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Synthesis of learning from DESNZ International Climate Finance programmes

ICF Portfolio

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Acronyms

Acronym	Definition
ADB	Asian Development Bank
AfDB	African Development Bank
AFOLU	Agriculture, Forestry and Other Land Use
BEIS	Department for Business, Energy and Industrial Strategy
BioCF	BioCarbon Fund
BNEF	Bloomberg New Energy Finance
CCS	Carbon Capture and Storage
CDM	Clean Development Mechanism
Ci-Dev	Carbon Initiative for Development
CIF	Climate Investment Funds
CLIC	Climate Leadership in Cities
CMCI	Capital Markets Climate Initiative
CMFP	Carbon Market Finance Programme (renamed as Ci-Dev)
CP3	Climate Public Private Partnership Programme
CRAFT	Climate Resilience and Adaptation Finance & Technology transfer facility
CSO	Civil Society Organisation
CSP	Concentrated Solar Power
CTF	Clean Technology Fund
DAE	Direct Access Entity
DESNZ	Department for Energy Security and Net Zero
DFID	Department for International Development
DSM	Distributed System Management
EBRD	European Bank for Reconstruction and Development
ESG	Environmental, Social and Governmental
ERP	Emissions Reduction Purchases
ESMAP	Energy Sector Management Assistance Programme
ETS	Emissions Trading Scheme
FCDO	Foreign, Commonwealth and Development Office
FIP	Forest Investment Programme
FP	Focal Point
GCF	Green Climate Fund
GCPF	Global Climate Partnership Fund
GEF	Global Environment Facility
GET FiT	Global Energy Transfer Feed-in Tariff
GHG	Greenhouse Gas
HMG	Her Majesty's Government
IADB	Inter-American Development Bank
ICAI	Independent Commission for Aid Impact
IEA	International Energy Agency
ICF	International Climate Finance
IEU	Independent Evaluation Unit
ISFL	Initiative for Sustainable Forest Landscapes
KPI	Key Performance Indicator
LCCR	Low Carbon and Climate Resilience

LDCs	Least Developed Countries
MDB	Multilateral Development Bank
MRP	Market-Readiness Proposal
MRV	Monitoring, Reporting and Verification
NAMA	Nationally Appropriate Mitigation Actions
NDA	National Designated Authority
NDC	Nationally Determined Contributions
NSP	NAMA Support Projects
P4F	Partnership for Forests
PE	Private Equity
PE1	Portfolio Evaluation 1
PE2	Portfolio Evaluation 2
PE3	Portfolio Evaluation 3
PMR	Partnership for Market Readiness
PPA	Power Purchase Agreements
PPCR	Pilot Programme for Climate Resilience
PV	Photovoltaic
R&D	Research and Development
RBF	Results-based Finance
REDD	Reducing Emissions from Deforestation and forest Degradation
REDD+	Efforts to reduce emissions from deforestation and forest degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks ¹
REPP	Renewable Energy Performance Platform
RPSP	Readiness and Preparatory support program
SCF	Standardised Crediting Framework
SREP	Scaling up Renewable Energy Program
TA	Technical Assistance
TCAF	Transformational Carbon Asset Facility
ToC	Theory of Change
UK ODA	UK Official Development Assistance
UK PACT	UK Partnership for Accelerating Climate Transition
UKCDR	UK Collaborative on Development Research
UKCI	UK Climate Investments
WBG	World Bank Group

¹ <https://www.forestcarbonpartnership.org/what-redd>

Executive summary

This report presents a rapid evidence review of key findings, lessons learned and evidence gaps arising from evaluations and other key documentation on the UK's Department for Energy Security and Net Zero² (DESNZ) International Climate Finance (ICF) programmes and related interventions. The aims of the review were to produce collated data, whose quality and strength is clearly stated, in an accessible format, organised by key themes, with gaps in DESNZ's evidence and information needs described. The outcomes of the review are intended to support ICF programmes by facilitating strategic thinking and planning as well as supporting the design of programmes and associated targeted monitoring and evaluation activities. The review covered 28 evaluations, synthesis reports and performance reviews completed from 2015-2021. The findings are specific to the programmes and documents included in this review. Analysis took place in 2021, with minor updates to the final report undertaken in 2022.

To select the documentation to be reviewed, a mapping of all available evidence was conducted and categorised per theme, type of document (independent evaluation/internal review/other) and assessed according to quality and relevance criteria. The selection was conducted in two batches. The first batch included the 15 documents that were considered the most relevant and of best quality. Once they had been reviewed and coded against the research questions, gaps in the evidence available were identified and addressed with the second batch. This review has identified some areas where there is less evidence available: evaluations of innovation-focused programmes, value for money, and quantification of finance leveraged.

The review was structured around five key themes: transformational change; mobilisation of finance; innovation and R&D; carbon pricing instruments; and support to climate negotiations and enabling environment. Key findings from each theme are presented below.

Transformational Change

Enabling and success factors:

As the ultimate objective of all or most of the programmes within the ICF portfolio, transformational change (defined here as 'change which catalyses further changes') was explicitly mentioned in the majority of reviewed documents. A total of 95 programmes have reported on their Transformational Change potential between April 2011 and March 2022³, using the ICF Key Performance Indicator (KPI) 15 methodology. Since 2020/21, 13 new programmes have started reporting on this KPI. The majority of programmes have maintained their scores since 2021, while 9 reported an increased likelihood of transformational change, and 5 reported a decrease.⁴ Generally, interventions seeking to achieve transformational change provide technical assistance, development finance or (most frequently) a combination of the two. The combined impact of technical assistance and direct financial support may be multiplicative rather than just additive, as it helps ensure that financial support is adequately embedded in national action, reaches its full potential to be effective, and therefore can be scaled up and replicated elsewhere.⁵

² Formerly the Department for Business, Energy and Industrial Strategy (BEIS)

³ All programmes across the ICF portfolio in DESNZ, FCDO and Defra, not just those administered by DESNZ

⁴ UK Climate Finance Results 2022. Available at: <https://www.gov.uk/government/publications/uk-climate-finance-results-2022> [accessed 2/12/22]

⁵ Vivid Economics (2020a), "DESNZ ICF - DESNZ ICF Mitigation Investment Options – Synthesis Report"

The potential for transformational change, or success factors that must be present for it to occur, are measured through a programme-level scoring approach with tailored indicators that are relevant for the programme. Whilst the main stated objectives of transformational change in the reviewed programmes were replication and scaling⁶, there was limited evidence on key success factors indicating that either or both have occurred yet. This is likely because such outcomes are longer term, future outcomes, and therefore evidence has yet to materialise. Another element for transformational change, successful demonstration, was found to be dependent on communication and promotion of results by the programme team to relevant stakeholders, although there has not always been a consistent approach in ICF in delivering this.

The national context was seen to be a critical factor to the achievement of transformational change, including sufficient political will and local ownership. Examples of facilitators included national government support (high-level champions and leadership) and political stability (in terms of long-term policy certainty). Conversely, barriers to transformational change included a lack of local support for specific technologies (through lack of recognition or policy support), regulatory barriers and local natural environment barriers (climate, severe weather and natural disasters).

ICF strengths:

One of the main strengths of the ICF portfolio identified by this review, that is helping programmes to pave the way for transformational change, was the way that ICF provides funding. In addition to the large scale of funding provided, ICF programmes demonstrate a willingness to take risks (where other funders prefer to support proven concepts), to provide concessional funding to improve project readiness, and to increase certainty through its transparency around eligibility requirements and selection criteria. In addition to funding, other areas of strength included enhanced guidance and support to applicants; robust monitoring and evaluation frameworks promoting strong measurement of results; and being an influencer of other funders and agencies, through the UK's emphasis on, and active participation in, transformational change.

Suggested areas for further investment:

- **Demonstration:** The dedication of more resources to communicate demonstration effects
- **Theories of Change:** The need to better explain the pathways to transformational change in project theories of change
- **Coordination:** Improved coordination and strategic partnerships with other local interventions
- **Engagement:** Better engagement with non-government actors.

Mobilisation of Finance

Enabling and success factors:

⁶ Although more recent programmes, that have yet to be evaluated, are looking at a broader range of dimensions through the KPI15 methodology – see HMG (2018), “Extent to which ICF intervention is likely to lead to Transformational Change. KPI 15 Methodology Note”. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/813600/KPI-15-extent-ICF-intervention-lead-transformational-change.pdf [accessed 2/12/22]

From April 2011 to March 2022, ICF programmes⁷ are estimated to have mobilised £5.7 billion public and £5.2 billion private finance for climate change purposes in developing countries. Using the evaluations of four programmes and three portfolio reviews, this review identified three main mechanisms that leverage private finance: providing a large scale of finance (as noted above under 'transformational change'), being a cornerstone investor (as a 'first mover' providing an impetus for others to follow) and helping to build a track record (often through demonstration effects).

The review found that there is no 'one-size-fits-all' way to de-risk investment, as this will depend on the stage of the intervention, business model and local context. Instead, programmes need to identify local market barriers or failures, and address them using targeted financial instruments and/or combination of support. The evidence in this report shows that currently, programmes are not doing this as consistently as they could do yet.

The evidence reviewed showed that the level of economic development in a country and its investment environment are the primary factors that influence the mobilisation of private finance. Without sufficient development of policy, legal and regulatory frameworks, investor protections, corporate governance and capital markets, there is little chance of mobilising a meaningful level of private finance.

ICF strengths:

One of the main strengths of ICF identified related to the mobilisation of finance is its capacity to mobilise co-funding when it acts as a cornerstone investor. As a trusted investor with a good reputation, the UK Government is in a strong position to leverage this to support the scale-up of other public-private climate initiatives.

Suggested areas for further investment:

- **Concessional finance:** There is a need for concessional finance in the on-grid renewable energy market, where a clean energy plant has not yet reached the tipping point of being able to undercut the economics of an existing fossil fuel plant. Such concessional finance has the potential to accelerate progress towards this tipping point and enable the earlier retirement of fossil-fuelled plants.
- **Country targeting of technologies:** ICF should target the most appropriate renewable energy technologies in specific countries to take advantage of local contexts.
- **Funding instruments:** Targeted funding instruments to address specific challenges, such as blended instruments (equity, debt, mezzanine) over longer time horizons to reflect the need for longer-term finance for renewable energy, and a need for early-stage private equity to address a major gap in early-stage investment where there is a lack of a 'pipeline'.

Innovation and R&D

Enabling and success factors:

This review found that there is no consistent definition of innovation within the ICF portfolio, with 'innovation' being referenced in relation to technologies, financial mechanisms, business models and novel approaches (where the technology or financial mechanism may be tried and tested, but the application or approach to deliver them is novel within its context). This review focuses on three ICF

⁷ All programmes across the ICF portfolio, not just those administered by DESNZ

programmes with innovation-specific objectives, and a handful of other programmes which have small components of innovation in their work.

This review found that basic research⁸ is best supported by public funding, due to its exploratory nature with no clear route to commercialisation. Private finance is more appropriate to later stages of innovation where there are clearer potential returns.

Innovation can be supported by interventions that use established technologies or finance mechanisms in novel ways (including through technology transfer) as an effective way to de-risk innovation in the eyes of investors. Similarly, ICF interventions that have supported regulatory and policy development to pave the way for innovative technologies have played a critical role (sometimes more so than private finance) in supporting innovation.

Key facilitators of innovation identified in this review for ICF included flexibility of support, agility (to rapidly respond to changing contexts) and an acceptance of risk. Furthermore, knowledge sharing (particularly between public and private stakeholders) has been seen to facilitate innovation, such as through idea generation, awareness raising and confidence building. Partnerships and collaborations, especially those that are embedded in the local context and at the local scale, are highly effective facilitators of innovation.

ICF Strengths:

The UK is also seen as a leader in the creation of effective partnerships and collaborations, presenting an openness to partnering and a desire to foster equal partnerships. The UK's expertise and experience in its own decarbonisation pathway is also seen as an area of strength, providing research and technical expertise that can be applied to other countries and new contexts.

Suggested areas for further investment:

- **Research leadership:** There is a need to strengthen research capacity and foster climate research leadership in ICF priority countries, to train the next generation of local scientists, innovators and decision-makers.
- **Context-specific research:** There is also a need for more context-specific research that focuses on local or regional scales, including those that seek to understand contextual opportunities for specific technologies in specific locations. Indeed, as noted in earlier sections, engaging with the local context is often critical to achieving other ICF objectives.

Carbon pricing instruments

Enabling and success factors:

This review focused on four ICF programmes addressing carbon pricing or (carbon) results-based finance. Across all reviewed interventions, technical assistance to build capacity either at the national or subnational government level was seen as critical to the facilitation of carbon pricing instruments. The most consistently successful type of support to facilitating uptake of instruments identified in this review was the improvement of the enabling environment within government and associated groups. This

⁸ 'Basic research' (sometimes 'pure research' or 'fundamental research') is concerned with developing knowledge or theoretical understanding on a subject, with no specific problem in mind. It contrasts with 'applied research', which seeks to provide solutions to specific problems, often utilising the outcomes of basic research

includes support that helps design, pilot, administer and/or monitor new instruments. Some interventions also supported carbon pricing instruments through direct financial support to projects or the piloting of new mechanisms, such as by agreeing to pay for verified emission reductions.

Effective engagement of key stakeholder groups was seen to be critical to the facilitation of carbon pricing instruments, for example by increasing awareness, managing expectations, tailoring instruments and achieving long-term buy-in. Good stakeholder engagement was evident in at least two of the carbon pricing programmes. The review found that the success of interventions within a country is ultimately tied to the national context, strength of political support and alignment with national policy priorities. Additionally, the availability of sufficient and proficient staff to implement activities was seen as critical to success.

ICF strengths:

Areas of strength for ICF included the UK's experience with a variety of instrument types across a range of sectors. All of the programmes reviewed were seen as innovative, first-of-their-kind and/or central to the carbon pricing and results-based finance space. Interventions that target the national level were also seen to be a particular area of strength.

Suggested areas for further investment:

- **Design and pilot stage:** ICF should aim to now move beyond readiness to support the design and piloting of new instruments.
- **Technical assistance:** Technical assistance and platforms for knowledge sharing and peer-to-peer learning are consistently requested and valued in interventions.
- **Tailored financial support:** There is an ongoing need for selective financial support to help pilot and stabilise new instruments.

Support to climate negotiations and enabling environment

Enabling and success factors:

This review focused on the evaluations of four programmes which have the primary aim of improving the enabling environment for climate change mitigation. It found evidence that the UK is providing support to improve the enabling environments for climate mitigation at a variety of levels: multi-sector national, subnational, as well as sector-specific. All intervention types focused on supporting or directly providing technical assistance such as to develop new policies, train staff, and engage stakeholders.

Key facilitators in this theme included national ownership and alignment with national needs; relationship building; stakeholder engagement; training to build technical skills; and expanding the duration of support to enable long-term capacity building. Key barriers included political instability or change of administration; and weak staff capacity or high staff turnover within national governments.

ICF strengths:

Areas of strength identified for ICF included perceptions that the UK has catalysed global action on climate change through its funding and its international influence on actors to intensify mitigation efforts. The UK is also seen to engage effectively with a wide range of stakeholders, making significant investments in knowledge and learning to support low-carbon development, with a strong focus on

results. The UK is viewed by other donors as proactive, reliable and good to work with; a credible partner in debates; and a country that is known for technically competent and skilled expertise.

Suggested areas for further investment:

- **Political leadership, governance and engagement:** This review identified barriers around political leadership, absence of comprehensive climate laws and sector plans, lack of effective institutional frameworks, poor sub-national government coordination, and disjointed engagement with important stakeholders. Suggestions for addressing these include improving governance for low carbon transitions; supporting the uptake and use of climate intelligence and data; and supporting the development of green financial systems.

Cross-cutting findings

There are key findings that emerge across all of these themes, that are seen to be essential for ICF programmes to be most effective:

- **A supportive enabling environment is crucial:** Factors including the buy-in of the agency or government department implementing the project, and any political changes are important for the success of implementing ICF programmes. Some interventions have been particularly successful because they have targeted key national stakeholders.
- **Being context-specific:** Programmes should be designed in a way that recognises country or sector specific needs, and often there needs to be sufficient local ownership to enable programmes to have the maximum impact. The success of interventions within a country is ultimately tied to the country context, strength of political support, as well as alignment with national priorities and the international context.
- **Technical Assistance (TA):** Delivering technical assistance alongside capital to build capacity either at the national or subnational government level are key elements in all interventions reviewed, and there is often lots of demand for TA support.
- **Stakeholder engagement:** Effective stakeholder engagement with key parties is essential for the facilitating programme delivery and impact

1 Introduction

1.1 Scope and objectives of the evidence review

Ipsos MORI was commissioned by the Department for Energy Security and Net Zero (DESNZ) to carry out an evidence review of key findings, lessons learned and evidence gaps arising from evaluations and reports on DESNZ's International Climate Finance (ICF) programmes and related interventions.⁹ The aims of the review were to produce collated data, whose quality and strength is clearly stated, in an accessible format, organised by key themes, with gaps in DESNZ's evidence and information needs described. This is in order to:

- Facilitate DESNZ's **strategic thinking and planning** on future ICF programmes;
- Support the **design** of ICF programmes; and
- Help design **targeted monitoring and evaluation** projects that will fill evidence gaps.

The rapid evidence review scope covers the time period from 2015 to 2021, and comprises an analysis of 28 evaluations, synthesis reports and performance reviews.

1.2 Methodology

1.2.1 Elaboration of research questions and coding framework

The study team developed research questions framed around five key themes (transformational change, mobilisation of finance, innovation and R&D, carbon pricing instruments, and support to climate negotiations and enabling environment), and three overarching questions (enabling factors that support effectiveness, areas where further investment is needed, and areas of strength for ICF). The key themes are aligned with the ICF portfolio theory of change, and the research questions respond to the evidence needs raised in the review specification and during the seven scoping interviews that the study team conducted with DESNZ staff. The research matrix is included in Annex 2.

The evidence review was conducted using the software NVivo 12. This facilitated the tagging of evidence against a coding framework aligned with the research questions (see the coding framework in Annex 3).

1.2.2 Mapping of existing evidence

In parallel to the scoping interviews and refinement of the research questions, the study team **mapped the breadth of evaluative evidence** (including evaluations, learning reports, monitoring reports, evidence syntheses and thematic reports) available per programme by:

- mapping a programme list and repository of literature received from DESNZ;
- systematically checking documentation published on the UK Government's 'DevTracker' facility;¹⁰

⁹ The scope included ICF programmes, as well as the Green Climate Fund (GCF) and the Climate Investment Funds (CIFs). A complete list of the programmes within the scope of the review can be found in Annex 1.

¹⁰ The Development Tracker, or 'DevTracker', is an online site with information on international development and humanitarian projects funded by the UK Government. It is managed by the Foreign, Commonwealth and Development Office (FCDO), and uses data published by the UK Government and partners. It can be accessed here: <https://devtracker.fcdo.gov.uk/> [accessed: 2/12/22]

- reviewing reports published on fund / programme websites;
- requesting access from DESNZ to forthcoming evaluations.

The mapping also included ICF annual reports and all ICF Climate Change Compass reports. The mapping generated a full sample of 75 relevant documents.

1.2.3 Screening of documents

Once the mapping was complete, the study team categorised the documents per theme (transformational change, mobilisation of finance, innovation & R&D, carbon pricing instruments, and support to climate negotiations & enabling environment), type of intervention (technical assistance, finance, funding competition, or other), and quality of the evidence. The quality was scored according to the following criteria:

- **Transparency of the method:** Where evaluations included a technical annex available or a comprehensive section on methodology, they received a score of 1. Otherwise, they were scored 0.
- **Evaluation approach and methodology:** Where evaluations used a robust framework and triangulated different sources of information, and this was explicitly identified in the documents, they received a score of 1. If the method was inappropriate or was not identified in the document, they received the score 0.
- **Limitations recognised:** Where evaluations included a comprehensive section of their limitations, they were scored 1. Otherwise, they were scored 0.
- **Consultations conducted:** Where evaluations used several data collection tools and consulted a broad range of stakeholders, they were scored 1. When final beneficiaries were not consulted, or the consultation had other obvious gaps, they were scored 0.

