream engagement with the host country and influence the policy design to successfully develop the PIN.

Finally, the fourth factor hindering the pipeline development is the (lack of) **engagement of host countries**. This element is influenced by three main mechanisms: the design of TCAF, the processes involved in TCAF's operations, and host countries' readiness to participate in TCAF, each of which are detailed below.

Design of TCAF: The TCAF has been perceived by some potential host countries as a high-risk operation. For instance, some countries have expressed lack of interest in participating in TCAF due to the perceived over-selling risk,²¹ which is exacerbated by the request from TCAF and the international community to raise NDC targets. The ERPA would signal a price to the market, and if the proposed price is considered too low by the host country, it may also be perceived as a risky operation. In addition, host countries are requested to comply with certain rules (TCAF's operational approach as per the Core parameters note), which may or may not be in line with the future Paris Rulebook. Finally, the TCAF is a RBCF mechanism and does not provide upfront investment to carry out the large-scale projects it

²¹ TCAF Annual Report 2018

supports. For those cases in which TCAF is not accompanied by a DPO operation, leveraging initial investment may be a barrier.

Processes in TCAF's operations: Host countries are involved in TCAF only once the pre-PIN has been approved by the FB. The pre-PIN is designed by WB staff and it is done in line with the host country's policies and NDCs. However, their exclusion from the original design may affect their ownership of the program, especially if, for instance, the policies it aligns with were developed by a previous government and the program lacks support at the national level. Some interviewees also commented on the difficulty for the TCAF Trustee to involve the right point of contact in host countries, given that climate policies frequently involve several ministries/departments.

Host countries' readiness: Finally, host countries may lack crediting preparedness. To participate in TCAF, host countries need an MRV system in place covering the whole sector and geographical boundary of the jurisdiction. In addition, the TCAF's counterpart may lack capacity or technical knowledge to engage in TCAF. The TCAF aims to overcome these barriers by providing technical assistance. However, technical assistance is only provided after the ERPA has been signed. The PIN preparation relies mainly on external consultants, rather than on capacity building provided to the host country.

This lack of readiness may also be affected by slower progress than anticipated in other programs that support countries at the readiness stage. As explained in Section 2.2, in its origin the TCAF was supposed to help countries that received support from PMR to transition from readiness into implementation. However, similar to the TCAF, the PMR has also evolved and adapted to changing context and needs, which has affected the way both initiatives may complement each other. The last evaluation conducted of the PMR (2018) found that only one country had concluded its Market Readiness Proposal (MRP) and concluded that it was too early to assess impacts. The level of readiness among PMR participants is not as advanced as initially thought when designing the TCAF, which affects the level of readiness of TCAF's potential host countries. The TCAF Annual Report presented in June 2018 included an operational note describing the steps to develop a pipeline of programs and identified ten countries where TCAF would target its operations. Except one country, all the other nine countries are PMR participants.

In the view of the evaluation team, the delays in pipeline development are due to both internal factors of TCAF related to its design and implementation (processes and governance), and external contextual factors, including lack of progress in international negotiations and lack of readiness in host countries. The TCAF will need to find a way to improve its internal processes, mainly the way it engages with host countries and the speed on decision making, and to work around the contextual factors than hinder progress, i.e. its operational approach to corresponding adjustments and the support it provides to host countries to improve their readiness.

3.2.2 Capacity building

As explained above (section 3.2.1), it is too early to assess capacity building as no programs have been approved yet. However, the TCAF's framework included targets for 2020 in terms of capacity building provided, and therefore has been considered to the extent possible.

Table 1.5: Output on capacity building

Output	Objective by March 2020	Evidence
Relevant knowledge transferred to participants resulting in increased capacity and readiness for the effective and sustainable management of carbon pricing mechanisms (including baseline methodologies and MRV)	Capacity building developed for 2 TCAF programs	<ul style="list-style-type: none"> As no program PINs have been approved yet, capacity building has not been provided Preparation of PINs mainly through hiring of external consultants

Source: TCAF Logframe and annual reports

Capacity building has not been provided yet as not enough progress in the pipeline has been made. However, this may be a vicious circle, given that lack of readiness is one of the mechanisms slowing down progress in pipeline.

Currently, the TCAF only provides capacity building assistance once the PIN has been approved. The preparation of PINs, although done in collaboration with host countries, relies heavily on the work carried out by external consultants, thus whether any capacity is built at host country level at PIN preparation stage is uncertain. In the view of the evaluation team, more capacity building is needed at an earlier stage to foster pipeline progress. This could be provided directly by the TCAF, although this would come at a cost, or TCAF could cooperate more actively with other programs providing technical assistance to the countries targeted. The latter would also require resources in the short term to map and engage other programs (different countries may require engagement with different programs and donors), which may be as resource intensive as providing technical assistance directly, but may be more efficient in the long term, while avoiding duplications and maintaining TCAF's added value as regards other programs. However, the feasibility and suitability of the latter option would need to be carefully assessed.

3.2.3 Knowledge transfer

The third output of the TCAF relates to its capacity to transfer knowledge to targeted non-participants by sharing the technical work conducted by TCAF and its lessons learned. This output is expected to contribute to the outcome “non-participating jurisdictions are better able to consider and implement new and innovative crediting mechanisms as a result of knowledge provided by TCAF”. The effectiveness of the TCAF to achieve this output has been assessed via desk review of the technical materials produced, the knowledge management strategy and work plans, and the TCAF website, and it has been informed by in-depth interviews with contributors and external experts involved in the production of blueprints.

Table 1.6: Output on knowledge transfer

Output	Objective by March 2020	Evidence
Relevant knowledge transferred to targeted non-participants, including UNFCCC negotiations, by effectively sharing TCAF blueprints and lessons learned	TCAF Knowledge Management strategy developed, including an assessment of appropriate target audience, and presented to donors for endorsement	The TCAF Knowledge Management strategy was presented to contributors and endorsed, and it is included in the TCAF Annual Report 2018.
	4 non-participating TCAF jurisdictions/ sector / areas have expressed interest in TCAF-style methodologies	No evidence found of either achievement or non-achievement
	8 events and reports conducted/delivered by the Trustee	<ul style="list-style-type: none"> 4 technical notes (core parameters, attribution, crediting period, corresponding adjustments²²) and 3 blueprints developed 1 joint TCAF/CPF discussion paper on blending climate finance and market mechanisms²³ and 1 economic research paper on the economics of blending and attribution²⁴. 2 workshops with DNAs and 2 in-country workshops in Sweden and Switzerland

Source: TCAF Logframe (output and objectives) and other TCAF documents (evidence)

The design of the TCAF did not foresee a formal knowledge management strategy. Instead, it was expected that knowledge would be generated through TCAF's operations and shared informally. However, in 2017, contributors requested the development of a formal Knowledge Management strategy, which was developed and approved (together with the 2019 workplan) by the Facility Board in 2018. The 2020 workplan for the fiscal year April 2019-March 2020 was presented and approved in 2019.

In the opinion of the evaluators, having a formal knowledge management strategy and annual workplans seems very relevant to achieve the outcomes of TCAF, in particular in relation to sharing knowledge with non-participants. The strategy identifies final audiences to be targeted by TCAF per type of document created. However, in our view, it misses the intermediaries that will help promote TCAF more widely with

²² The Corresponding adjustments note has not been endorsed by Contributors yet

²³ CPF/TCAF Discussion paper (2019) Blending climate finance and carbon market mechanism. Options for the attribution of mitigation outcomes

²⁴ Strand, J. (2019) Climate Finance, Carbon Market Mechanisms and Finance "Blending" as Instruments to Support NDC Achievement under the Paris Agreement, Policy Research Working Paper 8914, Development Research Group, World Bank Group

host countries, i.e. other internal WB teams such as staff at GPs and WB country offices, and other programs complementary to TCAF (e.g. PMR or other programs supporting countries at readiness stage).

The TCAF Trustee has been prolific in terms of the number of technical products created (technical notes and sectoral blueprints) and has been active at proposing the production of new technical products to contributors, as demonstrated by the internal documentation reviewed. The quality of these documents has been praised by interviewees, especially by contributors, who have also defined the TCAF as a “learning exercise”, which has “helped develop thinking significantly”.

Despite this extensive knowledge generation, it is unclear to what extent these are reaching non-participants as intended. The joint TCAF/CPF discussion paper, the economic research paper on blending and attribution, and the Core parameters note (which includes the notes on attribution and crediting period) have all been published online.

The core parameters note is a very technical document, and as such it may require other types of activities, such as workshops, webinars, or more user-friendly notes/brochures, to be effectively disseminated. In addition, the information available about the TCAF in the website is very scarce, which may make it difficult for its target audiences to fully understand the concept.

The events conducted by the TCAF have included two workshops with DNAs and two in-country workshops in Sweden and Switzerland. The in-country workshops were found very useful by interviewees, who commented that they helped attendants understand Article 6 and its implications. They also demonstrated that understanding of Article 6 and collaborative approaches is relatively low not only by the administration in developing countries, but also in developed countries.

Knowledge sharing with potential host countries, however, has been low, despite being one of the main audiences targeted in the knowledge management strategy. The TCAF has not provided technical assistance yet, as explained in section 3.2.2, and workshops in developing countries have not been held either.

Last, interviewees have also mentioned the lack of promotion of TCAF at COPs, other UNFCCC events and other events/activities (e.g. Innovate4Climate). This type of event might help identify the right point of contacts in host countries and bring TCAF onto their political agenda.

3.2.4 Early indications of outcomes and impacts

Although it is too early to assess the Facility’s achievement of the outcomes and impacts set out in its Logframe, this evaluation has assessed early indications of the former being achieved, mainly through the interviews conducted. The table below summarizes the expected outcome of TCAF and its associated indicators, as per the TCAF Logframe.

Table 1.7: Expected outcome of TCAF

Outcome	Outcome Indicator 1
An increase in the use of carbon pricing mechanisms that lead to verified emissions reductions through (i) Participating jurisdictions possess the capacity and are able to manage and use new and innovative GHG emission reduction crediting mechanisms (including baseline methodologies and MRV) and (ii) non-participating jurisdictions are better able to consider and implement new and innovative crediting mechanisms as a result of knowledge provided by TCAF.	Number (cumulatively) of participating jurisdictions that implement TCAF mechanisms.
	Outcome Indicator 2
	Quantity of verified emissions reductions (in MtCO ₂ e) directly resulting from implementation of TCAF mechanisms in supported jurisdictions.
	Outcome Indicator 3
	Volume of (a) private sector and (b) public sector finance leveraged by TCAF programs as a result of TCAF support.
	Outcome Indicator 4
	Number of climate change mitigation programs in non-participating jurisdictions that refer to TCAF interventions or use TCAF program design elements.

Source: TCAF Logframe

To date, while there is not evidence of achievement toward the outcome indicators in the table above, there is some evidence that TCAF's activities may contribute to Outcome Indicator 4. Technical notes developed by TCAF have informed other initiatives set up by TCAF Contributors to pilot Article 6, which may prelude non-participating jurisdictions to use TCAF program design elements (outcome indicator 4).

For example, bilateral programs for the transfer of ITMOs under Article 6 have been developed in Sweden, Switzerland and Norway. Some of these piloting programs, such as the international cooperation approach of the Klik Foundation in Switzerland and the Swedish Energy Agency's Virtual pilots, have been running in parallel to TCAF and share with it some elements of similarity.²⁵ Contributors have highlighted how the knowledge acquired from participating in TCAF has informed their own initiatives.

²⁵ See Annex II, which includes a summary of the programs similar to TCAF that were reviewed to inform this section

“TCAF [and its Knowledge Management Strategy] has very much informed our bilateral program and benefited our work a lot. That is one of the successes with TCAF today, doing all these different notes on how to handle the challenges that TCAF faces and developing different options on how to handle them. That has evolved our knowledge and how we could address the challenges that we are also facing in our bilateral program, so it absolutely helped.” - Contributor

Contributors mentioned that TCAF has benefited the studies they have conducted on how Article 6 pilots should be designed, and that this technical knowledge should be shared further. For example, when contributors shared experiences from their pilot programs in the occasion of side events at the COP in Madrid, they believed that some of the lessons learned came out from what they have learned from participating in the TCAF. In relation to the technical notes, they reported how TCAF provided the necessary resources to support their analysis, as it produced the thinking around how to develop an approach to piloting Article 6. This has been helpful for contributors, who mentioned that this could also be relevant for countries not directly involved in the TCAF, such as Spain and Japan.²⁶

3.3 Efficiency

Evaluating efficiency of the TCAF entails an assessment of the adequate use of resources and of the TCAF's governance and management. This assessment has relied on interviews with internal stakeholders (the TCAF Trustee and contributors), as well as on analysis of internal documentation (e.g. annual reports and minutes of the Facility Board meetings). In addition, evaluations of other WB programs have also been reviewed with the purpose of identifying which factors (either challenges or success factors) are common across several programs in the field of climate finance, and which ones are specific to the TCAF.

Key findings:

- Portfolio development processes have been slower than originally anticipated. The main bottleneck identified is to move from pre-PIN to PIN.
- Initial timelines were too optimistic. Other initiatives of similar size and nature have experienced similar delays (e.g. 3 years in Ci-Dev from pre-PIN to ERPA).
- Interviewees have recognized that initial expectations were too high, and that all parties involved underestimated the complexity of the Paris Agreement.
- The length of the processes to make decisions (especially on corresponding adjustments) has hindered progress.

²⁶ Spain and Japan have participated as observers in TCAF Facility Board meetings

3.3.1 Use of Tranche resources

The effective use of the resources is one of the objectives set in the TCAF Logframe (output 4).

Table 1.8: Output on effective use of resources

Output	Objective by March 2020	Evidence
Effective fund management of TCAF ensures efficient use of Tranche resources	<p>The target of this output was to have, by 2017, the following mechanisms in place:</p> <ul style="list-style-type: none"> • Appointment of facility manager • Communications from facility manager with contributors are timely and comprehensive (throughout review period) • Meeting protocols, including sharing of information pre and post meeting, created and adhered to (throughout review period) • Meetings include clear decisions to take, which are appropriately documented • Forward look of key fund preparation milestones shared and agreed (by June 2017) 	TCAF Trustee appointed as facility manager, communication mechanisms in place, meeting protocols in place and adhered to and discussions and decisions appropriately documented.