The screening process was undertaken in **two phases**:

- First, an initial assessment of the quality and relevance of the documents was undertaken, where the 15 documents that best met these criteria were selected. The selection prioritised final or mid-term evaluations with high scores on quality over formative assessments and low-quality evaluations. The relevance was assessed against the scope of the documents, prioritising portfolio evaluations over very narrow project-level evaluations, and prioritising markets and sectors highlighted as very relevant for DESNZ during the scoping interviews. The relevance assessment also prioritised evaluations over internal reviews, given that evaluations frequently include lessons learned that can be applied to wider programmes, whereas internal reviews are focused on monitoring programmes' progress against outputs and outcomes.
- The second batch of documents was selected once the first batch had been reviewed and coded. This approach allowed the team to fill evidence gaps detected after the first review. For instance, evidence gaps were detected in the theme of innovation. This resulted in the selection of annual reports of innovation-focused interventions, as evaluations of these programmes have not been conducted yet. To address this evidence gap, the team also included new documents in the mapping (e.g. a review of UK-funded research on climate change and international development).

The screening process resulted in the selection of **28 documents for review**.¹¹

1.2.4 Coding process

The shortlisted documents were reviewed, and their content **coded against the coding framework**, using the qualitative analysis software NVivo 12. The review team piloted four documents to identify any gaps in the coding framework, after which only minor adjustments were made. During the coding process, the study team held weekly meetings to discuss emerging findings and the coding approach (e.g. where the team felt that none of the codes adequately covered certain types of evidence). The code was updated regularly, e.g. to include new countries or sectors where evidence emerged.

1.2.5 Analysis and synthesis

To **analyse** the evidence, the study team held an analysis session where key findings across each thematic area were identified and discussed. The session revealed potential overlaps across themes (e.g. the mobilisation of private finance and the demonstration effect of transformational change), and the team agreed on the synthesis strategy and the approach to minimise overlaps in the report. The evidence was then synthesised around the themes and research questions.

1.2.6 Limitations

The findings presented in this document are ultimately limited to the evidence available from the documents selected, which represent an uneven distribution between, for example, different sectors/topics and stages in implementation. The team also noted the following overarching limitations during the review:

- There is a need for more evaluation research into innovation in the ICF, particularly innovation-focused programmes.
- Few evaluations assess Value for Money (VfM). For finance related projects, having more information on VfM may be a good way of comparing types of interventions.
- There is also rather limited evidence of quantification of finance leveraged.
- The majority of the programmes covered by the evaluations reviewed began prior to the 2015 Paris Agreement. It will be important to evaluate how new interventions incorporate the Paris Agreement rulebook¹² which was finalised at COP26.

1.3 Structure of this report

The report opens with an overview of the ICF portfolio and the coverage of existing evaluations of ICF programmes (Chapter 2) and goes on to analyse each of the identified themes. Chapter 3 addresses transformational change, including the different dimensions of transformational change that are covered in ICF evaluations. Chapter 4 analyses the mobilisation of private finance, including the types of support and market conditions that facilitate mobilisation, potential de-risking areas, and most effective instruments. Chapter 5 covers the theme of innovation and R&D, including how innovation is defined in the different programmes. Chapter 6 analyses carbon pricing instruments, and Chapter 7 the interventions aimed at supporting climate negotiations and enabling environment. Chapter 8 contains a

¹¹ The references reviewed are available in Annex 4.

¹² The Paris Agreement rulebook lays out how countries are held accountable for delivering on their climate action promises and self-set targets under their NDCs.

summary of the main success factors identified across all five themes, as well as the key strengths of the ICF portfolio and areas for further investment.

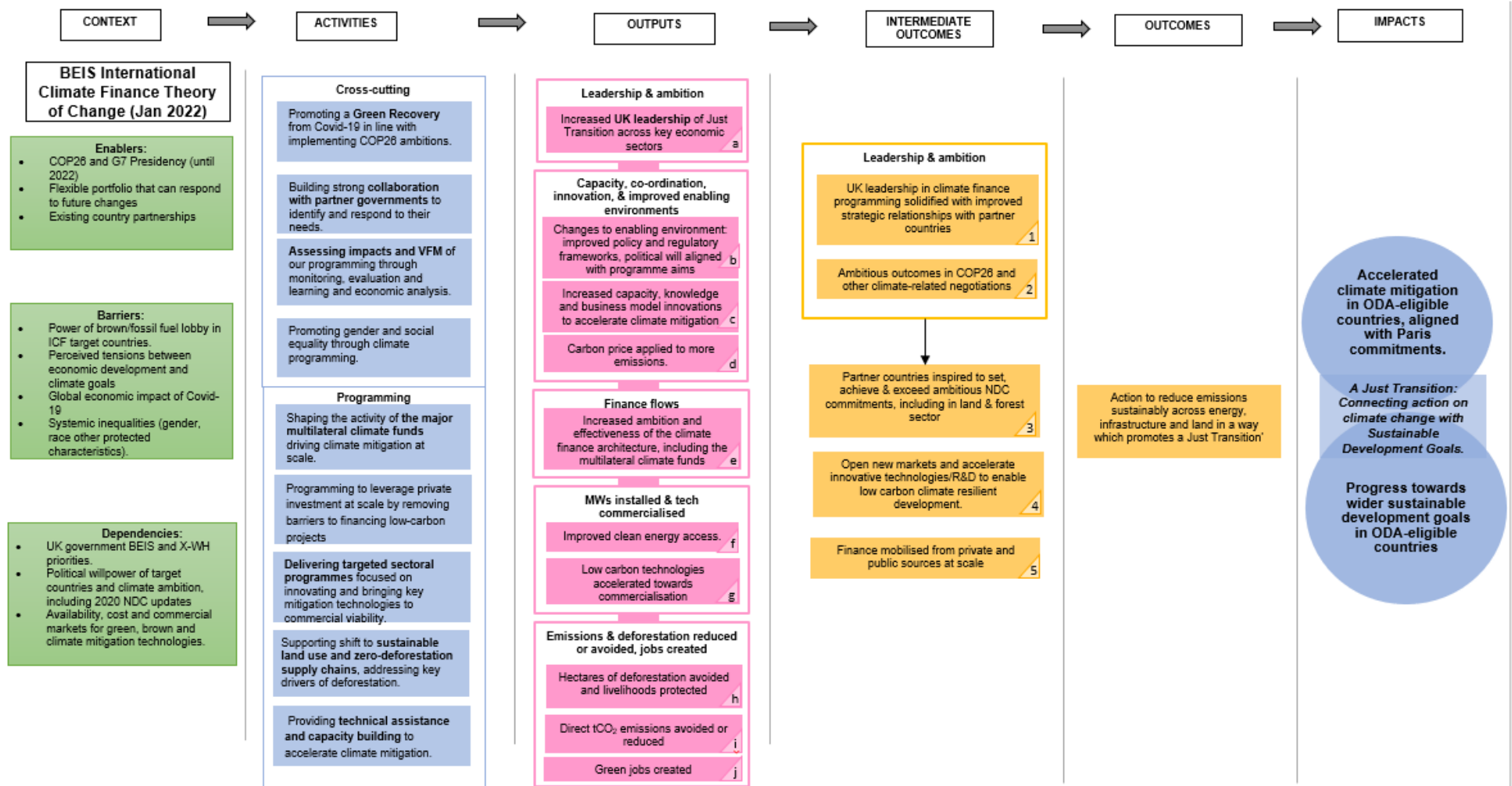
The report has five annexes, containing: the list of programmes within the scope of this evidence review, the research matrix, the coding framework used, the mapping of documents identified and the list of references reviewed.

2 The ICF Portfolio

Alongside other developed countries, the UK is committed to jointly mobilising \$100 billion per year in climate finance to emerging economies and developing countries from public and private sources from 2020-2025. The ICF is the UK's primary instrument for funding international action on climate change. In its initial phase from 2011-2016, the ICF was a £3.87 billion fund, while over the period 2016/17 to 2020/21 the UK government provided a further £5.8 billion of ODA through ICF. The UK is currently delivering on its commitment to spend £11.6 billion ICF between 2021/22 and 2025/26, including £3 billion on development solutions that protect and restore nature.

The ICF is managed by three government Departments (FCDO, DESNZ and Defra), and DESNZ was responsible for approximately £2 billion of the overall budget (£5.8 billion) for the second phase of ICF (2016-2020). DESNZ ICF focuses on climate mitigation, targeting the geographies and sectors with the greatest emission reduction potential, in order to keep the goals of the Paris Agreement within reach. DESNZ have developed a Theory of Change (ToC) for the ICF portfolio that captures the overarching expected impacts, outcomes, intermediate outcomes, outputs, and activities. The ToC, presented overleaf, is a working document and it is regularly updated.

Figure 1: DESNZ ICF Theory of Change



Source: DESNZ, Jan 2022. The ToC is regularly reviewed and updated, and therefore it is subject to change.

DESNZ-governed programmes within the ICF currently cover multiple funding instruments and delivery models, including financing through large multilateral funds such as the Climate Investment Funds (CIFs) and the Green Climate Fund (GCF); asset management companies (e.g. UK Climate Investments (UKCI) and Renewable Energy Performance Platform (REPP)); and support for multi-donor platforms such as the Nationally Appropriate Mitigation Actions (NAMA) Facility and the Forest Carbon Partnership Facility (FCPF). The study team has mapped 38 DESNZ-supported ICF programmes¹³, including the support provided to GCF and the CIFs, which constitute around half of DESNZ ICF budget.

2.1.1 Coverage of existing evaluations of ICF programmes

Among the 38 ICF programmes identified, 15 have been evaluated at least once or are in the process of being evaluated, in all cases by independent consultants.¹⁴ All programmes have a monitoring framework and annual reviews, and in cases where programmes are concluded, project completion reports are also available.

At the portfolio level, the ICF has been reviewed in three Climate Change Compass evaluations published in 2018, 2019 and 2020 and by the Independent Commission for Aid Impact (ICAI) in 2014, 2018/19 and 2021:

- The 2019 ICAI review assessed the contribution of UK ICF programmes to promoting low-carbon development in developing countries, focusing on the period since 2016.¹⁵ It mainly focused on the UK's use of ICF programmes to support the mobilisation of other financial flows, rather than carrying out field assessments of the implementation of low-carbon development projects.
- The 2021 ICAI review examined the effectiveness of UK aid in halting deforestation and preventing biodiversity loss.¹⁶
- The First Compass Portfolio Evaluation (Compass PE1, hereafter) looked at how the integration of ICF in the overall budget allocations of departments and country offices supported progress towards transformational change within the wider DFID (now FCDO) portfolio, analysing DFID's integrated ICF programmes since 2011.
- The Second Compass Portfolio Evaluation (Compass PE2, hereafter) sought to establish whether ICF's supported projects are driving private investment into low-carbon climate-resilient (LCCR) projects, using process tracing to assess the strength of evidence that demonstration effects contributed to mobilisation in each case where private finance had been mobilised.
- The Third Portfolio Evaluation (Compass PE3, hereafter) from June 2020 focused on evidence of policy change support for a selection of case studies, and provided recommendations on how to support more ambitious and effective national and sub-national climate change policies.

¹³ A list of the programmes mapped is included in Annex 1

¹⁴ All programmes have a monitoring framework and annual reviews, an evaluation is conducted where there is a strong requirement for additional learning

¹⁵ ICAI (2019), "ICF – International Climate Finance: UK aid for low-carbon development – Performance review final report", available at: <https://icai.independent.gov.uk/wp-content/uploads/International-Climate-Finance-ICAI-review.pdf>

¹⁶ ICAI (2021), "International climate finance: UK aid for halting deforestation and preventing irreversible biodiversity loss", available at: <https://icai.independent.gov.uk/review/halting-deforestation-and-preventing-irreversible-biodiversity-loss/review/>

- The ICF results published by the UK Government annually, the latest in October 2022, report the overall achievements of the portfolio between 2011/12 and 2021/22 against eleven key performance indicators.¹⁷

The Climate Investment Funds (CIFs) have been evaluated on several occasions: In 2014, there was an independent evaluation of the CIFs; in 2019, there was an evaluation of transformational change in the CIFs; and there are a few evaluations of individual programmes within the CIFs (e.g. FCPF, CTF).

The Green Climate Fund has an Independent Evaluation Unit (IEU) that, at the time this report was drafted, had completed eight portfolio evaluations and one forward looking performance review.

¹⁷ HMG (2022), "2022 UK Climate Finance Results", available at: <https://www.gov.uk/government/publications/uk-climate-finance-results-2022> [accessed: 2/12/22]

3 Transformational change

Transformational Change for the purpose of this report is ‘change which catalyses further changes’, enabling either a shift from one state to another (e.g. from conventional to lower carbon or more climate-resilient patterns of development), or faster change (e.g. speeding up progress on cutting the rate of deforestation). However, it can entail a range of simultaneous transformations to political power, social relations, decision-making processes, equitable markets and technology.⁶

Key findings:

- The interventions that seek to achieve Transformational Change provide technical assistance, development finance, or, more often, a combination of the two. They can be categorised in three groups: (a) project-based financing, (b) policy-based financing, and (c) programmatic approaches.
- Replication and scaling up are the main Transformational Change objectives of ICF interventions. Although there are signs across a number of programmes that replication or scaling up will be achieved, there is little evidence yet on key cross-cutting success factors for replication and scaling up to occur.
- Demonstration is another criterion for Transformational Change. There are different ways in which projects may be demonstrative (being novel, being demonstrably bankable, or being embedded in large-scale interventions).
- But for demonstration to occur, there needs to be communication and promotion of results by the programme team to relevant stakeholders. The evidence shows this engagement has been strong for the CIFs and REPP programmes, but more could have been done for the NAMA facility.
- Of the programmes reviewed, there is (early) evidence of Transformational Change in the following interventions: GCPF, the NAMA Facility and CTF. On the other hand, Transformational Change was less evident in CP3, PPCR, and FIP, and there is mixed evidence on whether it is likely to occur in GET FIT.
- The enabling environment strongly affects the extent to which Transformational Change may be achieved, including the buy-in of the agency or government department implementing the project, and any political changes.
- There is need for further investment in communicating demonstration, engagement with non-government actors, and coordination with other interventions in the same country/sector.
- The UK’s strong emphasis on transformational change is influencing other funders and agencies. This includes its efforts in better monitoring and evaluation.

Transformational change is the ultimate objective of all or most of the programmes within the ICF portfolio, whether explicitly reflected in their strategy, or implicitly in their theory of change and the

objectives pursued. Out of the 28 documents that the study team has reviewed, Transformational Change was mentioned in 16 of them. The Evaluation of Transformational Change within the Climate Investment Funds (CIFs) analyses this concept in depth, covering four funds:

Programme	Objectives
Clean Technology Fund (CTF)	The CTF empowers transformation in developing countries by providing resources to scale up low-carbon technologies with significant potential for long-term greenhouse gas (GHG) emissions. It invests in renewable energy, energy efficiency, and clean transport.
Pilot Programme for Climate Resilience (PPCR)	The PPCR supports developing countries and regions in building adaptation and resilience to climate change. It assists governments in integrating climate resilience into strategic development planning through concessional and grant funding.
Forest Investment Programme (FIP)	The FIP addresses the drivers of deforestation and forest degradation by supporting developing countries' efforts to reduce deforestation and forest degradation (REDD), while promoting sustainable forest management. FIP provides financing to developing countries for developing institutional capacity, and for public and private investments that are identified through REDD readiness strategies. Along with supporting the public sector, FIP's Private Sector Set Asides (PSSAs) allocate concessional financing to projects that engage the private sector in sustainable forestry. The FIP's Dedicated Grant Mechanism for Indigenous Peoples and Local Communities (DGM), is designed and led by representatives of indigenous peoples groups and local communities to set priorities and implement programs aimed at conserving their natural environment, and to enhance capacity in engaging with local, national, and international REDD+ dialogue and actions.
Scaling up Renewable Energy in Low-Income Countries Program (SREP)	SREP aims to support scaled-up deployment of renewable energy solutions to increase energy access. It empowers transformation in the world's poorest countries by demonstrating the economic, social, and environmental viability of renewable energy.

The Compass PE2 also covered the concept of Transformational Change, fundamentally from the angle of leveraging additional finance (see also section 4), and the ICAI review provided a comparison of the extent to which ICF interventions have achieved Transformational Change. Finally, some programme evaluations have also explored the concept and the pathways to achieving Transformational Change, including: The Second Independent Evaluation of the NAMA Facility, which treated Transformational Change as an evaluation criterion; the Mid-term Evaluation of REPP; and the Mid-term Evaluation of CP3.

Programme	Objectives
NAMA Facility	<p>The NAMA Facility is a multi-donor initiative that offers technical and financial assistance to developing countries and emerging economies showing leadership in tackling climate change. It has no specific regional or sectoral focus: it supports the most ambitious and promising projects with a high potential for Transformational Change towards a carbon-neutral pathway. Specifically, the Facility helps these countries to implement Nationally Appropriate Mitigation Actions (NAMAs), with support being issued through competitive Calls. The NAMA Facility was established jointly by the German Federal Ministry for the Environment, Nature and Nuclear Safety (BMU) and DESNZ in 2012.</p>
REPP	<p>REPP's objective is to incentivise or catalyse private sector funding for small-scale renewable energy (RE) producers over the long term. The measure of success will be a 'transformation' (increase) in private sector financing to small-scale RE projects in Sub-Saharan Africa. REPP's strategy is to support projects with a high demonstration value and replicability potential.</p>
CP3	<p>CP3 is participating as an equity investor in two private equity (PE) funds. Its objective is to increase low-carbon climate resilient (LCCR) investment in developing countries. These investments are expected to provide commercial returns to the UK Government, alongside development and environmental benefits. By demonstrating that these investments are not only ethical, but commercially viable, the initiative aims to catalyse new sources of finance, such as institutional investors (e.g. pension, sovereign wealth funds).</p> <p>In addition, CP3 has made funding available through a partially revolving technical assistance (TA) facility to support the market for low carbon climate resilient (LCCR) investments and undertake enabling activities for private equity, policy and regulatory initiatives and support schemes for first time fund managers in LCCR sectors.</p>

It is also worth noting that the Green Climate Fund (GCF) has conducted an evaluation of their country ownership approach, which also relates to Transformational Change since country ownership is one of the criteria to meet Transformational Change (although Transformational Change is not explicitly mentioned).

3.1 Types of interventions seeking Transformational Change

All DESNZ interventions in the ICF portfolio aim to achieve Transformational Change, although using different methods and seeking different types or levels of achievement of Transformational Change. Generally, most interventions provide Technical Assistance (TA), development finance¹⁸, or a combination thereof. The programmes that provide only, or mainly, TA (e.g. ESMAP, UK PACT), tend to

¹⁸ Development finance can be broadly defined as the use of public sector resources to facilitate private sector investment in low- and middle-income countries where the commercial or political risks are too high to attract purely private capital, and where the investment is expected to have a positive developmental impact on the host country.

focus on providing capacity building to government stakeholders and improving the enabling environment as a means of achieving Transformational Change. These interventions are covered in section 7.

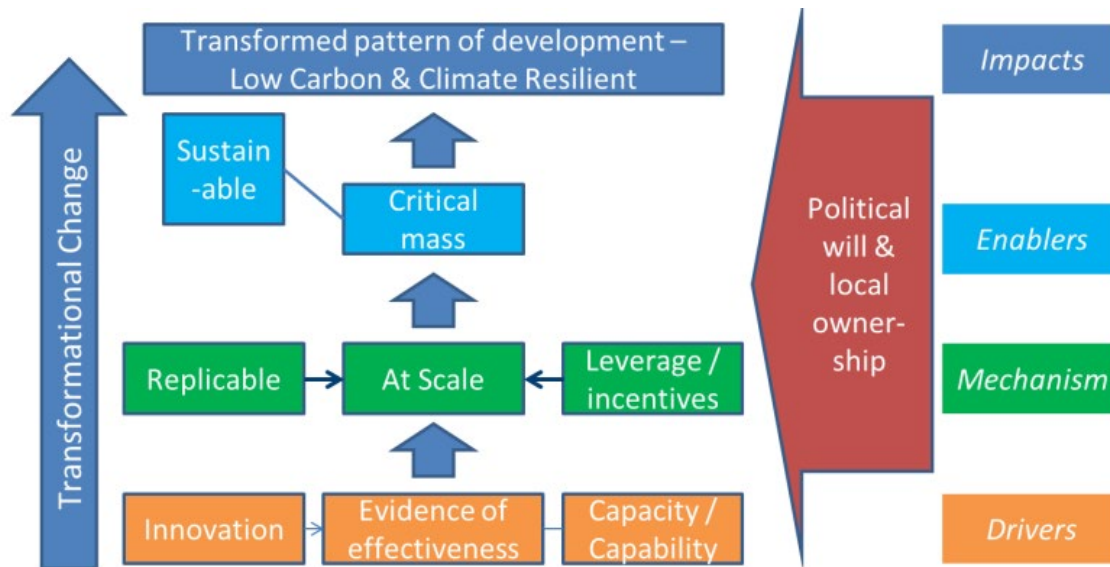
Most frequently, programmes combine financing with TA. The combined impact of TA and direct financial support may be multiplicative rather than additive, as it ensures that financial support is adequately embedded in national action, reaches its full potential to be effective, and therefore can be scaled up and replicated beyond a single project.⁵

In this review, we have classified interventions as follows:

- **Project-based financing:** This category refers to interventions that provide funding to small and medium-scale projects, with the aim of proving that investing in low carbon technologies is viable and that it has demonstration effects. Examples of interventions within this category are: REPP, CP3, UKCI, GCPF, and P4F. The Carbon Initiative for Development (Ci-Dev), which uses results-based finance (RBF), can also be included in this category.
- **Policy-based financing:** Vivid Economics describes it as “financing - including loans, grants and guarantees – that can help capacity-constrained governments introduce sectoral policies.⁵ Governments may face obstacles to introducing sectoral policies due to technical feasibility constraints, lack of resources and policy risk concerns. Climate finance in the form of loans, grants or guarantees for the development and implementation of specific sector policies can help overcome the cost to government of designing or financing new policies”. The NAMA Facility and GET FiT can be categorised as policy-based financing and, to a certain extent, the GCF (although the latter may also fall within the programmatic approach category).
- **Programmatic approach:** The programmatic approach goes a step beyond the policy-based financing in that it helps recipient countries to design large-scale packages of support. Generally, these funds have a national focal point that coordinates the funds’ activity in the country and lead the development of programmes or investment plans. An example of this is the CIF’s model, which involves a country-led programmatic approach, delivery of financing through MDBs, investments at scale, and a range of financing tools, including grants, loans, and other instruments.

3.2 Dimensions of Transformational Change covered in the ICF evaluations

The Key Performance Indicator (KPI) 15 methodology to assess Transformational Change considers eight criteria: Political will and local ownership; Capacity and capability increased; Innovation; Evidence of effectiveness is shared; Leverage; Replicable; At scale; Sustainable.⁶ See below the Theory of Change for Transformational Change underpinning the KPI 15 methodology.

Figure 2: Theory of Change for Transformational Change

Source: HMG (2018), “Extent to which ICF intervention is likely to lead to Transformational Change – KPI 15 Methodology Note”

In the evaluations analysed, Transformational Change is often assessed by the extent to which projects or programmes are likely to be replicated and/or scaled up, and whether they have had any demonstration effects. Other dimensions of Transformational Change (e.g. increased capacity and capability, local ownership) are drivers to achieve Transformational Change.

This section provides an overview of the criteria most frequently covered in the evaluations reviewed, including a description of the mechanisms used by programmes to achieve said criteria and key success factors.¹⁹

Key findings:

- Replication and scaling up are the main Transformational Change objectives of ICF interventions. Although there are signs across a number of programmes that replication or scaling up will be achieved, there is little evidence yet on key success factors for replication and scaling up to occur.
- Regarding demonstration (another criterion for Transformational Change), there are different ways in which projects may be demonstrative (being novel, being demonstrably bankable, or being embedded in large-scale interventions). But for demonstration to occur, there needs to be communication and promotion of results by the programme team to relevant stakeholders.
- Also, for projects to be transformational, there needs to be sufficient political will and local ownership.

¹⁹ Innovation is treated separately in Chapter 5. The criteria “critical mass” and “leverage/incentives” were not discussed within the evaluations reviewed, or not discussed with sufficient depth as to provide lessons learned. “Sustainable” was assessed in some evaluations, but not as a criterion leading towards Transformational Change.

3.2.1 Evidence of effectiveness is shared (demonstration)

This criterion is often pursued by interventions that aim at leveraging additional finance. The evidence available in programme evaluations is somewhat limited, although the Compass PE2 assessed this aspect more in depth. The evaluation categorised the demonstration effects used by ICF programmes into four groups:

1. **Market:** That there was a market for a particular product or service, e.g. solar home systems in East Africa.
2. **Financial or investment model:** That a particular financial model worked, e.g. lending to aggregators for agricultural products or insuring energy efficiency savings to reduce risk, or by supporting first-time fund managers to establish LCCR funds.
3. **Enabling conditions:** That the enabling conditions for investment existed, e.g. power purchase agreements (PPAs) and reliable contracts for renewable energy in Uganda.
4. **Others investing:** Showing that markets for renewable energy are becoming more mature to give potential investors confidence that others believe the risks are acceptable and returns viable.

The interventions that aim to achieve a demonstration effect via groups 1 and 2 (market and financial/investment model) are those categorised as project-based financing, whereas group 3 (enabling conditions) is more frequent in policy-based and programmatic interventions.

The key success factors identified in the evaluations reviewed to achieve demonstration effect are as follows:

- **Projects are ‘first of a kind’ unique** (i.e. a ‘proof of concept’). This was one of the mechanisms used in REPP, as well as the CTF. An example of this mechanism can be found in Eurus. Eurus was one of the first private wind power projects in Mexico and therefore had an important demonstration effect. At 250MW installed capacity, it was the largest operating wind farm in Latin America at the time. The project was developed under Mexico’s self-supply framework and sells its energy to Cemex Mexico under a 20-year PPA. Eurus was followed by La Ventosa Wind Farm, a 67.5MW plant commissioned the following year and also located in Oaxaca. The project was supported with \$15 million of CTF resources (via ICF).²⁰
- The **scale of the intervention is large**, i.e. projects have been implemented in sufficient number / different contexts to prove their effectiveness. The Evaluation of Transformational Change in the CIF placed particular importance to this factor. It identified that a single (or small number of) initiation-phase demonstration project(s) in a country may not be sufficient to catalyse transformational change. For example, despite CTF progress in supporting early-stage geothermal projects in Chile, the future of geothermal energy development in Chile remains uncertain.
- Projects are **demonstrably bankable** (i.e. demonstration of a project’s commercial value and commercial thinking). This mechanism was identified in the mid-term evaluation of REPP.

²⁰ BNEF (2019), “Climate Investment Funds – The Clean Technology Fund and Concessional Finance: lessons Learned and Strategies Moving forward – Final Report”

The evaluations reviewed found that meeting one or more of these criteria was necessary, but not sufficient, for projects to be demonstrative. All the evaluations reviewed coincided on the view that **for projects or programmes to be demonstrative, their success needs to be disseminated by the programme team to relevant stakeholders**. The ICF portfolio includes programmes where communication around demonstration has been praised in evaluations (e.g. the Global Innovation Lab for Climate Finance and the Eco Business Fund), as well as programmes where more could be done. The latter includes the REPP (the mid-term evaluation concluded that the programme should improve its awareness-raising around the demonstrability of REPP projects) and the NAMA Facility (the second independent evaluation found that more could be done to coordinate learning across programmes that target similar types of projects).

The Compass PE2 found evidence in four out of the ten programmes that were reviewed in depth of demonstration effects of projects, that contributed to mobilise private finance. In all the cases, the investee had used evidence from one or more of the demonstration projects in developing and presenting the investment case to their investors. In some cases, investors relied completely on their own due diligence and did not place any particular weight on the demonstration effects. In other cases, the investor valued demonstration evidence and used it in their investment decision.

One limitation acknowledged in PE2 is that investors are not always sure whether demonstration effects were generated by ICF or another project or funder or something else, or whether the demonstration effect was a critical driver.

3.2.2 Replication

Replication is generally the **final goal of ICF interventions**, and it is covered in all the evaluations that assess Transformational Change. The evaluations available, however, are mainly mid-term or intermediate, and therefore it was **too early to assess replication in most of the cases analysed**. The only exceptions are the Global Innovation Lab, which has been replicated in India²¹, and the GCPF. The Compass PE2 found that several banks supported by GCPF had replicated elements of the programme using further funding from development finance institutions.

Although it was too early to observe this impact, evaluations frequently assessed the extent to which replication was likely to happen. The evaluations of one policy-based intervention, the NAMA Facility, and one programmatic intervention, **FIP**, found **examples of potential future replication**:

- In Ghana, AfDB has undertaken its first-ever private sector project in the forestry sector and demonstrated a new financing model for catalysing private sector involvement in commercial teak plantations in degraded forest reserves with support from FIP. Building on the potential of this model, AfDB is exploring the possibility of other financial intermediary vehicles to replicate it.
- In Thailand, the Thai Rice project (funded by the NAMA Facility) aims to support a large-scale and permanent switch from conventional rice cultivation to sustainable and low-emission farming practices. The project targets the six most important provinces for rice production, and the government plans to extend it to other provinces if the programme is successful in the pilot provinces. There are similar projects in Viet Nam and the local stakeholders interviewed in the evaluation thought that the Thai model could be applied in other countries in the region, such as

²¹ The India Innovation Lab was launched in November 2015 with the endorsement of the Government of India's Ministry of New and Renewable Energy. As stated on the India Lab website, the India Innovation Lab builds on the successes of The Global Lab, but adapts them to India's unique opportunities and challenges. UK DESNZ (2014, ...,2021), "Global Innovation lab – Global Innovation Lab (continuation of Capital Markets Climate Initiative (CMCI)) – Annual Reviews (2014, ..., 2020)"

Laos and Myanmar, and there is interest from the government to spread knowledge to neighbouring countries.

The evaluation of **Ci-Dev**, on the other hand, found no signs of replication. What is more, in some instances, such as the cookstove projects in Rwanda, there were concerns that the projects might have the opposite effect, with the projects stifling the domestic market rather than improving conditions (although it was too early to conclude either positive or negative effects). The evaluation does not provide detailed information on the reasons for this, but it hints that the cookstove projects in Rwanda paid too little attention to cultural needs (e.g. stove companies were criticised because their stoves were not optimised to cook dry beans, a staple in Rwandan diets), and it was unclear whether the companies would be profitable.²²

Finally, the **REPP** did not have replication as an objective in its ToC, however the evaluation found that it may achieve it (via the demonstration mechanism explained in section 3.2.1).

Given the limited evidence of achievement of replication (only a handful of projects showed signs of replication, and their contexts were very diverse), it is too early to extrapolate lessons on key success factors.

3.2.3 Scaling up

Scaling up is often pursued as an ultimate objective of ICF interventions, at the same level as replication. The types of interventions aimed at scaling up projects are the policy-based and programmatic type of interventions. The programmes that seem to be the most advanced towards scaling up, according to the evaluations reviewed, are the **CIFs**. The evaluation of Transformational Change in the CIFs found advanced signals of scaling across CTF-relevant markets—specifically increases in non-CIF investment, installed capacity, and engagement by financial intermediaries. In all five CTF countries that the evaluation reviewed in depth, it found evidence that CTF-supported projects contributed in indirect ways to supporting broader renewable energy implementation. In countries such as Mexico, South Africa, Thailand, and Turkey, CTF investments had contributed to accelerating market take-off of technologies—such as wind and solar photovoltaic (PV) energy. Where less evidence of scaling up was found (e.g. scaling for concentrated solar power (CSP) and geothermal energy), this was because of barriers in the enabling environment (e.g. in the case of CSP and geothermal, their contribution not sufficiently recognised in the national energy systems).

3.2.4 Capacity and capability increased

There are several interventions within the ICF Portfolio that mainly provide technical assistance and capacity building to improve the environment for catalysing investments in climate mitigation (e.g. ESMAP, UK PACT, GET FIT, and the ISFL). The effectiveness of this type of intervention is discussed more in-depth in *Section 7 Support to climate negotiations and enabling environment*. There are also other interventions where the provision of capacity is a component of the package of support, and a mechanism to achieve Transformational Change. Examples of the latter include mainly project-based interventions:

- CP3 and GCPF both aimed at improving **investors' capability to invest** in low carbon technologies. Evidence of effectiveness of CP3's contribution to improving capacity is very limited,

²² LTS (2020), "Carbon Market Finance Programme (CMFP) – Evaluation of the Carbon Market Finance Programme – Mid-term Evaluation Final Report"

although there were some benefits found around improved capacity for ESG.²³ This evidence review did not include any evaluation of GCPF.

- REPP was designed to provide **TA to developers of small- to medium-scale RE projects** in Sub-Saharan Africa to help them attract finance and to make their project commercially viable. Project developers involved in REPP provided positive examples of how their capacity was built through engagement with the programme. They mentioned an improved understanding of (international) investor requirements, and the replication of REPP-learned best practices by non-REPP projects, among other benefits. The evaluation also found that REPP increased project developer capacity by connecting them to market actors.

Other KPI 15 criteria are covered to a lesser extent in the evaluations reviewed. **Co-benefits** is a mechanism to achieve Transformational Change that is not measured in KPI 15. The evaluation of Transformational Change of the CIF found that anchoring CIF programming in a narrative of wider co-benefits helped create Transformational Change in local contexts. Such benefits include **reducing poverty** (a key driver for many low-income country governments, particularly concerning the community adaptation, forest livelihoods, and energy access agendas), **economic development** and **greater productivity** (a focus for resilience programs, particularly in agriculture), and the development of industrial green-growth strategies that boost manufacturing capacity and create jobs. The second evaluation of the NAMA Facility arrived at similar conclusions.

3.2.5 Political will and local ownership

This criterion is often a mechanism to achieve Transformational Change, rather than an objective, and it is most commonly used in the programmatic and policy-based type of interventions. In these interventions, evidence shows that sufficient **political will and local ownership is a necessary condition to achieve Transformational Change**. When this was not present in projects, they did not show evidence of Transformational Change. Indeed, the GCF IEU, in its review of its country ownership approach, recommends that country ownership is required as a minimum standard (eligibility) to select projects, rather than a prioritisation tool.

The evaluation of Transformational Change in the CIF also found barriers for the achievement of Transformational Change related to political will and local ownership, comprising: Lack of sufficient finance and limited institutional capacity, ongoing weaknesses in the policy and regulatory environment, subsidies for non-sustainable alternative agendas, institutional rivalry for ownership of resources (including climate finance), sudden political change and instability, lack of community buy-in, and low levels of awareness.

The GCF IEU evaluation of country ownership, the evaluation of Transformational Change in the CIF, and the Second Independent evaluation of the NAMA Facility provide some lessons learned on key factors or attributes to improve political will and local ownership:

- **Alignment** with national policies and priorities.
- **Extensive stakeholder dialogue and meaningful engagement with non-state actors.** The evaluations of GCF and CIF found that the funds were not engaging enough with civil society and subnational stakeholders, respectively, which was limiting local ownership.

²³ LTS and CPI (2018) Climate Public Private Partnership (CP3) Monitoring and Evaluation Mid-term evaluation, p35

- Having a greater say in the use of climate finance, including through **national identification of project concepts and direct access**. It should be noted that this does not mean that ideas need to be originated by local stakeholders without participation of focal points (in the case of programmatic approaches) or other agencies, as they need to be aligned both with countries' policies as well as with donors' priorities.²⁴
- **Gaining the support of influential champions**. For instance, in Colombia, interest and intervention from the President catalysed activity in tackling deforestation across regional and local government and with enforcement agencies. ICF contributed to this by working at diplomatic level to help engage a critical mass of actors in a political discourse where previously, there had only been a technical discourse.
- **Flexibility** in implementation.
- In addition, the evaluation of the NAMA Facility found that **the level of co-funding provided by the recipient public institutions** is a sign of their commitment.

For more detailed information on political will and country ownership, see chapter 7.

3.3 ICF interventions that have been transformational

The ICAI review of ICF UK aid for low-carbon development and the evaluation of Transformational Change in the CIF provides a comparative of the extent to which ICF and the CIF, respectively, have achieved Transformational Change. The ICAI review identified **four ICF programmes that showed tentative evidence of transformation**, with early evidence on a fifth showing that transformation is likely but remains too early to judge (the remaining programmes did not have evidence yet available or were not scored). The review highlighted GET FiT and GCPF as the most transformational. However, the review was conducted in February 2019, and since then more evaluations such as the Compass PE3 report from 2020 have been published, enlarging the evidence of Transformational Change in the ICF portfolio, and demonstrating that evidence is more mixed.

Evidence of Transformational Change in **project-based interventions**:

- **GCPF**: Its technical assistance increased the capacity of local financial institutions to invest in low-carbon initiatives, which in turn increased the demand for funding. As the investments proved commercially viable, the approach is considered replicable. Several banks replicated elements of GCPF using additional funding, such as: (a) Establishing dedicated sustainable finance teams and green lending into their overall investment mandate; (b) Investing in new green products; and (c) Adopting ESG frameworks learned during the due diligence process with GCPF.

²⁴ The experiences of the GEF and CIF offer cautionary lessons for the GCF in terms of the risks for nationally originated project ideas – facilitated through country programmes. Essentially the experiences of the two funds tell us that country programme related processes are not sufficient for project ideas to be either eligible or to be rated as being able to align with the interests or capabilities of implementing entities. In the GEF, countries welcomed the NPFE as an opportunity for national empowerment to generate project ideas without the influence of the GEF Agencies. But ultimately, many project ideas identified through this process, and included in the “country-owned” pipelines, were eventually found to be ineligible for GEF funding – especially in low-capacity countries. This is attributed in part to inadequate guidance from the GEF Secretariat, which was encouraged to be non-prescriptive in order to promote country ownership. In the CIF, the Private Sector Set-Aside for adaptation and forestry projects asked countries to come up with innovative project ideas to submit to the private sector facility. Evaluation of this experience showed that (1) the project ideas were less innovative than had been hoped for, and (2) that countries struggled to find entities to agree to implement their projects. Source: Green Climate Fund IEU (2019), “Green Climate Fund – Independent Evaluation of Green Climate Fund’s Country Ownership Approach – Final Report”

- It was too early to assess Transformational Change in the evaluation of **CP3** (although the evaluation mentioned that it did fund a funding gap), and the evaluation of **REPP** found that the mechanisms by which the programme was supposed to achieve Transformational Change were not explicit in its theory of change, and therefore they were not being adequately monitored. However, the evaluation found that some projects were demonstrative.

Evidence of Transformational Change in **policy-based interventions**:

- **GET FIT**: The programme developed a new tariff structure for electricity in Uganda that encouraged investment into renewable energy. The ICAI review placed this programme as one of the most transformative. However, the Compass PE3 found that, although GET FIT encouraged independent power producers to invest in the country and helped create additional renewable energy generation capacity in the country, the main contributors to meeting Uganda's electricity-to-grid needs have been the two Chinese-funded hydropower plants. The evaluation concluded that critical mass had not been achieved and is now unlikely to happen. Evidence on whether DESNZ GET FIT funding has been transformational is therefore mixed.
- **NAMA Facility**: The second independent evaluation found strong evidence of the potential for replication of some of the projects analysed in-depth. There was also some evidence, albeit weak, of the programme team sharing information about projects to promote replication. However, the evaluation concluded that more could be done in this regard.