Source: TCAF Logframe and annual reports

Overall, the level of expenditure in 2018 and 2019 has been in line with or lower than the budget. The activities that have consumed more resources are activities related to business development (around two thirds of the budget every fiscal year) and the development of knowledge products (18% of the budget in FY2018 and 35% in FY2019).

The resources dedicated to business development (i.e. development of PINs and pre-PINs) have been much lower than budgeted in 2019, which is a reflection of the slow progress of the pipeline, with several programs on hold.

The TCAF pipeline development follows the WB project cycle, building on experiences from CDM credit purchase activities. However, as already explained, progress has been slower than anticipated. Besides the contextual factors and mechanisms that have slowed it down (see Section 3.2.1), the TCAF may have set timelines that were too optimistic. Other initiatives of similar size and nature have experienced similar delays (e.g. 3 years in Ci-Dev from pre-PIN to ERPA),²⁷ which demonstrates the complexities in finding suitable programs. Interviewees have recognized that expectations were too high, and that all parties involved underestimated the complexity of the Paris Agreement.

²⁷ Source: LTS International and Ecofys (2018), Evaluation of the Carbon Market Finance Program (CMFP)

3.3.2 Governance

The TCAF decision-making process involves the Facility Board as well as other WB units, as per the WB's project cycle. The GPs and CMUs are involved in the work on the program assessment frameworks and decision-making process for program inclusion.

As explained in Section 3.2.1, there have been elements related to the governance of the TCAF that have affected pipeline development. The main bottleneck is experienced at the stage of PIN preparation (see Table 3.6).

Table 1.9: Progress at different stages of pipeline development (actual vs objectives, cumulative figures)

	FY2017-18	FY2018-19	FY2019-20
Pre-PIN presented (framework)	5	8	11
Expected success rate at pre-PIN (pre-PIN to PIN stage)	0%	40%	40%
Pre-PIN presented (actual)	9	10	13
Pre-PIN approved (actual) ²⁸	6	5	5
Actual success rate at pre-PIN (pre-PIN to PIN stage)	67%	50%	38%
PIN presented (framework)	0	1	3
Programs that move from PIN to ERPA (framework)	0%	40%	40% (2 PINs)
PIN presented (actual)	0	1	1
PINs approved (actual)	0	0	1 PIN (20%)
Programs that move from PIN to ERPA (framework)	0%	0%	50% (1 ERPA)

²⁸ The annual review 2017-2018 indicates that "six of the nine pre-PINs presented to date received no objection from Contributors and therefore moved to PIN stage". The annual review 2018-2019, indicates, however, that "Five of the ten pre-PINs have moved to PIN development". The reduction in number of programs at PIN stage may be due to one program dropped from the pipeline.

ERPAs approved (actual)	0	0	0
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Source: TCAF Annual reports 2018 and 2019

One element that differentiates TCAF from other climate finance programs managed by the WB is the lack of participation of host countries' representatives in processes leading to decisions made on their programs.²⁹ For example, host countries are not offered the opportunity to present their own PINs to the Facility Board. Such a process could promote host countries' ownership of the program and inform contributors about challenges for implementation. While recognizing that this would not solve the bottleneck in PIN preparation, it could help host countries understand contributors' objections on their PINs, if any, or facilitate smoother transition from PIN to ERPA.

Another element that has affected pipeline progress, as explained throughout the document, is the issue of corresponding adjustments. PIN development has been halted while the Facility Board was discussing TCAF's operational approach. As of the writing of this report an approach has not yet been endorsed by contributors.

The lack of consensus on the approach raises concerns for the future governance (decision-making) of the TCAF. Past experience has shown that Facility Board members may disagree on elements or decisions that are fundamental to progress and continue TCAF operations, which may continue hindering progress in the future if the objectives or the mandate to the TCAF Trustee are flexible to interpretation. For instance, if the approach sets different requirements on CA for projects that are considered very innovative or with great transformation potential, the criteria of "very innovative" would need to be clearly defined.

The general requirement for countries to do corresponding adjustments implies slower pipeline development than a pure RBCF where CA is not required, as it requires the TCAF Trustee to engage stakeholders at the political level, at least until the international rules for the implementation of Article 6 are agreed. The objectives set in the TCAF logframe, as a consequence, may need to be revisited.

It is noteworthy that the approach proposed addresses some previous concerns raised by host countries. For instance, it addresses the risk of overselling by introducing the concept of surplus mitigation, defined as the amount of mitigation beyond the NDC that is available for corresponding adjustments. The approach stipulates the following: "If the host country does not exceed its NDC target by enough to cover the entire amount of corresponding adjustments (CA) reported in the Biennial Transparency Reports (BTRs)³⁰, then the final CA amount (and payment) would be limited to the amount beyond the NDC target (surplus mitigation)".³¹

Finally, it should be noted that the TCAF Trustee, as per the current TCAF framework, is only operational until 2028, whereas payments with CA would run until 2033. This mismatch may have implications for the management of the payments.

²⁹ For instance, CPF has a partnership committee where both sellers and buyers participate

³⁰ BTRs are reports to be submitted by the Parties, containing updates of national Greenhouse Gas (GHG) inventories, including a national inventory report of anthropogenic emissions by sources and removals by sinks of GHGs, information necessary to track progress in implementing and achieving its NDC under Article 4 of the Paris Agreement, and information on climate change impacts and adaptation under Article 7 of the Paris Agreement. Developing country Parties shall also provide information on financial, technology transfer and capacity-building support needed and received under Articles 9, 10 and 11 of the Paris Agreement.

³¹ Source: TCAF's operational approach to corresponding adjustments (2020)

4 Conclusions

The TCAF is a very relevant program in the current international context given that it combines a set of features that are unique: while there are other programs aiming to pilot Article 6, none of them focus on the same sectors than TCAF and/or target operations at the scale TCAF does (i.e. crediting programs aiming to reduce at least 5 m t over 5-7 years and achieving transformational change). Its focus on transformational change and engagement on CA also means it is innovative, and it has the potential to provide a niche form of support to host countries that helps advance international efforts to achieving the Paris Agreement. The TCAF, due to its scale and scope, is the most ambitious program amongst those reviewed by the evaluation team as part of the benchmarking exercise.

The objectives of the TCAF at the international level appear to be fully in line with contributors' priorities. In fact, the TCAF has been mostly shaped by contributors and the TCAF Trustee, the latter providing expert advice ahead of the Facility Board meetings where decisions have been made.

The progress made on the **objectives set at the participant level** (e.g. general GHG emission reductions, raise mitigation ambitions, etc.) has been slower than initially expected. The TCAF Trustee has identified a large number of programs which have been presented to the Facility Board. While the number of pre-PINs that receive no objection is in line with the expectations set in the TCAF Logframe, programs have experienced bottlenecks to move from pre-PIN to PIN. This is due to a series of factors both internal and external to the TCAF.

Internal factors include WB internal processes, mechanisms to engage host countries, and governance factors. Internal processes include the difficulty in engaging staff in other WB units and the mismatch between the time required to prepare a PIN and to agree on DPO operations. The mechanisms to engage host countries have not been very effective and the TCAF did not anticipate the challenges faced by host countries to implement suitable programs. Governance factors relate mainly to time elapsed until decisions are taken at the Facility Board, which halted TCAF operations in more than one occasion for long periods of time (e.g. approach to CA, objections to one PIN). In the future, if the mandate to the TCAF Trustee is not made clearer (e.g. when a program is considered very innovative), other differences in interpretation of TCAF's objectives among contributors may arise that slow down the pipeline development.

External contextual factors include both elements at the international level (e.g. lack of international rules), as well as factors at the participant (host country) level. The TCAF's Theory of Change assumes that there is the appropriate political, regulatory and legal infrastructure, as well as political will, in host countries to design and implement the program. However, the challenges experienced to progress TCAF's pipeline indicate that these assumptions do not always hold true:

- In some cases, host countries lack necessary infrastructure (e.g. MRV systems) and have not fully scoped how their NDCs will be implemented, the opportunities provided by Article 6, and the challenges of doing corresponding adjustments. As a result, host countries may perceive the TCAF as a high-risk operation. The TCAF needs to find a solution to ensure host countries have the right level of readiness.
- The current approach to pipeline development does not ensure political will and host countries' ownership of the program, since the initial identification of programs is conducted via desk

research only (albeit based on countries' NDCs), and host countries are involved once the pre-PIN has received no-objection by the Facility Board. It is unclear whether the current approach for pipeline development engages the host country at the right time, whether it engages the right stakeholders, and whether it can achieve the level of ownership needed to achieve transformational change.

Overall, although the technical characteristics of the TCAF are adequate to meet its purpose and in-depth and sound research underpins its core parameters, more information is needed to understand the “soft” elements of its design to better adapt TCAF to host countries' needs and priorities.

In the **international context**, the TCAF also has the **objective** of informing non-participating jurisdictions about TCAF's experience. The technical notes and blueprints produced are of high quality and have the potential to influence international negotiations if they are shared with non-participants. The increasing number of initiatives aiming to pilot Article 6 might benefit from the thinking already made by the TCAF on the core parameters for TCAF operations. However, outreach and dissemination of these documents so far have been limited to the workshops held with DNA representatives and contributors. Knowledge sharing with potential host countries has been low, despite being one of the main audiences targeted in the knowledge management strategy.

5 Recommendations

This section introduces the recommendations developed by the evaluation team to address the key challenges and shortcomings detected in the evaluation:

- The bottleneck experienced to progress programs at PIN preparation stage
- Delays experienced due to lengthy decision-making processes by the TCAF Facility Board
- Lack of outreach of TCAF to non-participants

All the recommendations are addressed to the TCAF Trustee and the Facility Board.

Recommendations to reduce the bottleneck in PIN preparation

These recommendations focus on the factors that slow down PIN preparation and that are under control of the TCAF Trustee and the Facility Board.

In the first place, the TCAF needs to address the **lack of readiness** in host countries where it aims to operate. As explained in the conclusions, this evaluation has found that it cannot be assumed that host countries have the infrastructure needed to participate in TCAF, even if the target countries have received support from the PMR. To address this, the TCAF has several options:

- Collaborate with other international programs providing technical assistance and readiness to TCAF target countries, in order to identify what additional readiness support is needed and deliver this support in partnership. This could include presentations or workshops to a group of countries (e.g. presentations at PMR PAs, CPF meetings...). The suitability and effectiveness of this option need to be carefully assessed, as the stakeholders engaged in PMR, CPF and other initiatives may be different from the stakeholders the TCAF targets (e.g. how to target the right people if the sectors targeted by TCAF are not the same as the sectors targeted in other initiatives?).
- Start providing technical assistance and capacity building at PIN stage, especially on CA and the issues raised by the CA technical note. The effectiveness of this option would be higher, but it would also require more financial and human resources from the TCAF. This option would also need coordination with other initiatives to avoid overlap.
- If the TCAF targets new countries, it is recommended that the TCAF Trustee conduct more extensive research on barriers to implementation (technical barriers, as well as barriers related to capacity and capability of host countries), level of readiness, and appetite for cooperative approaches and TCAF in the new target countries. This would require cooperation with other WB programs to avoid overlap. Given that carrying out this research is a resource-intensive task, countries and sectors may need to be prioritized.

Second, **ensuring buy-in of host countries** is fundamental to progress the pipeline and achieve the desired transformational change. While acknowledging that political shifts in host countries cannot be foreseen or addressed, the TCAF could strengthen its relationship with key stakeholders in host countries at PIN preparation stage, to maximize the chances that programs are progressed despite changes in the national context. Below we provide some illustrative examples of how this relationship can be strengthened:

- The Facility Board could invite host countries to present their PINs at the Facility Board meetings. This would provide contributors with better awareness of the challenges faced by host countries to progress their PINs, on the one hand, and would help the host country understand and address the feedback provided by contributors, on the other hand.
- The TCAF Trustee could propose, design and carry out more knowledge sharing activities with host countries. This could include, for instance, workshops, and could complement the technical assistance and capacity building proposed in the first set of recommendations that address the lack of readiness.
- The TCAF Trustee (or other WB teams) could conduct primary research (i.e. consultations) with target host countries to better understand their current situation and position towards TCAF, corresponding adjustments, and NDC implementation. This would inform host countries' needs for technical assistance and capacity building, as well as funding decisions on TCAF's pipeline moving forwards. For instance, it may provide relevant information to prioritize programs and resources (e.g. decide whether certain programs require more funding and assistance, and whether certain programs need to be put on hold).

Last, the TCAF Trustee needs to better **engage WB staff at GPs and WB country offices**. The evaluation team suggests addressing (a combination of) the following recommendations:

- In the first place, the role of other WB units at communicating TCAF to host countries needs to be formally recognized. We recommend that the relevant GPs and WB country offices are included as intermediary audiences in Knowledge Management strategy, and that specific communication actions are designed to this audience in future work plans.
- TCAF's approach needs to be communicated to and understood by GP and country offices' staff. We recommend designing and implementing activities to facilitate collaboration with these teams. This may include, for instance, webinars where the TCAF Trustee explains TCAF's approach and responds to questions that other teams may have. These webinars may be general, explaining TCAF's approach, or may be tailored to specific sectors (e.g. to explain and promote the blueprints).
- At the moment, the information available on the TCAF's website is very scarce, and country offices may lack materials/resources to communicate TCAF's approach to host countries' policymakers. The TCAF Trustee may need to dedicate resources to develop materials for WB country offices to use when they initiate conversations with host countries about TCAF. This could be, for instance, a video/brochure presenting TCAF. We would recommend the TCAF Trustee to consult with WB country offices whether any resources are needed, and if so, produce them.
- The issue of corresponding adjustments may need to be addressed with host countries at the political level. In this case, we recommend that the TCAF Trustee leads these conversations. However, support to country offices may be needed for them to be able to promptly address any questions that the host country may have.