Evidence of Transformational Change in **programmatic interventions**:

- **CTF**: In the CIF, the CTF is the programme which has demonstrated the greatest transformational impact. Key signals were identified around a shift to non-concessional finance, scaling, and replication by private investors, large-scale capacity increases, reduction of deployment costs, and, to a lesser extent, evidence of policy response.²⁵
- **PPCR** and **FIP** programs tend to operate in less developed country contexts and in market structures that are not yet fully commercial, or which have strong social development and poverty considerations. Therefore, they follow different routes towards achieving Transformational Change and advanced signals were less evident when the evaluation was conducted.

3.4 Contexts that facilitate or hinder effectiveness

This section summarises the contextual factors that have either underpinned or hindered the achievement of Transformational Change in the ICF. All the evaluations reviewed found that the country context and enabling conditions play a vital role on the extent to which interventions achieve Transformational Change. Key contextual factors are:

- The **agency or government department implementing/leading the project** affects the extent to which the programme progresses, the level of political will and, ultimately, the extent to which projects achieve Transformational Change. For instance, in PPCR, the achievement of Transformational Change was stronger when it had the buy-in of key stakeholders. In Tajikistan, the success of PPCR was significantly strengthened by the role of the Deputy Prime Minister, who led the institutional process and mobilised support and responsibility among a range of sector ministries and other institutions. In Zambia, having a prominent individual champion in the

²⁵ Itad (2019), "Climate Investment Funds – Evaluation of Transformational Change In the Climate Investment Funds – Final Evaluation Report"

government helped to secure strong ministry support for moving program implementation forward. In Nepal, strong government leadership, particularly among National Project Directors in the Departments of Hydrology and Meteorology and of Soil Conservation and Watershed Management, facilitated successes.

- In some countries, the **enabling environment** does not support the scale up of **certain technologies**:
 - In Nicaragua, national political and economic situations stalled geothermal program development that was being supported by CTF.²⁶
 - In countries such as Mexico, South Africa, Thailand, and Turkey, CTF investments have contributed to accelerating market take-off of technologies such as wind and solar PV energy. However, there is less evidence of scaling for CSP and geothermal energy, as their potential contribution to national energy systems (e.g., the provision of baseload power) is often not adequately recognized or compensated for in the policy and enabling environment.²⁶
 - The evaluation of REPP also found barriers in terms of regulatory environment, which the programme was not proactively seeking to address.
- **Climate impacts, severe weather, and natural disasters** pose significant challenges in some countries, affecting the sustainability of accelerated deployment of low-carbon technologies. For example, a hurricane destroyed the first utility-scale solar PV plant in Mexico that had been developed with CTF co-financing. In Dominica, damage from a hurricane has delayed the development of a geothermal energy plant²⁶. Changing weather and precipitation patterns can also affect the availability of hydro and wind resources, as is being considered in CIF countries such as Ethiopia and Tajikistan.
- The progress towards Transformational Change can also be impacted by **political changes**. Indeed, this is a common barrier alluded to in several evaluations: the Evaluation of Transformational Change in the CIFs, the Second Independent Evaluation of the NAMA Facility, and the Forward Looking Performance Review of the GCF.

3.5 Areas that need further investment

To achieve Transformational Change, ICF programmes need to dedicate more resources to:

- **Communicate demonstration**: Demonstration effects and, ultimately, replication and scaling up, may only occur if the effectiveness of interventions is shared with relevant stakeholders (e.g. other programmes, the climate finance community, and investors). The identification and communication of demonstration effects is currently the responsibility of programme teams, but they do not always have the skills and resources to do so.
- **Better explain in the ToC how Transformational Change is going to be achieved**: The evaluations of REPP and, to a lesser extent, the NAMA Facility, recommended that the pathways to achieving Transformational Change are better reflected in the ToC, and hypotheses and risks acknowledged. This would also facilitate the design of logframes with relevant indicators to measure achievement of Transformational Change, including early signs of Transformational Change.

²⁶ Itad (2019), "Climate Investment Funds – Evaluation of Transformational Change In the Climate Investment Funds – Final Evaluation Report"

- **Coordinate with other interventions in the same country/sector:** When interventions offer full packages of support that merge TA and funding, they are more likely to achieve Transformational Change. However, programmes may not have enough resources or skills within their teams to provide such packages of support, and there may be other programmes already offering complementary support. For instance, the evaluation of REPP found that the programme was facing barriers linked to the policy environment to achieve its goals, and the programme was not proactively seeking to address them. The evaluation recognised that the programme cannot cover everything, and instead proposed that REPP address these through strategic partnering either at project partner, implementing partner, co-donor or donor level.
- **Engage with non-government actors:** Country ownership is a condition to achieve Transformational Change. The evaluations of GCF found that the main shortcoming of the programme in its objective of achieving country ownership is that it is not engaging enough with non-government actors, in particular the civil society, local communities, indigenous peoples and women.

3.6 Areas of strength for ICF

The main added values of the ICF portfolio that help programmes achieve Transformational Change are:

- **Willingness to take risks:** This was evident in the NAMA Facility and REPP evaluations. Some funders seek only to support proven concepts, such as by replicating or scaling up existing successes. The NAMA Facility focuses on concepts that have strong potential for up-scaling, replication and the ability to influence wider sectoral changes but that may carry some risk. This is seen as critical by many in the climate finance community and as one of the unique values of the NAMA Facility. REPP, on the other hand, was found to be highly additional, especially on its early-stage support to on-grid projects.
- **Provision of concessional funding to improve readiness:** Policy-based and programmatic interventions, and in particular the NAMA Facility and the CIFs, offer a combination of financial support and concessional funding to improve readiness that improve the enabling environment to achieve Transformational Change.
- **Large amount of funding available:** The size of funding in NAMA Facility and CTF was highlighted as key elements to drive Transformational Change. Implementation requires large amount of funding which is usually difficult to find or requires concepts to have already been thoroughly tested. In the CTF, the scale of funding was a key factor to drive costs down and support the deployment of low carbon technologies.
- **Transparency around eligibility requirements and selection criteria to receive funding:** The certainty of resources helped engage key stakeholders in the CIFs and the NAMA Facility, positively influencing political will.

In addition to providing funds, UK's contribution in the field of transformational change is valued for:

- **Enhanced guidance and support to applicants:** The ICAI review highlights that the UK helped to enhance the guidance and support provided to NAMA Facility applicants. Over time, more applications have met the eligibility criteria, suggesting that UK efforts have helped developing countries access the funds.

- **Better monitoring and evaluation and promoting better results measurement:** The UK was instrumental in developing the NAMA Facility's first theory of change and in establishing a monitoring and evaluation framework, based on the UK's own experience. Similarly, for the Green Climate Fund, the UK has been a strong advocate for putting in place a results management framework to generate better results data.²⁷
- **The UK's strong emphasis on transformational change is influencing other funders and agencies:** The UK has successfully supported the embedding of transformational change into the operations of the NAMA Facility, and is also supporting the Transformational Change Learning Partnership, part of the CIF's Evaluation and Learning Initiative. The UK International Climate Finance team is active within this learning community, helping to develop and test definitions and theories of change for transformational change with a view to deriving the best impact from limited public climate finance.²⁷

²⁷ ICAI (2019), "ICF – International Climate Finance: UK aid for low-carbon development – Performance review final report"

4 Mobilisation of finance

This theme is closely linked to Transformational Change, and more precisely to the demonstration effect (section 3.2.1). This section provides a deeper dive on the mobilisation of finance and the effectiveness of interventions at de-risking low carbon projects.

The evidence has been gathered from the evaluations of REPP, CP3, CTF and FIP, as well as portfolio evaluations that explore the effectiveness of programmes at mobilising finance: The evaluation of Transformational Change in the CIFs, the Compass PE2, and the ICAI review. All the programmes covered in this section were introduced in section 3.

Key findings:

- There are three main mechanisms that evaluations identify to leverage private finance: providing large volume of finance, being a cornerstone investor, and helping to build a track record. The UK's ICF is strong in all of these areas.
- When it comes to de-risking investments, there is no 'one-size-fits-all'. Programmes need to identify the local market barriers or failures and address them using the appropriate financial instruments and/or combination of support.
- The CIFs (CTF and SREP) and REPP have been highly additional, as they targeted investments that otherwise would not have been considered bankable.
- The capacity to leverage finance depends on the context in which the intervention takes place. The ideal market is one that is not too developed, as it would not need public support, neither too poorly developed, as it would not leverage additional funding.
- The evaluations reviewed provide specific examples of the markets and technologies that need further investment, primarily in the renewable energy sector and, to a lesser extent, in the land use sector. There is less evidence available of funding gaps in other sectors.

4.1 How different types of interventions have mobilised finance

4.1.1 Evidence of mobilisation of private capital

The mobilisation of public and private finance in the ICF portfolio is measured through KPIs 11 and 12, respectively. From 2011-2022, it is estimated that ICF programmes have mobilised £5.7 billion public and £5.2 billion private finance for climate change purposes in developing countries.²⁸ The 2019 ICAI review reported on the finance leveraged until 2018, and highlighted the success of GCF which, according to the review, has succeeded in attracting co-funding from development finance institutions and commercial investors, such as banks and pension funds. By the end of 2017, it had achieved double its target for attracting private investment, mobilising £154 million.

²⁸ This refers to all ICF programmes and not only to those managed by DESNZ. HMG 2021 UK Climate Finance Results – Corporate Report, available at: <https://www.gov.uk/government/publications/uk-climate-finance-results-2021/2021-uk-climate-finance-results> [accessed: 2/12/22].

The evaluations of CP3 and REPP assessed the extent to which the programmes mobilised finance, and the evaluation of CTF provided an example of mobilisation of finance in Mexico:

- **CP3:** CP3 invested \$174 million in two funds who subsequently invested in funds, who invested in firms. Therefore, it leveraged finance at three levels: (a) Fund of fund level: It attracted \$691 million in co-investment from public and private investors; (b) Fund level: The co-investment was \$1,727 million; (c) Project level: Individual projects/firms received \$6,746 million of co-investment. The majority of the co-investment (71%) came from private sources, of which: 24% were private equity and infrastructure funds, 20% were institutional investors, 16% commercial financial institutions, 10% companies, 7% corporate actors, 6% project developers, 4% high net-worth individuals, 1% state-owned enterprises, and 12% other private institutions.
- **CTF:** The evaluation provided figures of finance mobilised in Mexico. New-build wind projects received around \$11.8 billion from 2011 to 2017, of which 45% came from project developers and 23% came from commercial banks. When the evaluation was conducted, the CTF had invested \$519 million in the country, of which \$115 million had financed wind and solar utility-scale power projects.
- **REPP:** The evaluation was conducted at an early stage in REPP's implementation but reported that, with the support from REPP, a few developers were finding it easier to find additional finance. Types of support that are mobilising private capital

The evaluations reviewed highlighted three key aspects or mechanisms that helped programmes mobilise additional finance: providing large scale of finance, being a cornerstone investor, and helping to build a track record.

- The **scale of finance** has been a significant driver of transformational change, as explained in section 3.2.1. The evaluation of Transformational Change in the CIFs found that, in the CTF, the scale of finance was fundamental to catalyse partners' interest and develop blended finance solutions. The evaluation of REPP advised that the programme might want to reconsider its strategy and target fewer countries with promising enabling environments for private sector investments, rather than spreading itself too thinly, i.e. increasing its scale in key markets to better incentivise private sector actors.
- Being a **cornerstone investor** in CP3 played a key role in mobilising finance at the fund of funds level. According to the evaluation, HMG was a critical player and first mover in the establishment of the two funds of funds and provided the impetus to experiment with a new way of delivering ODA together with the private sector to support LCCR development in emerging countries.
- Having a **track record** is important to secure funding, both for funds (to secure funding from investors) and for firms (to secure commercial funding), and ICF programmes such as CP3 help funds and firms to develop a track record. This aspect is also linked to the demonstration effects explained in section 3.2.1.

4.1.2 Types of support that are helping de-risk investments for commercial investors

The evidence review reveals that climate finance can be effective at de-risking investments when market failures are identified, and financial instruments adapted and tailored to the context, sector and operation in question. When it comes to de-risking specifically to mobilise private investors, there is not one-size-fits-all as it will depend on the stage of the project/company, business model and local market context.

In addition to the examples above at supporting early-stage projects/companies develop a track record, examples of de-risking strategies targeted to commercial investors include:

- Provide concessional finance, that is finance offered at friendlier terms (e.g. interest rate, tenor, conditions) than the market would provide to allow the borrower more flexibility to take on more challenging terms for a smaller portion of the need;
- Provide insurance/guarantees to local banks or other lenders to reduce their risk exposure within their acceptable limits;
- In blended finance models, such as by taking more junior equity positions or other strategies to accept first losses, to help protect other (commercial) investors willing to take more senior positions with less risk;
- Accepting currency fluctuation risk, instead of requiring the borrower to do so, such as by providing financing in the local currency.

The evaluations of CTF, CIF and REPP provide some specific examples of mobilisation and de-risking mechanisms:

- **Lack of liquidity in Kazakhstan during the financial crisis in 2008-2009:** CTF provided finance, blending it with capital from multilateral development banks in order to increase the amount of funding available.²⁹
- **Limited loan tenure (maturity) in Kazakhstan:** Commercial banks provided loans only 4-5 years in duration, which is significantly lower than the 15-year loans renewable developers typically need. CTF and MDBs offered loans with 15-20 year repayment periods, which were substantially more favourable than those offered by Kazakh commercial institutions. This helped inform local players that renewables projects are not necessarily riskier than other investment opportunities, and that long-term loans are possible when risks are evaluated properly.²⁹
- **Inflation and currency fluctuation in Kazakhstan:** By providing financing in U.S. dollars and euros, CTF was able to partially address the currency risk issue.²⁹
- **High interest rates:** CTF provided concessional loans at significantly lower rates than the market for 20-35% of the debt; when combining it with commercial funding, the blended rate was affordable for project developers.²⁹
- **Investor perceptions of high risk:** CIF took two different approaches to manage and reduce perceptions of high risk:³⁰
 - Enterprise-focused approaches, such as: partnerships that pilot new business ideas to provide a proof of concept; accepting non-traditional sources of collateral, e.g. trees; activities to increase credit ratings for SMEs; and business incubation to develop their management capacity. In Mexico, for example, grants were used to provide enabling technical and business

²⁹ BNEF (2019), "Climate Investment Funds – The Clean Technology Fund and Concessional Finance: lessons Learned and Strategies Moving forward – Final Report"

³⁰ IIED & LTS (2019), "Climate Investment Funds – Evaluation and Learning Partnership on Financing Forest-related Enterprises: Learning from the Forest Investment6 Program and other Initiatives – Final Report"

management capacity development for supported enterprises to equip them with the capacities to apply for credit and to grow.

- Investor-focused approaches, using financial instruments to de-risk investments (e.g. guarantees). In Armenia, legal risk mitigation approaches, such as power purchase agreements, guarantees, and licenses were used by SREP (CIF) to reduce perceived risks.³⁰
- **Lower competitiveness of low carbon technologies compared with conventional alternatives:** Concessional financing of early- to mid-stage projects at sufficient scale may help overcome cost and risk premiums of low carbon technologies.³⁰ REPP strategy also evolved over time to offer more concessionary terms to address risk, i.e. to prevent burdening the project with a cost which later would deter future commercial investors.³¹

4.1.3 Types of support that have been additional

The evaluation of **CP3** found that there can be a tension between additionality and leveraging private finance. It argued that high additionality environments (lower income, poorer investment environment) bear more risk, require proportionally larger levels of investment and are less able to attract private investors. Chapter 4.2 provides more information on the contexts that facilitate or hinder additionality and leverage of finance. Essentially, concessional finance in countries with weak enabling environment for private investment is likely to result in low leverage. In these contexts, technical assistance to improve the enabling environment (in isolation or in combination with financial support) may be more effective at achieving both objectives. Yet, in addition to the national context for finance, additionality will also depend on the specific project/developer characteristics, e.g. stage of project and level of innovation for the context or overall track record/creditworthiness of the entity.

REPP is an example of a programme where there was high additionality, but low leverage. REPP's additionality, according to the evaluation, was one of the most positive achievements of the programme. The high additionality was achieved by: (i) REPP targeting a recognised gap in the market: particularly early-stage development support for small-scale RE projects but also other kinds of support for 'risky' projects not (yet) attractive to other investors; (ii) by offering a range of products, tailored to the project's specific needs rather than a standard package of support; and (iii) by the REPP Board selecting a small investment company with notable market knowledge and sufficient flexibility and 'nimbleness' to read and respond rapidly to market changes, complemented by an equally small Assessment Committee and Management Board. As explained in section 4.1.2, the formative evaluation of REPP found little evidence of mobilisation of finance so far.

CP3, on the other hand, achieved both objectives (additionality and leverage) by having a diversified portfolio. In addition, CP3 provided a combination of finance and TA. TA was provided to fund managers where required to support their financing and development of early-stage projects. In this case, the TA contributed to increase the additionality of the fund, as it helped partners build more stable pipelines, allowing them to look at projects that would have otherwise been disregarded or postponed as they required more financial resources at the outset.

The evaluation of Transformational Change in the CIFs concluded that **CTF** and **SREP** were highly additional, and they also leveraged additional funding. It is likely that these investments happened in countries with fairly strong enabling environment, but where projects experienced barriers to raise funding of other kind (e.g. lack of liquidity, lack of collateral). The long-term concessional finance played

³¹ LTS and IMC Worldwide (2018), "REPP – Renewable energy Performance Platform: Mid-term Evaluation – Final Evaluation Report"

a major role in enabling development banks and recipient countries to pursue projects that might not otherwise have been considered bankable, and that were otherwise unlikely to have been pursued at all (or within a reasonable timeframe). CIF concessional funds were identified as having been catalytic in unlocking investments in geothermal (Chile, Indonesia, and Kenya), CSP (Morocco, South Africa, and Chile) and solar PV/wind projects (Chile, Mexico, Morocco, and Thailand).

4.1.4 Evidence of value for money achieved

DESNZ regularly assess the value for money (VfM) of its interventions, and this is also assessed in some evaluations. Evidence to inform this chapter has been gathered from the evaluations of REPP, CP3, CTF and FIP, as well as the portfolio evaluations that explore the evidence of programmes at mobilising private finance: the evaluation of Transformational Change in the CIFs, the Compass PE2, and the ICAI review.

The evaluation of CP3 offers an assessment of the value for money of the intervention, providing a qualitative assessment using DFID's 4E approach, considering Economy, Efficiency, Effectiveness, and Equity.³² The evaluation concludes that it provided VfM. Inputs such as the management fees and administration costs were in line with other programmes and represented value in terms of the outputs achieved. Its implementation was evaluated as effective and based on robust governance and management systems, although there were some delays in the deployment of capital. Finally, monitoring and management systems were found to be effective at capturing a comprehensive view of the portfolio results, although there remained challenges around the quality and availability of data.

The evaluation of REPP noted that assessing VfM was not within its scope; however, it suggested that the project size and the complexity of the offering could have implications on VfM, and that therefore it should be assessed in these terms in future business cases.

4.2 Contexts that facilitate or hinder the mobilisation of finance

The evidence reviewed shows that the level of economic development in a country and its investment environment are the primary factors that enable mobilisation of private investment. Without a certain level of development in areas that include policy, legal and regulatory frameworks, investor protections, corporate governance, and capital markets, there is little chance of mobilising private finance. There are also sector-specific factors influencing mobilisation of private investment. In the renewable market sector, for example, which was addressed in most of the evaluations reviewed, the structure of the power market and the opportunities it offers, including current and future electricity demand, also affect the extent to which interventions may leverage private finance.

The evaluation of CTF provides a very useful summary of the cases where concessional funding may or may not be adequate. In summary, the ideal market is one that is not too developed, as it would not need public support, neither too poorly developed, as it would not leverage additional funding.