Recommendations to maximize efficiency in program identification and decision-making

TCAF's approach to corresponding adjustments is still under discussion among contributors. The current proposed approach provides the CA limitation arrangement, i.e. limitation to CA volume by host country over achievement of its unconditional NDC target. Delays in reaching the agreement to set an approach

to operationalize CA, or lack of clarity on the final approach, may produce further delays in program implementation. We would recommend the **Facility Board to provide the TCAF Trustee with a clearer mandate** on the following:

- The list of target countries for TCAF's operations. This may entail including host countries' position on CA as a red flag issue, and/or targeting only countries who have expressed adherence to environmental integrity and CA (for example, but not limited to, countries who signed the San Jose Principles). Transparency on red flag issues and target countries is fundamental to ensure the program identification is as efficient and effective as possible.
- If the approach to operationalize CA sets different requirements or conditions to projects that are considered "very innovative and transformational", the characteristics of what constitutes "very innovative, transformational programs" need to be spelled out and agreed, as well as the countries where only RBCF, without international transfer of units, would be acceptable.

The **TCAF logframe** may need to be revisited to better reflect the complexity of requesting host countries to do CA and set clear targets to the TCAF Trustee. This may entail:

- Getting host countries' buy-in of CA will be a resource-intensive task and will require conversations at the political level. Contributors need to be ready to accept lengthier processes and potentially higher operational costs vs an approach where no transfer of ITMOs occurs. If the current objectives for pipeline development were set at a time when CA was not a requirement, these may need to be adjusted. We note that the logframe was updated in 2019 and that this may have been considered already.
- It may be beneficial to set targets on number of projects / volume of funding for programs that do not foresee international transfer of ITMOs, if such programs are eligible for TCAF operations. We note this may require a division of the Tranche A and the process to set these objectives may be long, as disagreements among Facility Board members may arise. However, we believe clarity on objectives at the outset is needed to avoid further delays.
- The current TCAF's operational approach may need to be revisited in the future if, for instance, the CA approach is unsuccessful (e.g. host countries refuse to do CA following this approach, or the approach is not aligned with the future Paris rulebook).
- TCAF operations need to be extended to 2033, according to the current approach on CA.

Recommendations to improve knowledge transfer to non-participants

Finally, the TCAF needs to improve its outreach to non-participants, to ensure it meets its objective of informing climate change mitigation programs in non-participating jurisdictions. We recommend the TCAF Trustee to include the following actions in its future knowledge management work plans:

- Publish technical notes and sectoral blueprints on the website. The technical notes should be edited before publication to make sure technical concepts are understood by a non-expert audience.

- TCAF's products (technical notes and sectoral blueprints) should be promoted and disseminated in international events and fora, such as COPs and Invest4Climate³². TCAF Trustee could also disseminate the knowledge generated, for instance, through submission of position papers to UNFCCC's calls for input.

³² The Invest4Climate platform aims to further mobilize, coordinate, and deliver the finance needed to close the climate financing gap and help countries make the transition to a low-carbon resilient future that supports jobs and growth. It is a joint World Bank Group and UNDP partnership co-launched by the United Nations Secretary General and World Bank President in September 2017.

Annexes

Annex I: Evaluation Question Matrix

Criteria	Evaluation Questions	Assessment criteria	Methods
Relevance	Is the TCAF adequately designed to meet its objectives?	Assessment of the theory of change Identification of transformative change principles in the design documents	Desk review, interviews with contributors and experts
	To what extent is the TCAF flexible enough to adapt to changes in the international context?	Changes in TCAF objectives as a result of changes in international context New activities carried out as a result of changes in context Adaptation and/or revision of pipeline of projects selected as a result of changes in context Flexibility of the processes in place to deal with changes in context Capacity of TCAF Trustee to anticipate to changes in context	Desk review, interviews with other units in WB, interviews with experts
	What is the added value provided by the TCAF, and how does it complement other international initiatives?	Assessment of the needs the TCAF aims to address, and existence (or not) of other initiatives Consultations carried out or existing coordination mechanisms, formal and informal, with other programs	Desk review, interviews and other units in WB, interviews with experts
	How does TCAF align with Contributors' priorities?	Alignment of TCAF's objectives and activities to Contributors' priorities Alignment of TCAF pipeline to Contributors' priorities Review of pre-PIN and PIN decisions made by Facility Board and reasons for objection	Desk review, interviews with Contributors
Effectiveness	What has been the progress of the TCAF so far, compared with the objectives set at the outset? Which factors have underpinned or hindered progress?	Assessment of KPIs and timeline (as per TCAF logframe and framework) Analysis of internal and external factors that hindered or underpinned progress, including international negotiations on Paris Agreement (e.g. corresponding adjustments)	Desk review, interviews with TCAF Trustee, interviews with Contributors, interviews with experts
	How effective has been the identification of crediting programs for implementation?	Relevance of the assessment criteria Assessment of the portfolio selected and pre-PIN process Engagement of key stakeholders in the PIN process	Desk review, interviews with WB country/regional units or others involved in pre-PIN development, interviews with TCAF Trustee, interviews with national stakeholders involved in PINs

	How effectively has the TCAF disseminated experience and good practices to the international climate community and the UNFCCC?	Assessment of workshops/other knowledge dissemination activities conducted as compared to KPI	Desk review, interviews with TCAF Trustee, interviews with experts/international community, interviews with Contributors
Efficiency	How fit for purpose are the governance and management of the TCAF?	Comparison of TCAF with governance of similar programs Contributors' views on the governance and management of TCAF	Desk review, interviews with Contributors
	How efficiently have the resources been used?	Efficiency of the processes to develop pre-PIN and PIN (outputs generated as compared to resources used) Efficiency of the pipeline generation and assessment Efficiency of other activities and processes	Desk review, interviews with TCAF Trustee, interviews with Contributors, interviews with other units in the WB

Annex II: Benchmarking of initiatives similar to the TCAF

The evaluation team conducted a benchmarking of initiatives piloting Article 6 and/or providing Results Based Climate Finance (RBCF). This entailed a review of 8 programs/projects, which were selected based on the aim to pilot international cooperation approaches under the Paris Agreement³³ and similarities to TCAF's approach. These included:

- Nordic Initiative for Cooperative Approaches (NICA)
- NPI Peruvian Solid Waste Sector Conceptual Article 6 Pilot (commissioned by NEFCO)
- Japan's Joint Crediting Mechanism (JCM)
- Klik Foundation
- Swedish Energy Agency Virtual Pilots
- World Bank Standardized Crediting Framework
- World Bank Carbon Partnership Facility (CPF)
- NAMA Facility

Nordic Initiative for Cooperative Approaches (NICA)

Website: <https://www.nefco.org/fund-mobilisation/funds-managed-by-nefco/nordic-initiative-for-cooperative-approaches/>

³³ NEFCO, Landscape of Article 6 Pilots <https://www.nefco.org/wp-content/uploads/2019/05/NICA-Article-6-mapping-study-April-2019.pdf>; Climate Focus and Perspective, Moving towards next generation carbon markets <https://www.climatefinanceinnovators.com/wp-content/uploads/2019/03/Moving-toward-next-generation-carbon-markets.pdf>

Who	NICA was jointly developed by Finland, Norway, Sweden and NEFCO (Nordic Environment Finance Corporation), and established by NEFCO in 2018. ³⁴
Objectives and scope	The main focus of the Nordic Initiative for Cooperative Approaches (NICA) is to support the implementation of Paris Agreement, particularly the operationalization of international market-based collaboration under Article 6. Objectives: 1) Raising the ambition of climate action, 2) Aligning finance flows with a low-emissions, climate resilient, circular economy, 3) Maximizing synergies in achieving sustainable development and climate goals
Main activities	<p>NICA aims to finance studies, workshops, technical assistance, side events and stakeholder engagement activities that support the operationalization of Article 6, as well as piloting cooperative models, which can be virtual and/or actual transactions. These activities aim to provide a concrete input for the development of practical rules for international cooperative approaches and promote knowledge sharing. The activities will be implemented by autumn 2021, financially administered by NEFCO with the oversight of a Project Group consisting of NICA donors.</p> <p>So far, NICA has published a background document³⁵, three documents presenting an overview of carbon crediting schemes³⁶, initial cooperative approaches³⁷, and four presentations from a workshop held in Helsinki in June 2019.³⁸</p>
Governance	Financial administration by NEFCO and continued oversight by a Project Group consisting of NICA donors. The Project Group may also invite non-donors to participate. NICA is open to other potential donors.
Comparison with TCAF	NICA and TCAF share the aim to contribute to the implementation of the Paris Agreement and inform the rules to operationalize Article 6, and they both have the objective to promote knowledge sharing on market-based cooperation approaches. However, while NICA initially mainly focuses on developing studies, workshops and stakeholder engagement as part of its activities, and exploring options for international transfers of mitigation outcomes, TCAF is designed to support programs in their implementation phase and in generating international transferrable mitigation outcomes.

³⁴ <https://www.nefco.org/fund-mobilisation/funds-managed-by-nefco/nordic-initiative-for-cooperative-approaches/>

³⁵ https://www.nefco.org/wp-content/uploads/2019/10/NICA_background-document_Sept-2019.pdf

³⁶ <https://www.nefco.org/wp-content/uploads/2019/05/NICA-Crediting-Mechanisms-Final-February-2019.pdf>

³⁷ <https://www.nefco.org/wp-content/uploads/2019/05/NICA-Article-6-mapping-study-April-2019.pdf>

³⁸ <https://www.nefco.org/wp-content/uploads/2019/07/NICA-WS-Art6-14-June-2019-Anttonen.pdf>; <https://www.nefco.org/wp-content/uploads/2019/07/Presentation-NICA-workshop-140619-Kronen.pdf>; https://www.nefco.org/wp-content/uploads/2019/07/NICA_workshop_Kahra_140619.pdf; https://www.nefco.org/wp-content/uploads/2019/07/NICA_workshop_Ahonen_2019-06-14_final.pdf;

NPI Peru Solid Waste Sector Conceptual Article 6 Pilot (commissioned by NEFCO)

Website: <https://www.nefco.org/news/solid-waste-program-launched-in-peru/>

Who	NEFCO and Peruvian Government (Ministry of Environment)
Objectives and scope	The Nordic Partnership Initiative (NPI) ³⁹ supported the Peruvian Government (Ministry of Environment) with the development of a conceptual Pilot Cooperative Arrangement for its Solid Waste Sector (SWS). NEFCO oversees the initiative and acts as the implementing agency of the program in Peru. The initiative focuses on exploring possibilities to lower CO2 emissions in the solid waste sector through National Appropriate Mitigation Actions (SWS NAMA), expected to contribute to Peru's NDCs. The Conceptual Pilot focuses on exploring a cooperative arrangement for Peru and a partner country to voluntarily engage in the transfer of ITMOs from the SWS NAMA. ⁴⁰ The SWS NAMA, an upscaled mitigation program which aims to minimize waste disposal and increase waste recovery, requires an estimated financial contribution of approximately USD 47.5 million.
Main activities	The proposed arrangement would cover the 2021-2025 and 2026-2030 NDC cycles. The suggested pilot considers a government to government transaction between Peru and a partner country and the possibility of a call option structure according to which the partner country has the right, but not the obligation, to purchase available ITMOs from the SWS NAMA at an agreed future date. In exchange for the right granted by Peru, the partner country will pay a call option premium in successive tranches in accordance with pre-agreed payment milestones. To mitigate the risk of overselling ITMOs that Peru might need for its NDCs, the call option will be conditional to Peru being on course to over-achieve its NDCs or a sectoral target for the waste sector. The pilot might entail corresponding adjustments done by the host country at the point of international transfer, but their form and method are still being debated.
Governance	Bilateral cooperative arrangement between Peru and the partner country
Comparison with TCAF	Similarly to TCAF, this initiative aims to pilot article 6 via RBCF. It also entails that the host country prevents double counting through corresponding adjustments and addresses the risk of overselling by making the trading of ITMOs conditional to the host country achieving its NDCs. The first main difference with TCAF consists in the use of a call option in the Peru conceptual pilot, by which the purchaser has the right but not the obligation to purchase ITMOs. Furthermore, the conceptual pilot in Peru

³⁹ Established in 2011 by Denmark, Finland, Iceland, Norway and Sweden

⁴⁰ https://www.nefco.org/wp-content/uploads/2019/07/NPI_opportunities_for_the_implementation_of_article_6_of_the_paris_agreement_in_the_solid_waste.pdf

	does not specifically aim to achieve transformational change but focuses on trading NAMAs from the waste sector only.
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Klik Foundation

Website: <https://www.international.klik.ch/en/Program.274.html?opened=1937>

Who	The KliK Foundation for Climate Protection and Carbon Offset (Stiftung Klimaschutz und CO ₂ -Kompensation) has been established within the framework of the Swiss CO ₂ law as the sector-wide carbon offset grouping for fossil motor fuels.
Objectives and scope	The Foundation will procure international emission reductions in order to offset part of carbon emissions generated by the use of motor fuels in Switzerland to comply with the Swiss CO ₂ Act. This should amount to 54 million tonnes of CO ₂ for the period 2021–2030.
Main activities	Until the rules for recognition of international emissions reductions become clearer, the Klik foundation is building its portfolio only on a provisional basis without entering into financial commitments. The pipeline is developed through call for proposals, inviting private organizations and government agencies to express their interest in planning and implementing mitigation activities suitable for the generation of ITMOs . Periodical calls for proposals are open to registered organizations ⁴¹ or government agencies. The first open opportunity call, from 1 April to 12 May 2019, received 31 proposals from 21 registered organizations, while the second one was open from 15 November 2019 to 26 January 2020, and it is not yet specified how many proposals were submitted. Submissions from government agencies are now open until December 2020. ⁴² Then, they will need to prepare a Mitigation Activity Idea Note (MAIN) and, if selected, a more detailed Mitigation Activity Design Document (MADD). After the establishment of a memorandum of understanding between the partner country and the Government of Switzerland, the KliK Foundation can sign purchase agreements. The program mentions the aim to build capacity in the host country, incentivize the mitigation activity and train local staff, but it does not specify the process of this assistance. ⁴³ Any agreement for cooperation must respect the requirements of Article 6, in particular to ensure environmental integrity and transparency, avoid double counting and contribute to sustainable development. However, specific criteria are not specified yet.