As referenced in the 2019 BNEF report: "Countries with middling enabling environments for PV and onshore wind and low experience in deploying those technologies present the best potential opportunities for deploying concessional finance in support of these technologies. Meanwhile, countries with strong enabling environments and high levels of experience suggest that concessional investment may no longer be needed for these technologies.

³² DFID's approach to value for money can be found here: <https://www.gov.uk/government/publications/dfids-approach-to-value-for-money-vfm> [accessed: 2/12/22]

Concessional finance provided to countries with weak enabling environments is likely to result in low impact in crowding-in commercial finance as these markets present more barriers to private investors. In these countries, development institutions can play a crucial role in providing technical assistance to create new clean energy policies and support a power sector reform”

The CIFs have been very effective at mobilising private finance when they offered products blended with other commercial institutions or multilateral development banks. This demonstrates that **coordination with other funds/programmes that are established or have operations in the target markets** may be beneficial to address market barriers and mobilise funding.

4.3 Areas that need further investment

The evidence available in the documentation reviewed focuses on investment needs or funding gaps in the on-grid **renewable energy** market. In this market, BNEF identified in its 2019 report **two ‘tipping points’** in order to assess whether there is need for concessional finance:

1. The first tipping point comes when building and operating a new clean power plant is more cost-efficient than doing the same for a fossil plant.
2. The second tipping point comes when a newly built clean energy plant can undercut the economics of an existing fossil plant.

The 2019 BNEF report argued that concessional finance may play a role until the second tipping point is reached. Where neither tipping point has yet arrived, concessional capital can be deployed to lower costs for clean energy, pull forward the arrival of tipping point one, and ensure only zero-carbon power-generation gets added to the grid. In countries where the first tipping point has already arrived, concessional capital can also be deployed to widen the advantage clean energy enjoys over other technologies. In these nations, such capital also has the potential to accelerate the arrival of tipping point two and bring forward retirement dates for coal-fired power plants.

Despite the ongoing volatility in international energy markets, the tipping points and principles discussed above should still be valid. In addition to this, the recently published 2022 International Energy Agency (IEA) World Energy Outlook³³ outlines that “concerted efforts to lower the costs of capital in emerging markets and developing economies could bring major energy security benefits by unlocking capital flows to support clean energy projects in these countries.³⁴ Additional financial and technical support, including concessional capital, private sector capital and inflows from international carbon markets, will all be crucial.” Governments and regulators have an essential role in mitigating risks, especially in projects to expand and modernise electricity grids, and international support is very important to catalyse higher investments. Especially given the difficult financial conditions faced globally.

In the renewable energy market, Vivid Economics suggests that the bigger opportunities are in **South Asia (including India), Indonesia, and South Africa**⁵. BNEF provides insights into some specific markets and technologies that need further support:

- Offshore wind in **India**;

³³ IEA (2022) – World Energy Outlook, available at <https://www.iea.org/reports/world-energy-outlook-2022> [accessed 20/12/22]

³⁴ The IEA, together with the World Bank and the World Economic Forum, proposed a series of priority actions based on more than 40 on-the-ground case studies. IEA (2021a) – Financing Clean Energy Transitions in Emerging and Developing Countries, available at <https://www.iea.org/reports/financing-clean-energy-transitions-in-emerging-and-developing-economies> [accessed: 20/12/22]

- New technologies in **Mexico** such as bifacial solar panels, battery storage, energy efficiency, technologies associated with advanced mobility such as electric vehicle (EV) charging stations, and geothermal;
- PV in **Morocco**;
- Wind farms in areas with lower wind speeds, rooftop solar facilities, biomass plants and energy storage projects in **Thailand**;
- **Small-scale solar projects**: BNEF suggested that development finance institutions could provide concessional capital in collaboration with domestic banks, who can assess borrowers' bankability.
- **Energy storage**: BNEF argued that as new renewable energy is added to the grid, more energy storage will be needed. However, even in established markets revenue uncertainty deters investors. The availability of finance, especially concessional finance, could prove crucial in incentivizing new-build storage globally.
- **Digital systems** to monitor and optimize generation assets and reduce operations and maintenance costs. The higher potential was identified in Chile, Colombia, Egypt, Indonesia, Mexico, Morocco, Nigeria, and Vietnam.

On the other hand, **commercial-scale PV does not need further government support** in most developing nations.

The evaluation of FIP provided insights on the **financing gaps in the land use sector**. It defined a key finance gap in supporting small- and medium-scale forest-related enterprises. The evaluation observed that the vast majority of FIP investments were either enabling investments addressing policy issues, or micro-scale investments into alternative income generating activities, with few investments into small- and medium-scale forest enterprises.³⁵ It recommended the following forms of support:

- Aggregating products within particular value chains that are known to have a positive impact of avoiding deforestation and forest degradation;
- Piloting business incubation to grow emergent enterprises; and
- De-risking measures to encourage investment into those enterprises to reach transformational scale (e.g. guarantees, concessional loans, trade credit and fiscal incentives).

The evaluations reviewed also advise on **types of support (instruments) that are needed**:

- CP3 concluded that there is a clear need for **early-stage PE for climate projects** around the world. Very early-stage finance remains a major gap in the market, slowing growth and limiting the investment opportunities of the CP3 funds themselves who often cite a lack of "pipeline" as a barrier.
- The CP3 evaluation also highlighted that there is need for **more climate and technology expertise** in funds and other **investment institutions** such as banks. This could be built with

³⁵ The suggested financing gap is partially being addressed by the Partnership for Forests in the ICF portfolio.

TA. Vivid Economics also mentioned that support to the financial sector is needed for greening their investments⁵.

- Given the need of long-term finance to develop RE projects (typically between 10-20 years), the 10-year fund that CP3 offered may be insufficient. The evaluation recommended **blended instruments (equity, debt, mezzanine) over longer time horizons**.
- To reduce the risk of developing renewable energies, public interventions should focus on **taking on market risks**, assisting utilities on tracking and improving their **financial sustainability**, and lowering financing costs through **concessional finance**.

4.4 Areas of strength for ICF

Among the evaluations and programmes reviewed to inform this chapter, we have found that interventions can be broadly categorised in two main groups, depending on the strategy used to leverage finance:

- UKCI, CP3 and REPP offer private equity in commercial terms, in some instances combined with TA. These programmes try to pilot new concepts and generate demonstration effect to leverage finance.
- The CIFs offer concessional funding, often blended with other instruments to provide a package of support that is tailored to the needs of the project/investor. The CIFs invest at scale to accelerate the pace at which countries reach the ‘tipping points’.

One of the main strengths of ICF is its capacity to mobilise co-funding when it acts as a cornerstone investor. HMG’s lead in CP3 was critical to the establishment of the funds of funds, helping shape their strategies and decisions and influencing other public investors in the funds. As a trusted investor with a good reputation and significant technical experience from CP3, HMG is in the unique position to leverage this to support the scale up of other public-private climate initiatives.

The evaluation of CP3 recommended that HMG leverage its leadership role by bringing together CP3 stakeholders to share lessons, discover opportunities and create a green investment community.

5 Innovation and R&D

5.1 Innovation and R&D in the reviewed documentation

Although highlighted as a key area of interest for ICF and this review, limited explicit references to innovation and R&D were found in the documents selected for the review. A key reason for this is that the three ICF programmes with innovation-specific objectives – International CCUS, Global Innovation Lab and Clean Energy Innovation Facility – have not been evaluated. Although this review focused on evaluation reports, some annual reviews for these programmes were reviewed to address gaps. This is a key finding – that there is a need for more evaluation research into innovation in the ICF, particularly innovation-focused programmes.

Key findings:

- Basic research is best supported by public funding, with private funding being more appropriate to later stages of innovation with clearer returns.
- The application of tried and tested technologies and mechanisms in novel contexts can be an effective way to ‘de-risk’ innovation, including through technology transfer.
- Regulatory and policy development can play a critical role (sometimes more so than private finance) in supporting innovation, particularly where interventions can adapt the local regulatory and policy landscape to pave the way for adoption of innovative technologies.
- Flexibility, agility to respond to changing contexts, and an acceptance of risk are key to the facilitation of innovation.
- Knowledge sharing, particularly by bringing together public and private stakeholders can facilitate innovation through idea generation, raising awareness and building confidence.
- Partnerships and collaborations, especially at a local scale or in specific contexts are effective facilitators of innovation.
- Areas that need further investment comprise: the strengthening of research capacity and fostering of climate research leadership, and investments in improving capacity and expertise in less developed countries.
- UK ICF main areas of strength are: its openness to partnering, and its expertise and experience in its own decarbonisation pathway.

5.2 Innovation within the ICF portfolio

This review highlighted three key ICF programmes with innovation-specific objectives:

Programme	Objective
International CCUS	This programme aims to accelerate deployment of Carbon Capture, Usage and Storage (CCUS) within key developing countries through raising technical understanding, leading to establishment of policy and incentive structures necessary to support the technology.
Global Innovation Lab	The Lab is a public-private partnership bringing together experts from private and public sectors to discuss and understand barriers to ICF investment. It generates and launches innovative financial instruments to attract private investment in climate change mitigation and adaptation at scale.
Clean Energy Innovation Facility (CEIF)	The CEIF is an ODA grant-funded programme to support clean energy research, development and demonstration that helps improve the performance of innovative technologies and accelerates the clean energy transition in developing countries.

Other programmes (including NAMA Facility, CP3 and REPP) were identified in the review as programmes with components of innovation in their work, although less of a specific, integral innovation focus.

A key finding from the review is that there is no consistent definition of innovation within the ICF portfolio. The scope of references to innovation includes the following:

- **Technologies** – typically renewable energy technologies, sometimes piloted to demonstrate new ways of doing things such as those supported by REPP e.g. a “grid-connected geothermal project in an area where geothermal energy had not been tried before” in Chad.³⁶
- **Financial Mechanisms and Business Models** – typically involving new funding models (e.g. CP3’s innovative model to deliver UK ODA³⁷ or those supported by the Global Innovation Lab) or business models (e.g. a novel pay-as-you-go system that attracted private finance for off-grid rural electrification in Nigeria³⁶).
- **Novel Approaches** – where the technology or financial mechanisms may be tried-and-tested, but the application or approach to deliver them is novel within its context e.g. NAMA facility.³⁸

A Vivid Economics report on transformative climate finance³⁹ defines innovation along similar lines as “the development of new goods, services, technologies and business models that support climate action.” That report also highlights the importance of **technology transfer** (“which refers to the

³⁶ ICAI (2019), “International Climate Finance: UK aid for low-carbon development – A performance review” p28

³⁷ CPI (2018), “Climate Public Private Partnership (CP3) Monitoring and Evaluation – Mid-term evaluation”

³⁸ Ipsos MORI (2021), “NAMA Facility – 2nd Interim Evaluation and Learning – Final Report”

³⁹ Vivid Economics (2020b), “Transformative Climate Finance – A framework to enhance international climate finance flows for transformative climate action”

dissemination of knowledge, skills and physical technologies between and within countries”) as a component and driver of innovation, as new technologies often require innovative approaches to adapt to the local context.

This same report also provided a useful categorisation of the different stages of innovation:

- **Basic Research** – experimental or theoretical work to acquire new knowledge without a particular envisaged use;
- **Research and Development (R&D)** – where research findings are applied to new technologies and products;
- **Demonstration Projects** – where technologies and products are adapted to be applied in a real-world application;
- **Deployment** – where technologies or products are deployed on a larger scale within a specific context often with the support of private finance or public support;
- **Commercialisation** – where the technologies or products are competitive within the market.

While this definition is specified around technological innovation and cannot be directly applied to the other categories of innovation identified above, it is a useful framework to consider the different stages of innovation and will be used as a reference in this chapter.

5.3 How different types of interventions support innovation

Key findings:

- Basic research is best supported by public funding, with private funding being more appropriate to later stages of innovation with clearer returns.
- The application of tried and tested technologies and mechanisms in novel contexts can be an effective way to ‘de-risk’ innovation, including through technology transfer.
- Regulatory and policy development can play a critical role (sometimes more so than private finance) in supporting innovation, particularly where interventions can adapt the local regulatory and policy landscape to pave the way for adoption of innovative technologies.

There is evidence from this review that basic research activity in the context of innovation is best supported by public funding. The rationale for this is that, as detailed above, such research is exploratory and, without a specific use case in mind, less likely to attract private investment than later stage innovation activity, where there are clear returns (such as at the deployment and commercialisation stages). Public funding, therefore, can be critical to enable the earliest stages of innovation, that forms the basis for ideas to be generated into commercial outputs. Indeed, a majority of research stakeholders

surveyed by UK Collaborative on Development Research (UKCDR) noted that UK ODA-funded research leads to innovation⁴⁰.

A critical category of interventions that support innovation are those that allow tried and tested technologies, financial instruments and approaches to be applied in new contexts. Such a tactic reduces perceived risk to investors and can give confidence to local stakeholders to explore application in new contexts. An example of this is the use of rebates to stimulate demand for electric vehicles in Cabo Verde, demonstrating that such vehicles are viable options in small island states.⁴¹ Such interventions are often supported by private equity (PE) funds such as the Climate Resilience and Adaptation Finance & Technology Transfer Facility (CRAFT).³⁹

Included in this are interventions that enable **technology transfer**. The CP3 mid-term evaluation⁴² highlighted several examples of innovation and technology transfer in the ICF portfolio, particularly from developed to developing countries. In addition to establishing innovative technologies in developing countries, technology transfer can also stimulate domestic innovation.³⁹

There is evidence that **concessional finance** can play a role in similarly building confidence in new applications of existing technologies, such as Clean Technology Fund (CTF) financing to the solar thermal and PV sectors in Morocco. This investment led credibility to these new technologies and helped mobilised capital to invest in novel applications.⁴³

The support of **local supply chains** can also play a role in enabling innovation, by supporting intermediaries to leverage innovative funding mechanisms, grow new business models and deploy low-carbon technologies and services.⁴⁴

There is some evidence that **regulatory and policy development** can have a significant impact on innovation, sometimes greater than financial investment (see chapter 4.2). The CP3 mid-term evaluation highlighted the example of the transformation of the renewable energy market in El Salvador where they found “that regulatory and policy developments had a far more significant impact on the market than increased availability of [private equity], with even the CP3 investments delaying commitments until the regulatory environment had stabilized.”⁴² This highlights the importance of interventions that can help change the local regulatory and policy environment to pave the way for innovation.

There was limited explicit evidence emergent in this review for assessment of **value for money** in the context of innovation. One key example is the example of the Global Innovation Lab, which supports innovative financing models for low-carbon development. This case highlighted 25 Lab ideas that have mobilised \$1 billion in additional investment for climate change actions, representing a return of more than 3:1 on initial investment.⁴⁵

⁴⁰ UKCDR (2021), “UK-Funded Research On Climate Change And International Development - The scope and reach of UK ODA and Wellcome-funded research (2015 – 2020)”

⁴¹ Ipsos MORI (2021), “NAMA Facility – 2nd Interim Evaluation and Learning – Final Report”

⁴² CPI (2018), “Climate Public Private Partnership (CP3) Monitoring and Evaluation - Mid-term evaluation”

⁴³ BNEF (2019), “The Clean Technology Fund and Concessional Finance”

⁴⁴ ITAD (2019), “Evaluation of Transformational Change in the Climate Investment Funds – Final Evaluation Report”

⁴⁵ ICAI (2019), “International Climate Finance: UK aid for low-carbon development – A performance review”

5.4 Contexts that facilitate innovation

Key findings:

- Flexibility, agility and an acceptance of risk are key to the facilitation of innovation
- Knowledge sharing, particularly by bringing together public and private stakeholders can facilitate innovation through idea generation, raising awareness and building confidence
- Partnerships and collaborations, especially at a local scale or in specific contexts are effective facilitators of innovation

The evaluation of CTF suggests that “flexibility and agility are key”⁴⁶ to facilitate innovation. It notes that equipment costs and local circumstances can change rapidly, requiring an ability to quickly adjust strategies. The same review notes a need for a willingness to take chances and “a high degree of comfort with failure”⁴⁶ on new finance/business models and technologies given that many new ideas do not succeed.

Knowledge sharing and collaboration are also critical facilitators of innovation across multiple programmes. For instance, the Energy Sector Management Assistance Program (ESMAP) reportedly functions as a conduit for new technologies, new thinking and delivery models through its knowledge products and events⁴⁷. Similarly, the Global Innovation Lab acts as a forum to bring together public and private stakeholders to generate innovative ideas around new financing mechanisms before testing these with experts and piloting.⁴⁸ Such activities can support innovation through generating new ideas, raising awareness and building confidence.

Building partnerships is also critical to the facilitation of innovation. A key recommendation from UKCDR is for research funders to consider flexible approaches to facilitating and incentivising local partnerships to ensure that climate-development research aligns with local needs. They identify the value in utilising the “Science Innovation Network (SIN), Research and Innovation Hubs and embassies to identify and make links to in-country actors.”⁴⁹ REPP also provides an example of effective partnership building by using a ‘bottom-up approach’ that seeks project-specific partners (changed from their previous ‘top-down’ approach of signing up a ‘pool’ of potential partners to draw upon as needed), to best target the needs of projects. Through REPP’s partnerships they seek to facilitate innovation by increasing “capabilities and understanding in financial institutions and risk mitigation providers, making them better able to support small-scale [renewable energy] developers.”⁵⁰

5.5 Areas that need further investment

A key area for further investment into research and innovation is the strengthening of research capacity and fostering of climate research leadership in ICF priority countries⁵¹. This is seen as vital to the creation of the next generation of climate scientists and decision makers as well as embedding climate

⁴⁶ BNEF (2019), p13

⁴⁷ ICF (2020), “External Evaluation Of The Energy Sector Management Assistance Program (ESMAP) – Final Evaluation Report”

⁴⁸ ICAI (2019)

⁴⁹ UKCDR (2021), “UK-Funded Research on Climate Change and International Development - The scope and reach of UK ODA and Wellcome-funded research (2015 – 2020)” p 63

⁵⁰ DESNZ (2018), “Renewable Energy Performance Platform – Mid-Term Evaluation” p49

⁵¹ UKCDR (2021)

science in the training and thinking of future innovators (including engineers, accountants, managers and planners). UKCDR also note that there is a need for context-specific research that focuses on local or regional scales, creating opportunities for researchers to work more collaboratively with practitioners and policymakers.

Similarly, investments in improving capacity and expertise in less developed countries is needed to support innovation. In particular, “early-stage support for developing infrastructure needed for long-term decarbonisation, and implementing policy and regulation changes required to support energy storage technologies, DSM technologies, electric vehicles and the deployment of CCS.”⁵²

There is also a need to understand contextual opportunities for specific technologies in specific locations. For instance, Thailand, which has lower wind speeds than neighbouring countries (e.g. Vietnam) has seen reduced opportunities for wind energy projects. However, recent developments in wind turbine technology have led to equipment designed to work in environments with low wind speeds, potentially facilitating new applications in Thailand.⁵³ Another example is that weak grid capacity, reliance on back-up generators, and high grid emission intensity in India, West Africa and South Africa present specific mitigation opportunities in the application of energy storage.

5.6 Areas of strength for ICF

Multiple sources in this review highlight the UK’s international reputation as a leader in international climate action and climate science. In the context of research and innovation, this was sometimes expressed as a reputation for thought leadership, research capacity strengthening and strong management of research funding.

As previously noted, partnerships and collaborations are seen as vital facilitators for innovation. From UKCDR interviews with research stakeholders, partnerships and collaborations were seen as a key strength for the UK, with perceptions that the UK is open to partnering, strong at fostering effective and equal partnerships and, as a result, in demand for collaboration. Examples for this include the Newton partnership model and the Africa Sustainability Hub.⁵¹

The UK’s expertise and experience in its own decarbonisation pathway is seen as an area of strength in its ability to support innovation in energy and land use activities in other countries. For example, DESNZ can draw on experience with specific technologies, including large-scale renewables, demand-side response, electric vehicles and energy storage to bring these technologies to new countries with new applications – as previously noted, a critical type of innovation activity for ICF.

⁵² Vivid Economics (2020b), “DESNZ ICF Mitigation Investment Options: Synthesis Report” p27

⁵³ BNEF (2019)

6 Carbon pricing instruments

This review focused on four programmes addressing carbon pricing and/or (carbon) results-based finance⁵⁴ in various sectors for which there are relevant evaluations available. All are administered by the World Bank:

Programme	Objectives
BioCarbon Fund (BioCF) Initiative for Sustainable Forest Landscapes (ISFL)	<p>Launched in November 2013, the ISFL is a 17-year, first-of-its-kind program seeking to reduce greenhouse gas (GHG) emissions from the agriculture, forestry, and other land use (AFOLU) sector and to increase sequestration through improved land management. It works with the governments of Colombia, Ethiopia, Indonesia, Mexico, and Zambia to pilot new landscape planning approaches at a jurisdictional scale. The initiative is split across two funding mechanisms:</p> <ul style="list-style-type: none"> ▪ BioCFplus provides grant funding to improve the enabling environment for sustainable land-use and low-emissions development activities. Components include technical assistance, capacity building, and investments. ▪ BioCF T3 provides results-based payments to purchase verified emission reductions to sustain interventions in sustainable land use that lower GHG emissions.
Forest Carbon Partnership Facility (FCPF) - Carbon Fund	<p>FCPF is part of the global reducing emissions from deforestation and forest degradation (REDD+) architecture. The FCPF, and its framework for readiness, presented a place to start for many REDD Countries, and a process to follow, responding to the decisions that came out of as well as commitments made relating to international climate negotiations. The aim of the FCPF is to support developing countries in moving towards results- based payments for climate change mitigation under the UNFCCC, while supporting REDD Readiness. It has two funding mechanisms: the Readiness Fund, which supports REDD Readiness, and the Carbon Fund, which supports the piloting of Emission Reduction Purchases (ERPs).</p>
Carbon Market Finance Programme (CMFP)	<p>CMFP is being implemented through the Carbon Initiative for Development (Ci-Dev). It provides funding from 2013 to 2025 seeking 'to increase the flow of international carbon finance to Least Developed Countries (LDCs) – with a focus on Africa – to support climate change mitigation and poor peoples'</p>

⁵⁴ For purposes of this report carbon pricing instruments like the Clean Development Mechanism, off-set crediting or credit markets within emission trading systems are considered to be an advanced form of results-based finance, but results-based finance does not necessarily focus on carbon i.e. emission reductions as the result rewarded. Results based finance is often used as a precursor to and/or supporting the development of full scale carbon pricing regimes. A carbon tax operates using a reverse mechanism, that is penalizing the emission rather than rewarding the reduction.

access to clean energy and other poverty reducing technologies. It has two components:

- The Readiness Fund (RF) provides, amongst other things, technical assistance for developing Clean Development Mechanism (CDM) methodologies and business models, as well as knowledge management and learning opportunities and grants to support project development and barrier removal.
- The Carbon Fund (CF) uses carbon results-based finance (c-RBF) to purchase emission reductions from selected projects, verified and certified through the clean development mechanism (CDM).

Partnership for Market Readiness (PMR)

The PMR is a global partnership currently consisting of 41 developed and developing countries and jurisdictions. Its vision is to “provide a platform for sharing experience, fostering new and innovative market-based instruments, and building market readiness capacity for countries to scale up climate change mitigation efforts.”. The PMR seeks to achieve this vision through grants, technical assistance and upstream policy support delivered in-country against country-defined roadmaps, formalized in Market Readiness Proposals, (MRPs), as well as through the production and dissemination of technical knowledge products and knowledge exchange facilitated through training sessions, workshops. It supports development of a variety of carbon pricing instruments including: carbon taxes, offset crediting, and emission trading systems.

Key findings:

- Technical assistance to build capacity either at the national or subnational government level are key elements in all interventions reviewed.
- Most focus on improving the enabling environment within government and associated groups, such as to help design, pilot, administer, and/or monitor new instruments. This type of support has been demonstrated to be the most consistently successful to date.
- Some also provide direct financial support to projects or to pilot new mechanisms, such as by agreeing to pay for verified emission reductions.
- Knowledge management and stakeholder engagement strategies are also core elements contributing to programme success.
- Effective engagement of all key stakeholder groups is critical.
- The success of interventions within a country is ultimately tied to the country context, strength of political support, as well as alignment with national priorities and the international context.
- There needs to be sufficient and proficient staff in country to implement activities.

- As more support options become available, it is important to synergize with other resources to retain each programme's unique contributions and avoid overlaps.
- Technical assistance and platforms for knowledge sharing and peer to peer learning are consistently requested and valued in the interventions reviewed.
- All four interventions reviewed to inform this chapter have been administered by the World Bank and are seen as innovative, first- of their kind and/or central to the carbon pricing and results-based finance space.

6.1 How different types of interventions support carbon pricing instruments

As indicated in the programme descriptions above, these interventions provide technical assistance to governments and associated bodies in improving the enabling environment and build capacity for designing, administering and/or monitoring new instruments. They sometimes also provide technical assistance directly or to project developers to implement projects, e.g. to develop credit worthy projects within a specific mechanism. They may also provide direct financial support to projects and/or to pilot new results-based financing mechanisms by purchasing emission reductions. All also seek to contribute to the international dialogue and knowledge base.

Key findings:

- Technical assistance to build capacity either at the national or subnational government level are key elements in all interventions reviewed.
- Most focus on improving the enabling environment within government and associated groups, such as to help design, pilot, administer, and/or monitor new instruments. This type of support has been demonstrated to be the most consistently successful to date.
- Some also provide direct financial support to projects or to pilot new mechanisms, such as by agreeing to pay for verified emission reductions.
- Knowledge management and stakeholder engagement strategies are also core elements contributing to programme success.

6.1.1 Effectiveness of different intervention types

Readiness-focused technical assistance to national governments to improve the enabling environment and build capacity for designing, administering and/or monitoring new instruments **was effective across all interventions** reviewed. Each of the four interventions supported first-of-its-kind or early-stage activities at the national level seeking to support new national systems and instruments, within the context of international climate negotiations and agreements. Technical assistance could be through the provision of technical experts or providing financial support to hire external experts or to fund a position, within a Ministry, for example.

These programmes also demonstrated **successes at the international level as well**, such as by supporting development of three new CDM methodologies, several methodology changes and the Standardised Crediting Framework (SCF) (Ci-Dev), to increasing awareness of carbon pricing globally and providing demonstration effects even in countries not directly participating (e.g. PMR).

- The stakeholders surveyed as part of the Second Independent Evaluation of the **PMR** overwhelmingly reported that the PMR has had a high level of impact: almost 80% of implementing country partners reported that the PMR has had a high level of impact in their own country, and 72% of all stakeholder types reported that the PMR has had a high level of impact internationally. The PMR is also supporting participating countries' capacity and readiness to design, pilot and/or implement carbon pricing instruments and/or the core technical components. In particular, the PMR has had a strong impact on stakeholder engagement and has also impacted Monitoring, Reporting, and Verification (MRV) systems, benchmarking, and specific mechanisms. There is also clear evidence the PMR having a broader influence on global policy discussions. Its evaluators noted: PMR language quoted in negotiations; PMR participants more confident in participating in global policy discussions; advocacy documents cite PMR outputs; new countries are considering carbon pricing instruments due to PMR outputs.
- A survey conducted as part of the **FCPF** evaluation found 92% of REDD Country Participants had positive opinions about participating. Respondents also highlighted that the FCPF had actively produced guidance for the implementation of readiness programs at the country level, which was essential in starting and guiding Readiness Implementation. Most REDD Countries acknowledged the importance of the FCPF for its role in kick-starting the National REDD+ Strategy process, stakeholder consultations, and raising awareness. In some cases, financial support from the FCPF led to the leveraging of additional finance from other bilateral and multilateral sources. One of the key strengths of the FCPF has been the structure and common readiness framework that the Facility has provided REDD Countries throughout the portfolio as well as demonstrated relevance to global REDD+ processes. The FCPF also constructed the first multilateral REDD+ RBF to be used for piloting incentives for REDD+.

The review found that **effectiveness of project level support**, such as that provided by **Ci-Dev**, was more mixed, often due to factors outside the programme's control. Ci-Dev was designed to build experience in carbon pricing and market-based approaches locally that would help countries, as well as project developers, participate more widely in market-based mechanisms in the future. Ci-Dev support has helped some project developers to overcome operational challenges related to the CDM. The financial support provided through the emissions reduction purchase agreements was often insufficient to overcome all of the financial challenges projects faced, particularly liquidity. Yet, some project developers were able to use the agreements to leverage additional finance. As Ci-Dev focused project level support on specific gaps within each company, it did not directly address more systemic barriers to success, particularly in more nascent markets. One implication from Ci-Dev's experience is that systemic barrier removal is important for broader uptake of market-driven energy access projects.

Results-based finance, such as directly purchasing verified emission reductions, was somewhat effective. The sustainability of results depended on the local and international context and was not necessarily within the programme's control or sphere of influence. Continuing the example from Ci-Dev, i.e. (lack of) access to upfront finance and a positive policy environment were critical factors in individual project success, as was product functionality/suitability and local market demand. The implication is that there must be a critical mass of enabling factors and reduction in barriers overall for the incremental support provided by a programme to be effective.

Knowledge management, convening power and promoting peer-to-peer exchange and learning was consistently highly valued and directly linked to building capacity within national governments, yet mixed in actual implementation for the interventions reviewed, with many successes but also some obvious opportunities missed (e.g. ISFL, PMR). Specific outputs include market and technical studies,

lessons learned reports, case studies, blogs and interactive material as well as trainings, knowledge sharing workshops, and peer-to-peer exchange forums.

These findings from evaluations of specific programmes are further supported by the findings from a Vivid Economics report on transformative climate finance⁵ that stated:

- “Technical assistance and capacity building are vital to the establishment, development and linking of carbon markets. ETS design is a complex undertaking, and poor design can have damaging financial and political repercussions. This complexity is compounded by the fact that in order to be effective, ETS design needs to take into account national circumstances like political will, industrial sector composition, economic growth and trade relationships. There is no one size fits all model, and a large majority of governments do not possess the expertise to design and implement carbon markets. [...] [Assistance] can take the form of developing MRV systems, collating international best practices, funding pilot systems, developing innovative tools and services to support carbon pricing etc. [...]
- Grants and loans may be used to address capacity or information constraints within governments or be used to help meet the costs of providing subsidies or incentives as part of environmental taxation policy reforms. [...] Guarantees can be used to address delivery risk on carbon assets used for compliance. [...] Other climate finance supported instruments (such as derivatives) could be used to overcome the disincentive created by low or volatile carbon prices.
- In and of themselves, project-level investments are unlikely to support fiscal reforms. However, if investments can catalyse domestic public co-financing – through the use of domestic fiscal policies - they may be able to support permanent reforms that support long-term climate action.’
- [The PMR] is one of the largest providers of technical assistance for the development and implementation of carbon markets.”

6.2 Contexts that facilitate the design, piloting and/or implementation of carbon pricing instruments

Key findings:

- Effective engagement of all key stakeholder groups is critical.
- The success of interventions within a country is ultimately tied to the country context, strength of political support, as well as alignment with national priorities and the international context.
- There needs to be sufficient and proficient staff in country to implement activities.
- As more support options become available, it is important to synergize with other resources to retain each programme’s unique contributions and avoid overlaps.

6.2.1 Key stakeholder groups

While the specific stakeholder groups important to engage will vary by instrument and scope, building cross-sectoral, multi-stakeholder processes are typically important. Key stakeholder groups include:

- National climate policy makers as well as those with administrative, financial and sectoral responsibilities e.g. the Ministry of Finance as well as the Ministry of Environment;
- Sub-national actors (often missed per the evidence reviewed);
- Civil society, university/research institutions and technical expert groups engaged in the space;
- Private sector/project developers, i.e. those that would directly participate in, or be affected by, the mechanism.

The evidence reviewed indicated that **stakeholder engagement is critical** to increasing awareness, managing expectations, and appropriately tailoring instruments, as well as achieving buy-in and long-term sustainability. The level and nature of engagement for each group should be carefully considered and planned for over time. Some evaluations reviewed noted importance of ongoing cross-sectoral, multi-stakeholder processes as well as managing stakeholder expectations (e.g. FCPF).

6.2.2 Contextual factors influencing effectiveness

The majority of the programmes covered by the evaluations reviewed began prior to the **2015 Paris Agreement**. The review indicated that, while each were effective at least in some areas, all were influenced in some way by the uncertainty leading up to the Paris Agreement or the changes to the international climate agreement architecture that came out of it. For example, the CDM, established under the Kyoto Protocol expired and was ultimately replaced by Article 6 of the Paris Agreement. The uncertainty around whether a new carbon markets mechanism would exist, and if so, what the characteristics would be influenced implementation of the PMR and Ci-Dev. For example, it was unclear if projects under development with or without emission reduction purchase agreements in place would still qualify. Therefore, programmes may have achieved a demonstration effect by supporting successful piloting of a concept, but the opportunity for up-scaling and replication was limited at this point in time.

It was clear across all interventions reviewed that support must be tailored to the country context and any mechanisms must be backed by sufficient political will and align with national climate and development priorities as well as international commitments, e.g. should be explicitly aligned with NDCs. For example, in the FCPF, tailored technical assistance to the REDD Countries as determined by the strategic priorities improved the efficiency of the programme. PMR stakeholders indicated that one of its key features is that it is instrument neutral – also that it adapts to meet the changing international context.

Related, while the programmes may contribute, even significantly, to countries' efforts to implement new mechanisms, the decisions ultimately rest with the policy makers in each implementing country. There are also numerous factors internal and external to each country, which are outside of a programme's control, that influence its progress, but high **country ownership** backed by political will is vital. For example, the FCPF evaluation noted that support for some countries were placed on hold due to national circumstances, e.g. a political crisis or challenges with the contracted delivery partner. This is also key to navigate competing interests from different stakeholders, e.g. between jurisdictions, ministries, or subsectors.

Multiple evaluations also noted the importance of having sufficient, ideally dedicated, staff (with the appropriate expertise) within country, such as within the office of the national focal point to carry out the activities. For example, one PMR country suffered substantial delays due to lack of procurement capacity within the ministry. Another dynamic noted in the PMR evaluation has to do with the reputation,

connection, and influence of the focal point with other ministries and departments and with external national stakeholders, or different ministries willingness to collaborate with each other.

There is a need to find a **balance between international and local expertise**. For example, stakeholders for the PMR evaluation noted that when consultancies incorporate international and local experts, the outputs delivered are generally better. International experts bring technical expertise and experience on designing instruments in other countries that local experts might not have. On the other hand, local experts bring knowledge on the domestic market and the specifics of the affected sectors.

There is also a need to strike a balance between specific technical work and processes of “socialization” within the country (i.e. including stakeholder engagement to facilitate buy-in and ownership). Without sufficient stakeholder engagement the technical outcomes risk being stranded and essentially ignored.

As noted in the PMR evaluation: both the needs within countries as well as the landscape of support available constantly evolves, therefore, programmes should consciously seek to synergize with other resources to retain their unique contributions while avoiding unnecessary duplication. For example, more recently established regional collaborations are gaining more prominence and may indicate areas where international support can scale back or alternatively directly link with as part of the knowledge management strategy. In another example, four out of the five country programmes in the ISFL combined different World Bank Group (WBG) funding mechanisms, which increased available funding for the initial phase of the ISFL, filling capacity gaps for an enabling environment and effectively combining social and economic goals with climate goals.

All of the interventions reviewed are administered by the World Bank, which brings its own unique characteristics. For example, its reputation, technical knowledge and convening power are seen as unparalleled. It also has existing robust systems such as safeguarding and due diligence processes.

6.3 Areas that need further investment

The level and type of support needed varies by country context, stakeholders targeted and the maturity of the instrument. As the focus of successful programmes has been targeting new instruments at the national level, the review continues that focus here. **Readiness** for then designing and piloting new instruments are the most relevant for ICF support, but this is appropriately shifting as contexts mature. For example, the focus of support the PMR provides has evolved over time to focus less on readiness and more on instrument design. The Transformational Carbon Asset Facility (TCAF) was developed in 2016, after the Paris Agreement, to create a mechanism to pilot the programs designed with support of the PMR. Yet a recent evaluation of the TCAF noted that countries were less ready than originally anticipated.

For interventions targeting new instruments at the national level, **technical assistance and platforms for knowledge sharing and peer to peer learning** are consistently requested and valued in the interventions reviewed. Secondly, there is still an ongoing need for selective financial support to help pilot and stabilise new instruments.

6.4 Areas of strength for ICF

The review indicated that the UK has experience with a variety of instrument types in a range of sectors. All four interventions reviewed have been administered by the World Bank and are seen as innovative, first- of their kind and/or central to the carbon pricing and results-based finance space.

Interventions targeting the national level are a particular area of strength, such as through improving the enabling environment and building capacity as well as supporting development of new mechanisms.

The PMR focuses broadly on a variety of carbon instruments and sectors. The PMR is considered by key stakeholders to be the most prominent initiative dealing with carbon pricing, and by several to be the only place where dialogue is happening at a practical and technical level across a broad spectrum of participants on what works and what does not in relation to carbon pricing. Key features which add value are that: it is instrument-neutral, it supports early-stage capacity building, it provides hands-on support, and its participative and networking approach. It has evolved to meet the changing international context.

The ISFL and FCPF focus more specifically on agriculture and land use. For example, ISFL was the first program to apply the landscape and jurisdictional approaches in conjunction with one another. This innovative and integrated concept of the ISFL program is seen by most stakeholders to be necessary to achieve reduced emissions in the program landscapes. Further, the program is seen as well aligned to national global climate change mitigation priorities, policies and strategies as well as international climate agreements.

The Ci-Dev focuses on energy access in LDCs, first within the context of the CDM and now shifted to Article 6 of the Paris Agreement. The UK, as well as others' support for carbon pricing and (carbon) results-based finance more generally such as through Ci-Dev has inspired new initiatives, such as the Biochar Initiative's carbon sequestration credit.

7 Support to climate negotiations and enabling environment

Within the ICF portfolio, there are several programmes whose main objective is to improve the enabling environment for climate change mitigation. Among the programmes reviewed, the main examples of intervention targeted at improving the enabling environment and supporting climate negotiations are:

- National level, multi-sector: The GCF's RPSP, the NDC Partnership, the NAMA Facility; the UK PACT.
- Subnational: The CLIC;
- Sector-specific: ESMAP, the FIP;
- Carbon pricing/RBF-focused – refer to chapter 6.

Descriptions of these programmes are provided in the table below (for descriptions of FIP and the NAMA Facility, see chapter 3). This chapter is based on the evaluations of these programmes as well as the Compass portfolio evaluations.

Key findings:

- The UK is providing support to improve the enabling environments at a variety of levels: multi-sector national, subnational, as well as sector specific.
- All intervention types focus on supporting or directly providing technical assistance such as to develop new policies, train staff, and engage stakeholders. Some also provide direct financial support, such as for upscaling projects as part of a country's NDC.
- Country ownership and alignment of support with country needs is key to the effectiveness of interventions targeted at creating an enabling environment.
- Political instability or regime change can dramatically change how implementation is progressing, as motivation and coordination among relevant government ministries and agencies highly influence effectiveness of the interventions in this area.
- Training to build technical skills enhanced continuity among project activities and proved a significant mechanism across interventions.
- A critical factor to improve the enabling environment lies in relationship building and stakeholder engagement to gather the necessary support across groups.
- In countries with relatively less advanced governance systems or financial markets, investing in improved capacity and expertise are crucial precursors to delivering mitigation. For opportunities that require long-term capacity building, expanding the duration of support has proved effective across both capital and technical assistance investments.

Most programmes considered here focused primarily on the enabling environment and developing strategies at either the sectoral or subnational level – which contribute to countries’ ability to meet their international obligations but did not directly focus on support for climate negotiations. Readers may also refer to chapter 6 on carbon pricing, as all four of the programmes considered in that chapter directly address the enabling environment at the national level from their perspective too.