⁴¹ The list of approved organisations is published on the Klik website: <https://www.international.klik.ch/en/Activities-and-impact/Private-organisations.285.html>

⁴² <https://www.international.klik.ch/en/Activities-and-impact/Call-for-Proposals.305.html>

⁴³ <https://www.international.klik.ch/en/Getting-involved/Why-engage.296.html>

Governance	Government to government approach, building a network of partner organizations
Comparison with TCAF	The Klik Foundation international cooperative approach program presents several similarities to TCAF in terms of objectives. It aims to pilot article 6 through international transfer of mitigation outcomes, highlighting the co-benefits for transferring country in terms of sustainable development, increased mitigation ambition, capacity building through staff training, and transformation. However, it is a government-to government approach focused on only one specific sector for Switzerland, specific criteria for its implementation are not specified yet and it remains purely provisional.

SEA Virtual Pilots

Website: <https://www.energimyndigheten.se/en/cooperation/international-climate-cooperation/challenges-and-opportunities-for-operationalizing-article-6/>

Who	Swedish Energy Agency and seven selected host countries
Objectives and scope	The Swedish Energy Agency has commissioned nine virtual pilots to be developed in seven different countries (Colombia, Chile, Nigeria, Kenya, Mongolia, Indonesia and Philippines). ⁴⁴ Based on actual data and policies (including NDC) the virtual pilots present examples of how different mitigation activities could be designed under Article 6, under different country-specific settings. Each pilot has resulted in a report presenting a fully developed blueprint of a mitigation activity in a real-world setting. The virtual pilots offer an overview of the most important aspects (technical, financial and legal) that would need to be addressed for an Article 6 transaction to be implemented. By providing concrete examples, the virtual pilots can inform and contribute to the ongoing discussions regarding the Article 6 rulebook.
Main activities	The study borrows country contexts to develop a conceptual Article 6 virtual pilot. For example, the SEA-Nigeria Virtual Pilot was developed using the Nigerian country context and combines the use of Article 6 and sovereign green bonds to expand energy access. The Pilot proposes a domestic crediting program to promote renewable energy mini-grids. ⁴⁵ Mitigation outcomes generated through the SEA-Nigeria Virtual Pilot that go beyond the host country's unconditional mitigation target would be made available to be transferred internationally under Article 6.4. ⁴⁶ The Pilot contributes to the host country's renewable energy targets.

⁴⁴ <https://www.energimyndigheten.se/en/cooperation/international-climate-cooperation/challenges-and-opportunities-for-operationalizing-article-6/>

⁴⁵ <https://www.energimyndigheten.se/globalassets/webb-en/cooperation/virtual-pilot-policy-brief-nigeria-cf.pdf>

⁴⁶ <https://www.energimyndigheten.se/globalassets/webb-en/cooperation/virtual-pilot-policy-brief-nigeria-cf.pdf>

Governance	Pilot carried out by the Swedish Energy Agency in collaboration with organizations commissioned to develop them in the seven countries (for example, Climate Focus has been engaged to assess the Nigeria pilot).
Comparison with TCAF	The project-by-project crediting approach would be similar to TCAF, as well as the aim to inform international negotiations. By providing concrete examples, the virtual pilots aim to contribute to the ongoing discussions regarding the Article 6 rulebook. However, the SEA pilots are purely conceptual and aim to understand beforehand how Article 6 could be implemented. Differently from TCAF, they do not present an official commitment (political and contractual) from the host country.

World Bank Standardized Crediting Framework (SCF)

Website: <https://www.ci-dev.org/sites/cidev/files/documents/SCF%20concept%20report.pdf>

Who	World Bank
Objectives and scope	The World Bank's SCF is an initiative developed to support the transition of the Ci-Dev CDM project pipeline towards the new regulatory framework of the Paris Agreement ⁴⁷ , while offering valuable insights and lessons learned to the on-going Article 6 negotiations.
Main activities	The pipeline of projects of the SCF builds on the Ci-Dev portfolio, and the SCF pilots are simulations operating in parallel to the CDM activities to allow a comparison between the two models. ⁴⁸ The SCF is being piloted in Senegal and Rwanda (as they are part of the Ci-Dev portfolio) to promote energy access. In Senegal it supports the rural electrification program implemented by the Senegalese Rural Electrification Agency. In Rwanda, it supports the improved cookstove program, with key stakeholders being the Rwanda Environment Management Authority (REMA), the Ministry of Environment, Inyenyeri (project developer) and the support of the World Bank. The SCF operates as a simulation in parallel to the CDM programs supported by Ci-Dev in both host countries, to enable a direct comparison at the end of the piloting phase, and only then enable the transaction of ITMOs. Host country governments have the role to implement the SCF, as they can best establish the link between crediting and NDC implementation in a way that is most fitting with national and sectoral circumstances. The form of cooperation and the allocation of emissions reductions between parties is not yet clear, as well as the extent to which the generates ERs would contribute to the host country's NDCs.

⁴⁷ <https://www.ci-dev.org/sites/cidev/files/documents/SCF%20concept%20report.pdf>

⁴⁸ <https://www.ci-dev.org/sites/cidev/files/documents/Methodological%20note%203%202019.pdf>

Governance	Host country governed crediting approach, giving them the role of managing and implementing the SCF, as they can best establish the link between crediting and NDC implementation, as well as define crediting modalities that are most fitting with national and sectoral circumstances.
Comparison with TCAF	The two distinguishing aspects of the SCF are host country governance, that gives them the flexibility to define the most appropriate cooperative approach to transfer ITMOs, and operational reforms to transition from CDM's Program of Activities to sectoral crediting programs under the Paris Agreement. Instead of a standardized crediting approach, TCAF uses program-by-program crediting, and has a wider scope in terms of piloting not only sectoral, but also policy crediting.

Japan's Joint Crediting Mechanism (JCM)

Website: <https://www.icm.go.jp/about>

Who	The government of Japan
Objectives and scope	<p>Main objectives: 1) Facilitating diffusion of leading low carbon technologies, products, systems, services and infrastructure as well as implementation of mitigation actions, and contributing to sustainable development of developing countries, 2) Appropriately evaluating contributions from Japan to GHG emission reductions or removals in a quantitative manner, and use them to achieve Japan's emission reduction target, 3) Contributing to the ultimate objective of the UNFCCC by facilitating global actions for GHG emission reductions or removals.</p> <p>A crediting framework that facilitate the implementation of mitigation actions to reduce GHG emissions in developing countries and contribute to Japan's and host countries NDC targets. Not established under the Paris Agreement (established in 2010), but it is expected to transition into an Article 6.2 cooperative approach, as it is expected to be flexible enough to allow the bilateral cooperation to retain its existing structures.⁴⁹</p>
Main activities	Partnering countries sign an agreement with the government of Japan and present their proposed project activity based on approved country-specific methodologies. Credits issued under the JCM are allocated directly to Japan and the partnering country. It is not yet clear whether the credits are classifiable as ITMOs , as currently have no price attached to them, meaning they are non-tradable. ⁵⁰ However, parties can explore options for trading in the future, depending on continued developments