Programme/fund	Objectives
Readiness and Preparatory Support Programme (RPSP)	<p>The Green Climate Fund’s (GCF) Readiness and Preparatory Support Programme (RPSP) provides grants to support country-driven initiatives of developing countries to strengthen their institutional capacities, governance mechanisms, and planning and programming frameworks towards a transformational long-term climate action agenda. The Readiness Programme provides grants and technical assistance to National Designated Authorities (NDAs) and/or focal points (FPs). Readiness funding can also be deployed to strengthen Direct Access Entities. The objective is to enhance the capacity of national institutions to efficiently engage with GCF. Dedicated readiness funding may also assist countries in undertaking adaptation planning and developing strategic frameworks to build their programming with GCF. Other examples of supported activities include:</p> <ul style="list-style-type: none"> ▪ Enable the preparation of country programmes providing for low-emission, climate resilient development strategies or plans; ▪ Support and strengthen in-country, Fund-related institutional capacities, including for country coordination and the multistakeholder consultation mechanism as it relates to the establishment and operation of national designated authorities and country focal points; and ▪ Enable implementing entities and intermediaries to meet the Fund’s fiduciary principles and standards, and environmental and social safeguards, in order to directly access the GCF.
UK PACT	<p>UK PACT (Partnering for Accelerated Climate Transitions) is a flagship TA programme under the ICF portfolio. It finances projects in supporting partner countries to implement and increase their ambitions for carbon emission reductions in line with their Nationally Determined Contributions (NDCs). All UK PACT projects work to accelerate partner countries’ transition to low carbon development in alignment with the 2015 Paris Agreement. UK PACT delivers impact through a combination of grant funding for longer term capacity-building projects and the rapid mobilisation of short-term expertise for skill-shares and secondment opportunities. UK PACT is demand-driven and funding can be allocated to feasibility studies, policy and regulatory analysis, and technical skill-shares of specialist expertise to partner countries. The breadth of the UK PACT project portfolio covers diverse sectors such as green finance, forests, clean energy and energy efficiency and sustainable transport.</p>

NDC Partnership	The NDC Partnership works directly with national governments, international institutions, civil society, researchers, and the private sector to fast-track climate and development action. It has over 100 members, including developed and developing countries in all regions of the world, as well as major international institutions and non-state actors. Members work together to provide technical assistance and capacity building in over 50 countries to provide countries with the tools they need to implement their NDCs.
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The Energy Sector Management Assistance Program (ESMAP)	ESMAP was launched in 1983 as a global knowledge and technical assistance program assisting low- and middle-income countries in growing their know-how and institutional capacity to formulate environmentally sustainable energy solutions for poverty reduction and economic growth. The multi-donor funded partnership program is administered by the World Bank, anchored in the Energy and Extractives Global Practice (GP). The program provides multidisciplinary technical assistance either directly from World Bank staff or expert assistance funded through grants through three thematic programs (energy access, renewable energy, and energy efficiency) and three cross-cutting programs (regional annual block grants [ABGs], the Energy Subsidy Reform Facility [ESRF], and the Knowledge Hub), with gender integrated through the programs, rather than as a stand-alone initiative. It coordinates with other programmes to supplement existing technical support or to provide subsequent technical or financial support. ESMAP also hosts events and produces a wide variety of knowledge products which it disseminates through a variety of channels.
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Climate Leadership in Cities (CLIC)	<p>CLIC takes an integrated multi-level approach:</p> <ul style="list-style-type: none"> ▪ It supports cities to develop climate action plans through C40's Climate Action Planning programme. The programme provides a strategic appraisal of a city's work on climate change, support and technical expertise to develop a Climate Action Plan. This component has supported 15 megacities in Latin America and Asia to develop ambitious climate action plans consistent with the Paris Agreement; developing a pathway to net zero by 2050 and committing to ambitious interim targets by 2030, in line with the standard set by C40 through the Climate Action Planning Framework. ▪ It supports national decision-makers with policy relevant research and engagement activities through the Coalition for Urban Transitions, delivered by the World Resource Institute (WRI). ▪ The C40 Cities Finance Facility (CFF), jointly implemented by GIZ and C40, CFF provides grants to 19 projects in 17 cities to prepare and deliver finance-ready sustainable infrastructure projects. It aims to enable cities to independently undertake similar projects in the future.
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7.1 How different types of interventions contribute to enabling environments for climate mitigation

As indicated in the programme descriptions above, these interventions provide **technical assistance to governments and associated bodies in improving the enabling environment and build capacity** for climate action within each country. The technical assistance may be provided by direct staff expertise or through grants for consultants or staff positions within government bodies. They may also provide direct financial support. In addition to this, several programmes also seek to **contribute to the international climate dialogue and knowledge base** through knowledge management programmes.

Key findings:

- The UK is providing support to improve the enabling environments at a variety of levels: multi-sector national, subnational, as well as sector specific
- All intervention types focus on supporting or directly providing technical assistance such as to develop new policies, train staff, and engage stakeholders. Some also provide direct financial support such as upscale projects as part of a country's NDC

7.1.1 Effectiveness of different intervention types

A recent review of the ICF portfolio found that UK programmes have helped developing countries to articulate and implement national low-carbon development strategies and initiatives through a combination of technical assistance and UK support for multilateral climate funds that provide resources for country-led initiatives. **Technical assistance**, either in the form of grants to access technical expertise, or via capacity building activities, has proved to be effective in many programmes across the ICF portfolio. In the evaluations reviewed, recipient countries consistently praised these types of activities, and the evaluations also provide examples of success (see Table 2).

The **RPSP** evaluation conducted a meta-analysis of the readiness activities of six climate-related global funds which showed that the RPSP has been supporting a broader and more ambitious range of readiness activities than the other comparator funds, consistent with the overall ambition of the GCF as a whole. Case studies conducted through the RPSP indicated that the grants were supporting the preparation of country programmes in eight of the nine countries visited. The majority of these efforts were building on previous national planning exercises, such as the preparation of Intended Nationally Determined Contributions (INDCs) as part of the Paris Climate Agreement.

The UK also supports the **NAMA Facility**, which provides financing to specific project proposals that align with and feed into a country's NDC. Before projects start implementation, the NAMA Facility provides grants for countries to access technical expertise and improve their preparedness. According to the evaluation, this type of support was considered one of the key added values of the programme and by implementing partners.

This type of support synergises with the support provided through interventions such as the **NDC Partnership**. The recent evaluation of the NAMA facility indicated that these projects can facilitate national policy development and potentially contribute to the setting of targets in a new sector for a country's NDC.

UK PACT's capacity enhancing support includes various forms of training and awareness raising workshops, which were adapted to the country context, the stakeholders, and the particular content

being provided in each case. In total, the majority of the beneficiary respondents surveyed in its 2021 synthesis report stated that the training they received had been ‘useful’ or ‘extremely useful’.⁵⁵

At the local level, **CLIC** achieved key results in delivering technical climate-smart urban planning, raising political commitment to climate action, building the capacity of city administrations for inclusive and equitable low-carbon urban planning, increasing cohesion across city ministries for the delivery of climate actions, and knowledge and learning both within and beyond participating cities. On average 89% of the measures agreed upon in each city’s capacity development strategy have since been implemented.⁵⁶

The programmes that aim to enable the environment to design and implement carbon pricing instruments (see chapter 6) also provide examples of technical assistance activities that contributed to the success of the programme and that were praised by recipient countries:

- The **PMR** has had a strong impact on stakeholder engagement and has also impacted MRV systems, benchmarking, and specific mechanisms. There is also clear evidence the PMR having a broader influence on global policy discussions. Its evaluators noted: PMR language quoted in negotiations; PMR participants more confident in participating in global policy discussions; advocacy documents cite PMR outputs; new countries are considering carbon pricing instruments due to PMR outputs.
- The **FCPF** actively produced guidance for the implementation of readiness programs at the country level which were positively valued by REDD Country participants and were essential in starting and guiding Readiness Implementation. Most REDD Countries acknowledged the importance of the FCPF for its role in kick-starting the National REDD+ Strategy process, stakeholder consultations, and raising awareness.

Table 1: Examples of technical assistance activities that have been effective

Programme	Example
RPSP	<ul style="list-style-type: none"> ▪ In Bangladesh, the RPSP was a significant contributor to the country programme process, building on extensive consultations for climate planning already being undertaken for national strategy development; ▪ In Mongolia, some 10–20 new concept notes are being developed as part of the country programme development process, with RPSP support.
NDC Partnership	<ul style="list-style-type: none"> ▪ In Burkina Faso, the NDC partnership has supported broad mobilisation around climate change and attracting funding from partners in the country.
UK PACT	<ul style="list-style-type: none"> ▪ In China, UK PACT grant funding supported the Climate Bonds Initiative (CBI) to provide recommendations to two local government entities to help them build their local green bond market and scale up green bonds issuance in China. The recommendations focused mainly on definitions of ‘green’ projects and assets and included information from international green standards and their potential application within the local Chinese context. As a result of this and other UK PACT projects, CBI and UK diplomats were invited to talks by the People’s Bank

⁵⁵ UK PACT (2021), “UK PACT (Partnering for Accelerated Climate Transitions) – 2020/21: A Synthesis of Fundings”

⁵⁶ UK DESNZ (2021), “Climate Leadership in Cities (CLIC) Programme – Project Completion Report”

of China that ultimately removed 'clean' coal from investments allowed to be made using green bonds under Chinese regulations, making the world's second largest green bond market substantially greener.

ESMAP

- In Kenya, Ethiopia, and Nigeria, ESMAP-supported geospatial electrification planning which played a critical role in changing mindsets around energy access and launching national electrification strategies and ultimately informed World Bank lending operations resulting in additional preparation support from ESMAP (e.g., through Lighting Africa).
- Also, in Ethiopia, ESMAP's 2016 study on the financial viability of African power utilities was noted as particularly "eye opening in conversations with counterparts," in the words of one World Bank interviewee.
- In Rwanda, the Government committed to a quarterly electricity tariff adjustment in 2019, as a prior action in the energy sector development policy lending series.
- In Mongolia, ESMAP helped remove the barrier of a too-high feed-in-tariff (FIT) for renewable energy—introducing upper tariff limits and competitive auctioning through an amendment to the renewable energy law—and putting the Government on a better path to scale up renewable energy through power purchase agreements (PPAs).

FIP

FIP has been able to change how forests are viewed by key stakeholders, including ministries of finance, shifting the profile of the sector from one viewed primarily as a net cost to one that can potentially be self-sustaining and provide economic value.

- In Burkina Faso, the impact of FIP on government commitment to sustainable forestry has been strong, with FIP being a key driver in supporting the national approach to the creation of a REDD+ strategy.
- FIP has also strengthened existing institutions in other larger middle-income countries (e.g., Mexico and Brazil) where there were already established forestry programs and long histories of government and multi-donor support.
 - In Mexico, the forestry authority, CONAFOR, has successfully coordinated a wide-reaching program of forestry interventions, including structuring the largest loan for forestry in the World Bank's history, as part of a package of investments that include FIP.
 - In Brazil, the Ministry of Finance has played a vital cross-departmental coordinating role, helping to settle disputes among line ministries—a positive sign of high-level commitment.

GET FiT

- In Uganda, the GET FiT programme engaged a number of technical experts to build capacity in the Electricity Regulator Agency (ERA). A team of international lawyers worked with ERA and other national stakeholders to provide background

about the way private sector investment works, encouraging the government to accept risks it was previously unwilling to accept.

The other form of support that interventions have employed and that has also contributed to design low carbon market roadmaps and strategies is **knowledge sharing activities and events** that bring multiple implementing countries together and raise the profile of their projects. In RPSP and UK PACT, these activities fostered collaboration and partnerships at the regional level; in ESMAP, the events organised raised the profile of supported projects and engaged relevant stakeholders.

The evaluation of UK PACT noted that the development of partnerships was vital to successful project delivery. For example, it found that the UK’s embassies in focal countries were seen very favourably in terms of their collaboration with implementing partners in facilitating access to political actors, federal and local government entities, private organisations, and financial institutions throughout the respondent groups. Linking with other UK PACT projects was also viewed as an important means of partnership. Multiple participants commented that the relationships built within the UK PACT also lead to collaborations in other sectors or topics, not necessarily related to climate action. By creating synergies with similar organisations, some participants felt their project delivery could be more effective and could even amplify their results.

The evaluation of **ESMAP** highlighted that its leading position is foremost acknowledged in the energy access agenda. This role was bolstered by international and regional events organised or co-financed by ESMAP, which brought mini-grids and stand-alone systems to the attention of governments, rural electrification agencies, and DFIs. ESMAP played a critical role in creating a growing off-grid electricity community of government, private sector, non-profit, and international stakeholders.

Table 2: Examples of knowledge sharing activities that have been effective

Programme	Example
RPSP	<p>The RPSP has supported Structured Dialogues, workshops and events that had a wide reach and successfully stimulated further engagement:</p> <ul style="list-style-type: none"> ▪ In the Caribbean: A regional readiness proposal to mobilise and engage with the private sector was presented by Jamaica and approved in August 2017 following conversations initiated during the Structured Dialogue with the Caribbean held in June 2017; ▪ In the Pacific: Dialogues and missions resulted in advancing multi-country projects in early warning systems and climate information; exploring opportunities for regional approaches to food security and transport; and strengthening collaborative efforts to identify and address barriers and opportunities for engaging the private sector in climate; ▪ In Asia: A green banking initiative mooted at the Asia Structured Dialogue is being developed by Bangladesh, Indonesia, Malaysia, and the Philippines with support from the Secretariat’s Private Sector Facility. South-south cooperation exchange visits have taken place because of the Asia Structured Dialogue: visits

from Bangladesh and Nepal NDAs to India, and by a Pakistan NDA to Mongolia; and

- Across regions, exchanges between NDA/FPs are taking place with the aim of sharing best practices in early readiness implementation experiences (specifically for country programming, engagement of the private sector and communications materials).

7.2 Contexts that facilitate or impede effectiveness of interventions

Country driven and country-owned approaches to climate action are key. Support should be directly aligned with country needs and priorities, timely, and seek to complement and not duplicate existing readiness initiatives and programmes at international, national and regional levels. For example, the design of the RPSP ensures that countries retain a lot of flexibility in institutionalising their own processes, and therefore determining what country ownership means to them as well as the readiness support activities that are needed. Examples from UK initiatives where lessons can be learned to better support NDCs include:

- The 2050 Calculator was delivered too late in Colombia to support greater ambition for their nationally determined contributions (NDCs) in response to the Paris Agreement of 2015.
- Ambitious targets advocated by the UK were not included in the Indonesian NDC because Government of Indonesia ministers and officials were not confident that the targets were achievable.

Yet, **factors within the country can either facilitate or impede effectiveness.** For example, where all the relevant government ministries and agencies have the desire to support the common goal and work together backed by overall political will, implementation runs more smoothly. However, there are cases of insufficient motivation, misaligned incentives, or in-fighting between different groups (e.g. RPSP, CLIC). In the absence of such strong country ownership, with clear strategy and sufficient communication, there is a tendency for each to pursue its own agenda in a largely uncoordinated fashion. Related, policies and priorities need to be sufficiently aligned at the national, regional and local levels. Political instability or regime change can dramatically change how implementation is progressing.

Training is a significant mechanism across interventions. For example, UK PACT noted enhanced action resulting from its training activities, including taking steps to improving ESG practices and aligning to climate financing governance reporting standards. This reflects increased interest in the development of national green financial markets, and an acknowledgement of the importance of harmonisation of GHG monitoring, reporting, and verification systems.

The evidence reviewed indicated that **relationship building and stakeholder engagement are critical** to improving the enabling environment and gathering the support necessary to increase climate ambition, as well as achieving buy-in and long-term sustainability. The level and nature of engagement for each group should be carefully considered and planned for over time. In addition to government representatives at a variety of levels, it should include the private sector, civil society organisations, and local communities, and vulnerable, marginalised and indigenous peoples. Most, if not all, interventions reviewed had extensive stakeholder engagement components, or otherwise offered support for them.

Multiple evaluations noted that the ability to **leverage financial resources beyond the programme** to maximise its impact and ensure its sustainability was seen as a key enabling factor for sustained results (e.g. RPSP, UK PACT, ESMAP).

The ICF Mitigation Options Synthesis Report noted that across both capital and technical assistance investments, **expanding the duration of support can help increase the impact** from investments. Across a range of opportunities, longer timelines for support can help secure mitigation outcomes – particularly for opportunities that require long-term capacity building, as with governance, policy development and financial sector reform.

Chapter 6.2 provides additional information on contextual factors that affect the effectiveness of interventions aiming at improving the enabling environment to establish carbon pricing instruments.

7.3 Areas that need further investment

Vivid Economics found there is broad demand and need for governance support to improve the enabling environment and overcome political economy constraints, improve and mainstream climate change within policy and institutional frameworks, and strengthen coordination between national and sub-national government and between government, business and civil society. The report noted that this type of intervention is likely to achieve high cost-effectiveness, given that it may contribute towards large system-wide mitigation actions at a relatively low cost, compared with other types of interventions⁵.

In countries with relatively less advanced governance systems or financial markets, **investing in improved capacity and expertise** are crucial precursors to delivering mitigation across sector-specific opportunities. Programmes such as RPSP, which focus on countries' readiness for mitigation programmes, may be effective in these contexts. Recommendations from the RPSP evaluation suggest building a more specific vision and targets (e.g. what does it mean for a country to be ready, and requiring the development of readiness targets, progress and result indicators) as well as the need for a differentiated approach based on national contexts, needs and results. This is based on the finding that "readiness" varies greatly among countries and that a more targeted approach would increase the effectiveness of the intervention and the way results are measured.

Vivid Economics identified that, in these contexts, barriers that need to be addressed revolve around political leadership, absence of comprehensive climate laws and sector plans, lack of effective institutional frameworks, poor sub-national government coordination, and disjointed engagement with important stakeholders⁵.

The report suggested that **interventions focus on:**

- Improving **governance for low-carbon transitions**, ensuring the attention to political economy barriers and the inclusion of communities and vulnerable groups for a just transition, to avoid the negative consequences that can arise from low-carbon governance, such as unemployment and inequalities in some sectors;
- Supporting the **uptake and use of climate intelligence and data** and the development of high-quality technical inputs such as emissions data, inventories, and developing models for GHG emissions projections or risk pathways;
- Supporting the development of **green financial systems**.

In these types of interventions, TA and knowledge sharing activities can be combined with capital investment. There is particular value in using multifaceted delivery approaches that combine capital spend with technical assistance, take programmatic approaches, or expand bilateral partnerships and the duration of support. This is also highlighted in the evaluations of the GCF's RPSP and NAMA Facility, suggesting high value in increasing the use of TA within programmes, and of combining TA with capital investment.

In terms of geographies, Vivid Economics posited that there is high mitigation value in **expanding partnerships** beyond the set of countries where DESNZ has strong national partnerships, so supporting new opportunities in Southeast Asia, for example in Indonesia and Malaysia, or expanding Sub-Saharan African partnerships to include East Africa (e.g. for energy opportunities) or West Africa (land use opportunities)⁵.

7.4 Areas of strength for ICF

Reviews of the ICF portfolio note the UK has made a substantial contribution to catalysing global action on climate change, both through its own funding and by influencing international actors and developing countries to intensify their efforts on climate change. The UK is an influential actor within the international climate finance architecture, with a voice in the use of much larger amounts of climate finance. The low-carbon development programming is focused on demonstrating the viability of low-carbon initiatives. The UK engages effectively with a wide range of actors and is enjoying some success in promoting leadership of low-carbon initiatives by developing countries and mobilising private finance into low-carbon investments. It makes significant investments in knowledge and learning to support low-carbon development, and is a major advocate of a stronger focus on results in international climate action.