⁴⁹ <https://www.adb.org/sites/default/files/publication/541116/article6-paris-agreement-jcm.pdf>

⁵⁰ <https://www.climatefinanceinnovators.com/wp-content/uploads/2019/03/Moving-toward-next-generation-carbon-markets.pdf>

	under the UNFCCC. Japan has already signed agreements with 17 countries from across the globe ⁵¹ , and has in place 41 registered projects, 66 approved methodologies for various sectors, and 19 credit issuances totaling circa 21,80026 (tCO ₂ eq).
Resources	USD 69 million ca.
Governance	Government of Japan, governments of host countries, Joint Committees that acts as the Secretariat of the JCM and serve as country-specific governing bodies for JCM Implementation (consists of representatives from both sides).
Comparison with TCAF	Not necessarily established with the Article 6 context in mind, but the program has the potential to be recognized under Article 6.2 cooperative approaches, reflecting requirements of the Paris Agreement in the bilateral cooperation, including robust accounting through correspondent adjustments. ⁵² Bilateral agreements between the government of Japan and partner countries. Credits generated are not yet ITMOs.

World Bank Carbon Partnership Facility (CPF)

Website: <https://cpf.wbcarbonfinance.org/>

Who	World Bank
Objectives and scope	The CPF's objective is to develop emission reductions and support their purchase, on a larger scale through the provision of carbon finance to long-term investments. The CPF utilizes scaled-up, programmatic approaches, such as the Program of Activities, to enable carbon finance. ⁵³
Main activities	The CPF is comprised of two trust funds: 1) the Carbon Asset Development Fund (CADF) to prepare and implement emission-reduction programs, and 2) the Carbon Fund (CF) to purchase carbon credits from the pool of emission reduction programs. As CPF started in 2012, it had a lot of POAs (program of activities), a portfolio following strictly the CDM rules and generating certified emission reductions. Only a small portion of CPF refers to the Paris Agreement and post-2020 rules, and those are NCI pilots (new crediting instruments). They experiment sectoral crediting, but not necessarily seek Paris Agreement compliance under Article 6.

⁵¹ Mongolia, Bangladesh, Ethiopia, Kenya, Maldives, Vietnam, Laos, Indonesia, Costa Rica, Palau, Cambodia, Mexico, Saudi Arabia, Chile, Myanmar, Philippines and Thailand

⁵² <https://www.adb.org/sites/default/files/publication/541116/article6-paris-agreement-jcm.pdf>

⁵³ <https://cpf.wbcarbonfinance.org/>

Governance	The CPF is a partnership of Buyer (Governments of Spain, Norway and Sweden) and Seller participants (Caixa Economica -Brazil, Ministry of Industry and Trade -Vietnam, Fonds D'équipement Communal -Morocco, Greater Amman Municipality; Provincial Electricity Authority -Thailand, Hebei Green Agriculture Co. China, Rural Electricity Agency -Tanzania; Ministry of Finance -Egypt, Land Bank of the Philippines, also includes Donors (Governments of Spain, Norway, Italy; European Commission) and Host Country Partners (NDRC, China). The Partnership Committee is comprised of an equal number of Buyers and Sellers and makes key decisions. All participants are entitled to attend and to participate in Partnership Committee meetings. Decisions on programs to include in the first tranche portfolio are made by buyers.
Comparison with TCAF	Main difference: the CPF has not been established under the Paris Agreement, it will close in 2023 and pilots few programs under the Paris Agreement (NCI - new crediting instruments) without seeking full compliance with Article 6.

NAMA Facility

Website: <https://www.nama-facility.org/>

Who	German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the Department for Business, Energy and Industrial Strategy (BEIS) established the Facility in 2013. The Danish Ministry of Energy, Utilities and Climate (EFKM) and the European Commission joined the NAMA Facility as new Donors in 2015.
Objectives and scope	The Facility's aim is to offer technical and financial assistance ('NAMA Support Projects' (NSPs) to developing countries and support them implement Nationally Appropriate Mitigation Actions (NAMAs). Support projects are selected through open competitive calls (now the 7 th call is opening in April 2020). The approach is to select the most transformational NAMA support projects from across all sectors, those with the potential to improve, for example, the way that people live, work and move around while also catalyzing larger changes across a sector.
Main activities	NAMAs are seen as concrete measures to achieve the objectives of NDCs . The NAMA Facility requires NSP Outlines to refer specifically to the country's NDC context. At the end of 2018, the NAMA Facility portfolio consisted of eleven NSPs in implementation, one concluded NSP component (Mexico Housing TC, concluded in 2017) and 15 NSPs in preparation (Appraisal/DPP). The Facility also has a knowledge creation approach, and at COP24 launched its comprehensive six-year report entitled "Inspiring Climate Action – The NAMA Facility: A Snapshot". Further

	communication activities included side events at the Bonn Climate Conference and the COP24.
Governance	NAMA Facility Board, currently comprising representatives of the Donors of the NAMA Facility (currently BMU, BEIS, EFKM and the European Commission). Board Members take all decisions on strategy and project selection. GIZ has since the 4 th call taken over all functions as implementer of the Facility that have previously been split between GIZ and KfW. A Technical Support Unit (TSU) functions as the secretariat of the NAMA Facility and supports the Board in its management.
Comparison with TCAF	Established in a context prior to the Paris Agreement. The facility does not aim to pilot Article 6 or market-based mechanisms to trade emission reductions. The “credited NAMAs” option is still under discussion at UNFCCC.

Ipsos MORI's standards and accreditations

Ipsos MORI's standards and accreditations provide our clients with the peace of mind that they can always depend on us to deliver reliable, sustainable findings. Our focus on quality and continuous improvement means we have embedded a 'right first time' approach throughout our organisation.



ISO 20252

This is the international market research specific standard that supersedes BS 7911/MRQSA and incorporates IQCS (Interviewer Quality Control Scheme). It covers the five stages of a Market Research project. Ipsos MORI was the first company in the world to gain this accreditation.



ISO 27001

This is the international standard for information security designed to ensure the selection of adequate and proportionate security controls. Ipsos MORI was the first research company in the UK to be awarded this in August 2008.



ISO 9001

This is the international general company standard with a focus on continual improvement through quality management systems. In 1994, we became one of the early adopters of the ISO 9001 business standard.



Market Research Society (MRS) Company Partnership

By being an MRS Company Partner, Ipsos MORI endorses and supports the core MRS brand values of professionalism, research excellence and business effectiveness, and commits to comply with the MRS Code of Conduct throughout the organisation.

Data Protection Act 2018

Ipsos MORI is required to comply with the Data Protection Act 2018. It covers the processing of personal data and the protection of privacy.

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About Ipsos MORI Public Affairs

Ipsos MORI Public Affairs works closely with international institutions, national governments, local public services and the not-for-profit sector. Its c.200 research staff focus on public service and policy issues. Each has expertise in a particular policy area, ensuring we have a detailed understanding of specific sectors and policy challenges. Combined with our methods and communications expertise, this helps ensure that our research makes a difference for decision makers and communities.

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