According to the Compass PE3, the UK is viewed, by other donors for example, as proactive, reliable, and good to work with; as a credible participant in debates, whose position is based on careful thought and strong analysis; and a country which fields technically competent and skilled staff in support of its policy objectives. The UK influences the positions of other donors in four main ways: i) by deploying specialists to generate robust evidence which justifies and rationally advocates the UK's position; ii) by taking up formal roles that enable it to move things forward and steer debate; iii) by putting skilled and experienced individuals into key roles where their behaviour command respect and followership; iv) and by building on the credibility that the UK has in this field, putting its money and human resources behind its public commitments. Occasionally, overuse or inappropriate deployment of these strengths can obstruct the UK's ability to influence.

8 Conclusions

8.1 How the themes are interlinked

Although discussed separately, the themes analysed in this review are closely interlinked. For instance, achieving Transformational Change through demonstration effects involves leveraging additional finance; and sufficient political will and local ownership have been found to be key success factors across several themes.

8.1.1 Key success factors to leverage finance, achieve Transformational Change and/or accelerate innovation

The review has shown that most programmes within the ICF portfolio provide funding with the expectation to leverage additional finance and produce Transformational Change (although sometimes the ambition of seeking Transformational Change is not recognised yet in the programmes' theories of change, e.g. REPP). Some of these interventions also seek to accelerate innovative technologies.

For this type of interventions to be successful, one or more of the following elements need to be embedded in their design/rationale:

- The **scale of finance** is large, with projects implemented in sufficient number (or at sufficient scale) within a given context to prove their effectiveness;
- HMG is a **cornerstone investor**, helping invested firms/funds to build their **track record**;
- The projects funded are **novel** (e.g. a 'proof of concept' of a new technology, or an existing technology in a new context);
- The projects funded are demonstrably **bankable** (i.e. demonstration of a project's commercial value and commercial thinking);
- There is **willingness to take risks** and high degree of comfort with messiness or failure;
- The **financial instruments are tailored** to overcome the local barriers identified to access private finance.

8.1.2 Key success factors to achieve political will and local ownership

Sufficient political will and local ownership are necessary conditions for interventions to succeed, irrespective of the objectives pursued by the programme (i.e. whether it is achieving Transformational Change or designing new carbon pricing instruments). Lessons learned from the evaluations reviewed on how to maximise political will and local ownership should be carefully considered by those designing or implementing new programmes.⁵⁷ The main key success factors identified across the different themes in this review are:

- Alignment with national policies and priorities;

⁵⁷ Examples of evaluation reports with lessons learned on local ownership are:

- Green Climate Fund IEU (2019), "Green Climate Fund – Independent Evaluation of Green Climate Fund's Country Ownership Approach – Final Report"
- Ipsos MORI and SQ Consult (2021) "NAMA Facility – 2nd Interim Evaluation and Learning – Learning Report: Pathways for enhancing local ownership"

- Extensive stakeholder dialogue and meaningful engagement with sub-national and non-state actors;
- Having a greater local say in the use of climate finance, such as through national identification of project concepts;
- Gaining the support of influential local champions;
- Flexibility in implementation to evolve as the local context evolves;
- Having sufficient, ideally dedicated, staff (with the appropriate expertise) within country.

8.1.3 The role of technical assistance, capacity building and knowledge exchange

Technical assistance and, more broadly, capacity building and knowledge exchange, have been essential in interventions that aimed to develop carbon pricing instruments, interventions where the objective was to improve the enabling the environment, and interventions that supported innovation:

- Readiness-focused **technical assistance** to national governments was effective at supporting the development of carbon pricing instruments and national strategies for climate mitigation (e.g. REDD+) for example. At the international level, it supported the development of new methodologies (e.g. new CDM methodologies). Technical assistance, or grants to access technical assistance, were also highly valued in interventions that seek to leverage funding and achieve Transformational Change, like the NAMA Facility.
- **Knowledge sharing activities** were considered of high value in programmes such as ESMAP, UK PACT, and PMR.

8.2 Key strengths identified in the ICF portfolio

The evidence review has found that the UK is driving better monitoring and evaluation practices and promoting better results measurement across the ICF portfolio. In particular, the UK's strong emphasis on transformational change is influencing other funders and agencies. Examples of this include the NAMA Facility, the GCF, and the CIFs.

The UK's own experience and its leadership in climate mitigation positively influence the programmes it funds:

- The UK's expertise and experience in its own decarbonisation pathway is seen as an area of strength in its ability to support innovation in energy and land use activities in other countries;
- Partnerships and collaborations are a key strength for the UK, which are vital facilitators for innovation;

Finally, it should be noted that the UK is one of the main international donors in the field of climate mitigation. The scale of funding provided by some programmes (e.g. NAMA Facility, CTF) has been key in unlocking further investment. This would have not been possible without the UK's contribution.

8.3 Areas for further investment

The evidence review has also provided some lessons on key areas for further investment. Some of these areas relate to specific technologies and markets (see chapter 4.3), whereas others refer to types of support needed to increase effectiveness. Among the latter, the main types of support identified are:

- More communication of demonstration effects, both to leverage more finance and to incentivise Transformational Change;
- More technical assistance and platforms for knowledge sharing in interventions that support the development of carbon pricing instruments; and
- Strengthening of research capacity and expertise in ICF priority countries to support innovation.

When it comes to leveraging finance and achieving Transformational Change, there must be a critical mass of enabling factors and reduction in barriers for a programme to be effective. Some interventions fell short of meeting their objectives because the support they provided was insufficient (e.g. their scope/scale were limited), or they did not address all the barriers (e.g. the interventions only provided funding, which did not address political/macro-economic barriers).⁵⁸ When the scope of interventions is limited and do not address all the barriers, or when additional resources are needed (e.g. to increase the scale of funding), better coordination with other interventions may be a solution. This could be achieved through:

- Better coordination between programmes that provide TA and programmes that provide financial support;
- Better coordination among funders/programmes that provide financial support, e.g. to provide blended instruments.⁵⁹
- Coordination may also achieve efficiency gains, e.g. to disseminate lessons learned and communicate success stories.

⁵⁸ For instance, the evaluation of REPP found barriers in the regulatory environment that the programme was not proactively addressing, and the evaluation of Ci-Dev found that the financial support provided through the emissions reduction purchase agreements was often insufficient to overcome all of the financial challenges projects faced, particularly liquidity.

⁵⁹ For instance, Ci-Dev could be blended with up-front funding to overcome liquidity constraints.

Annex 1: List of programmes within the scope

The list of ICF programmes included within the scope of this evidence review are the following⁶⁰:

- 2050 Calculator
- BioCarbon Fund (BioCF)
- Capacity Building for Transparency Initiative (CBIT)
- Carbon Initiative for Development (Ci-Dev)
- Clean Energy Fund Technical Assistance Programme (CEF TA)
- Clean Energy Innovation Facility (CEIF)
- Climate Ambition Support Alliance (CASA)
- Climate Finance Accelerator (CFA)
- Climate Leadership In Cities (CLIC) Programme
- Climate Public Private Partnership (CP3)
- Energy Sector Management Assistance Programme (ESMAP)
- Fiji Support programme
- Forest Carbon Partnership Facility (FCPF) - Carbon Fund
- Global Climate Partnership Fund (GCPF)
- Global Energy Transfer Feed-in Tariff (GETFiT)
- Global Innovation Lab (Continuation of the Capital Markets Climate Initiative)
- Green Climate Fund (GCF)
- Green Africa Power (GAP)
- International Carbon Capture and Storage
- International Climate Change Negotiations Support Programme (NSP) - Previously support to the CDKN
- Knowledge, Evidence and Engagement Portfolio (KEEP)

⁶⁰ This list compiles all programmes that DESNZ (previously BEIS) ICF has ever funded, however not all programmes listed are included in the analysis in this report.

- Market Accelerator for Green Construction (MAGC)
- NAMA Facility
- NDC Partnership
- Partnership for Market Implementation (PMI)
- Partnership for Market Readiness (PMR)
- Partnerships for Forests (P4F)
- Pollution Management and Environmental Health (PMEH)
- REDD Early Movers programme (REM)
- Renewable Energy Performance Platform (REPP)
- Silvopastoral Systems (SPS)
- Sustainable Infrastructure Programme (SIP) - Latin America
- Territorios Forestales Sostenibles (TEFOS) – formerly ForTREES For People
- Transformational Carbon Asset Facility (TCAF)
- UK Climate Investments Pilot (UKCI)
- UK Partnering for Accelerating Climate Transitions (UK PACT)

Annex 2: Research matrix

Theme	Which types of interventions have been effective?	Which contexts facilitate effectiveness, and which ones hinder it?	Which areas need further investment?	Does the evidence show different instruments as natural areas of strength for ICF?
Transformational Change (Transformational Change)	<ul style="list-style-type: none"> • What are the dimensions of Transformational Change covered in ICF evaluations? • What role (e.g. enablers, drivers...) do technical assistance, private finance and innovation play when pursuing Transformational Change? • How strong is the evidence on achievement of Transformational Change? • What is the profile of UK climate support (size, type of intervention) in the programmes where highest effectiveness has been evidenced? 	<ul style="list-style-type: none"> • What evidence is there for socio-demographic, cultural or environmental contexts under which higher levels of effectiveness are apparent? • In those regions where evidence of achieving Transformational Change is weaker, what aspects of the context limited effectiveness? 	<ul style="list-style-type: none"> • What are the thematic areas or stakeholders that evaluations highlight as key gaps to driving impact? • What form of support is needed in those? 	<ul style="list-style-type: none"> • What instruments used by ICF have facilitated and/or achieved higher effectiveness?
Private Finance	<ul style="list-style-type: none"> • How strong is the evidence on mobilisation of private capital in the context of ICF interventions? • What types of support are mobilising (or facilitating) the most private capital? • Which programmes have mobilised private capital in new areas, and how? • What types of interventions have proved effective in de-risking investments and in what contexts (e.g. stages of project cycle, sector)? • What, if any, evidence is there for value for money achieved by different 	<ul style="list-style-type: none"> • What market conditions/stakeholders (in the context of ICF interventions) are needed to mobilise private finance? • In which markets have programmes been additional and why? 	<ul style="list-style-type: none"> • What, if any, evidence is there on potential de-risking areas (in the context of ICF interventions) that need to be further targeted for private capital to flow in? 	<ul style="list-style-type: none"> • What instruments, or combination of instruments (e.g. TA + grants) have been most effective in ICF portfolio? • How do instruments in ICF portfolio compare to those used by multilaterals?

	types of finance interventions?			
Innovation	<ul style="list-style-type: none"> • How is innovation defined within ICF portfolio? • How have programmes ensured that funding for innovation is ODA-compatible? • How are innovation interventions supporting SDGs? • What forms of ODA-financed innovation/RD&D support have been most impactful at driving innovation and why? • How does this differ per stage of innovation?_ • What, if any, evidence is there for value for money achieved by different types of innovation interventions? 	<ul style="list-style-type: none"> • What contextual enabling factors, partnerships and collaboration are needed to achieve innovation? 	<ul style="list-style-type: none"> • What, if any, evidence is there on clean energy innovation needs (clean technologies, business models and institutional/governance aspects) in ICF priority countries? 	<ul style="list-style-type: none"> • Are any thematic areas where UK's support is strongest? E.g. Solar, Wind? • Are any climate pull mechanisms where UK's support is strongest? E.g. Advance market commitments, results-based financing, public procurement
Carbon pricing instruments	<ul style="list-style-type: none"> • What types of interventions (technical assistance, financial support, results-based finance) or combination thereof have been most effective at supporting the development of carbon pricing instruments? 	<ul style="list-style-type: none"> • What stakeholders need to be engaged in these types of interventions for them to be effective? • What contextual factors affect the effectiveness of this type of interventions? 	<ul style="list-style-type: none"> • Are there any stage of implementation (e.g. readiness, piloting, implementation) where target geographies require support? • What form of support is needed in those? 	<ul style="list-style-type: none"> • Are there any market instruments where the UK has relevant experience to offer? (E.g. ETS, carbon taxes, etc.)
Support to climate negotiations / other types of TA	<ul style="list-style-type: none"> • What programmes and types of interventions have been most effective at raising climate mitigation ambition? 	<ul style="list-style-type: none"> • What stakeholders need to be engaged in this type of interventions for them to be effective? • In which contexts have these interventions been most effective? 	<ul style="list-style-type: none"> • Are there any geographies where this type of support is needed? 	<ul style="list-style-type: none"> • Are there any types of programmes (sectors, geographies) where effectiveness is higher when they are accompanied by climate negotiation?

Annex 3: Coding framework

File (basic characteristics of the reports reviewed):

- Document
 - Evaluation
 - Annual review
 - Lessons learned report
 - Other
- Year
- Author

Cases (descriptors of the document):

- Programme [list of programmes evaluated]
- Funding portfolio
 - ICF
 - GCF
 - CIF
 - Other
- Type of intervention
 - Technical assistance
 - Concessional finance
 - Competition
- Theme
 - Transformational change
 - Innovation
 - Private finance
 - Carbon markets
 - Support to climate negotiations
- Sectors
 - Renewable energy
 - Energy efficiency, including green buildings
 - Transport
 - Waste and wastewater
 - Industry
 - Land-use change and forestry

Nodes (coding framework – each piece of text could be assigned to one or more nodes, at any level):

1. Transformational change
 - 1.1. Types of interventions
 - 1.1.1. Dimensions of Transformational Change covered in evaluations
 - 1.1.1.1. Replication
 - 1.1.1.2. Scaling up
 - 1.1.1.3. Political will and local ownership
 - 1.1.1.4. Demonstration effect / evidence of effectiveness is shared
 - 1.1.1.5. Capacity and capability increased
 - 1.1.1.6. Innovation

- 1.1.1.7. Incentives for others to act
 - 1.1.1.8. Other
 - 1.1.2. How different types of programmes support Transformational Change
 - 1.1.2.1. Technical assistance
 - 1.1.2.2. Private finance
 - 1.1.2.3. Innovation
 - 1.1.3. Strength of evidence of achievement of Transformational Change
 - 1.1.3.1. Strengths
 - 1.1.3.2. Limitations
 - 1.1.3.2.1. Too early to assess Transformational Change
 - 1.2. Contextual factors
 - 1.2.1. Socio-demographic, cultural and environmental contexts that facilitate Transformational Change
 - 1.2.2. Contextual factors that limit Transformational Change
 - 1.3. Areas for further investment
 - 1.3.1. Thematic areas
 - 1.3.2. Stakeholders
 - 1.3.3. Forms of support
 - 1.3.3.1. Technical assistance
 - 1.3.3.2. Grants
 - 1.3.3.3. Concessional finance
 - 1.3.3.4. Climate diplomacy
 - 1.3.3.5. Other
 - 1.4. Instruments and areas of strength for ICF
2. Private finance
 - 2.1. Types of interventions
 - 2.1.1. Strength of evidence of mobilisation of private capital
 - 2.1.1.1. Strengths
 - 2.1.1.2. Limitations
 - 2.1.1.2.1. Too early to assess
 - 2.1.2. Types of support that are mobilising private capital
 - 2.1.3. Types of support that are effective at de-risking investments
 - 2.1.4. Areas (sectors, business models) with high effectiveness in de-risking
 - 2.1.5. Types of support that offer good value for money
 - 2.2. Contextual factors
 - 2.2.1. Market conditions that are necessary to mobilise private capital
 - 2.2.2. Stakeholders to engage to mobilise private capital
 - 2.2.3. Markets where ICF investments have (not) been additional
 - 2.3. Areas for further investment
 - 2.3.1. Areas that need to be de-risked
 - 2.4. Instruments and areas of strength for ICF. Evidence of effectiveness per type of instrument.
 - 2.4.1. Technical assistance
 - 2.4.2. Grants
 - 2.4.3. Loans
 - 2.4.4. Private equity
 - 2.4.5. Results-based finance
 - 2.4.6. Other
3. Innovation
 - 3.1. Types of interventions
 - 3.1.1. How is innovation defined?
 - 3.1.2. How have programmes ensured that funding for innovation is ODA-compatible?

- 3.1.3. How are innovation interventions supporting SDGs?
- 3.1.4. Forms of ODA-financed innovation/RD&D support that have been impactful, and why
- 3.1.5. Evidence of VfM of ODA-financed innovation/RD&D support
- 3.2. Contextual factors
 - 3.2.1. Contextual enabling factors to achieve innovation
 - 3.2.2. Partnerships and collaboration needed to achieve innovation
- 3.3. Areas for further investment
 - 3.3.1. Evidence on innovation needs
 - 3.3.2. Geographies that need further support
- 3.4. Instruments and areas of strength for ICF
 - 3.4.1. Thematic areas where UK's support is strongest
 - 3.4.1.1. Renewable energies
 - 3.4.1.2. Energy efficiency
 - 3.4.1.3. Other
 - 3.4.2. Climate pull mechanisms where UK support is strongest
 - 3.4.2.1. Advance market commitments
 - 3.4.2.2. Results-based financing
 - 3.4.2.3. Public procurement
- 4. Carbon pricing instruments
 - 4.1. Types of interventions. Effectiveness of:
 - 4.1.1. Technical assistance
 - 4.1.2. Financial support
 - 4.1.3. Results-based finance
 - 4.2. Contextual factors
 - 4.2.1. Stakeholders that need to be engaged
 - 4.2.2. Facilitating factors
 - 4.2.3. Limiting factors
 - 4.3. Areas for further investment
 - 4.3.1. Stages where further support is needed
 - 4.3.1.1. Readiness
 - 4.3.1.2. Piloting
 - 4.3.1.3. Implementation
 - 4.3.2. Forms of support needed
 - 4.3.2.1. Technical assistance
 - 4.3.2.2. Grants
 - 4.3.2.3. Concessional finance
 - 4.3.2.4. Climate diplomacy
 - 4.3.2.5. Other
 - 4.4. Instruments and areas of strength for ICF
 - 4.4.1. ETS
 - 4.4.2. Carbon taxes
 - 4.4.3. RBF
- 5. Support to climate negotiations and enabling environment
 - 5.1. Types of interventions
 - 5.1.1. Enabling environment (improved policy and regulatory framework, political will)
 - 5.1.2. Increased capacity, knowledge, skills
 - 5.1.3. Increased mitigation ambition
 - 5.2. Contextual factors
 - 5.2.1. Stakeholders that need to be engaged
 - 5.2.2. Contexts where these interventions are most effective

- 5.3. Areas for further investment
 - 5.3.1. Geographies
 - 5.3.2. Other areas for further support
- 5.4. Instruments and areas of strength for ICF. Programmes which would benefit from climate diplomacy support.

- 6. Geography (transversal node applied across any theme and research question. For documents that only targeted one country, this was applied at the document level -using case- and then in pieces of text that comment on specificities of the context that underpinned/hindered effectiveness)
 - 6.1. Asia-Pacific
 - 6.1.1. [Sub-nodes were added for each country mentioned in the evidence reviewed]
 - 6.2. Africa
 - 6.3. Latin America
 - 6.4. Europe

- 7. Sector (transversal node applied across any programme, context, etc. For documents that only target one sector, this was applied at the document level -using case- and then in pieces of text where the sector was relevant for analysis purposes)
 - 7.1. Renewable energy
 - 7.1.1. Solar PV
 - 7.1.2. Offshore wind
 - 7.1.3. Etc. [to be added by code task force as new technologies come up]
 - 7.2. Energy efficiency, including green buildings
 - 7.3. Transport
 - 7.4. Waste and wastewater
 - 7.5. Industry
 - 7.5.1. Cement
 - 7.5.2. Etc. (to be added as sectors come up in documentation)
 - 7.6. Primary sector, excluding land use
 - 7.6.1. Fisheries
 - 7.6.2. Mining
 - 7.7. Land-use change and forestry
 - 7.7.1. Agriculture
 - 7.8. Other

- 8. Quality of evaluation / strength of evidence
 - 8.1. Information on methodology
 - 8.2. Limitations

- 9. Other topics (this node was used to code information that did not fit within any existing code, however the review team considered it was relevant. Before starting the analysis, a senior member of the team reviewed all the information in this node and re-coded it to relevant nodes, or un-coded it if considered irrelevant).

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