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EVIDENCE REVIEW ON RESULTS-BASED PAYMENTS APPROACH PAPER

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Evidence review on results-based payments

APPROACH PAPER

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LIST OF AUTHORS

The authors of the evidence review on results-based payments are (in alphabetical order by last name):

FULL NAME	AFFILIATION
Josh Meuth Alldredge	Mathematica
Emma De Roy	Independent Evaluation Unit, Green Climate Fund
Elangthoko Mokgano	Independent Evaluation Unit, Green Climate Fund
Peter Mwandri	Independent Evaluation Unit, Green Climate Fund
Tulika Narayan	Mathematica
Martin Prowse	Independent Evaluation Unit, Green Climate Fund
Jyotsna Puri	Independent Evaluation Unit, Green Climate Fund
William Rafferty	Mathematica
Anu Rangarajan	Mathematica
Faraz Usmani	Mathematica

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ABSTRACT

This paper outlines a proposed approach for conducting an evidence review on the effectiveness of results-based payments (RBPs). Specifically, this evidence review will adopt a broad approach to take stock of the literature on the effectiveness of RBP interventions across (1) all sectors where they have been used (such as agriculture, education and health); (2) multiple types of outcomes; and (3) multiple levels (namely, assessments of RBP interventions that target outcomes at the beneficiary, service provider, investor and system-wide levels). The approach paper then describes the evidence review’s literature search procedure, which – consistent with its broad approach – will target both academic outlets and the grey literature. Based on rigorous screening and data extraction procedures, this evidence review will produce evidence gap maps and an intervention heat map. The former will shed light on where the literature on the effectiveness of RBP intervention is relatively dense and where key knowledge gaps remain salient. Subsequently, an intervention heat map will highlight how the distribution of the Green Climate Fund’s RBP project financing to date relates to the existing evidence base. In so doing, the evidence review will aim to generate insights that inform the enhanced application of RBP interventions to meet international, national and regional climate change goals.

ABBREVIATIONS

CCT	Conditional cash transfer
CO₂	Carbon dioxide
EAP	East Asia and Pacific
ECA	Europe and Central Asia
GHG	Greenhouse gas
LAC	Latin America and the Caribbean
MNA	Middle East and North Africa
NAR	North America
PES	Payments for environmental services
RBP	Results-based payment
SAR	South Asia
SSA	Sub-Saharan Africa
TOC	Theory of change

A. BACKGROUND

Climate change is a defining policy challenge of the twenty-first century. This section begins with a description of the seemingly intractable nature of the climate challenge. Next, it provides an overview of results-based payments (RBPs) and highlights their potential to accelerate progress on global climate goals. The section concludes with a summary of the objectives of the evidence review.

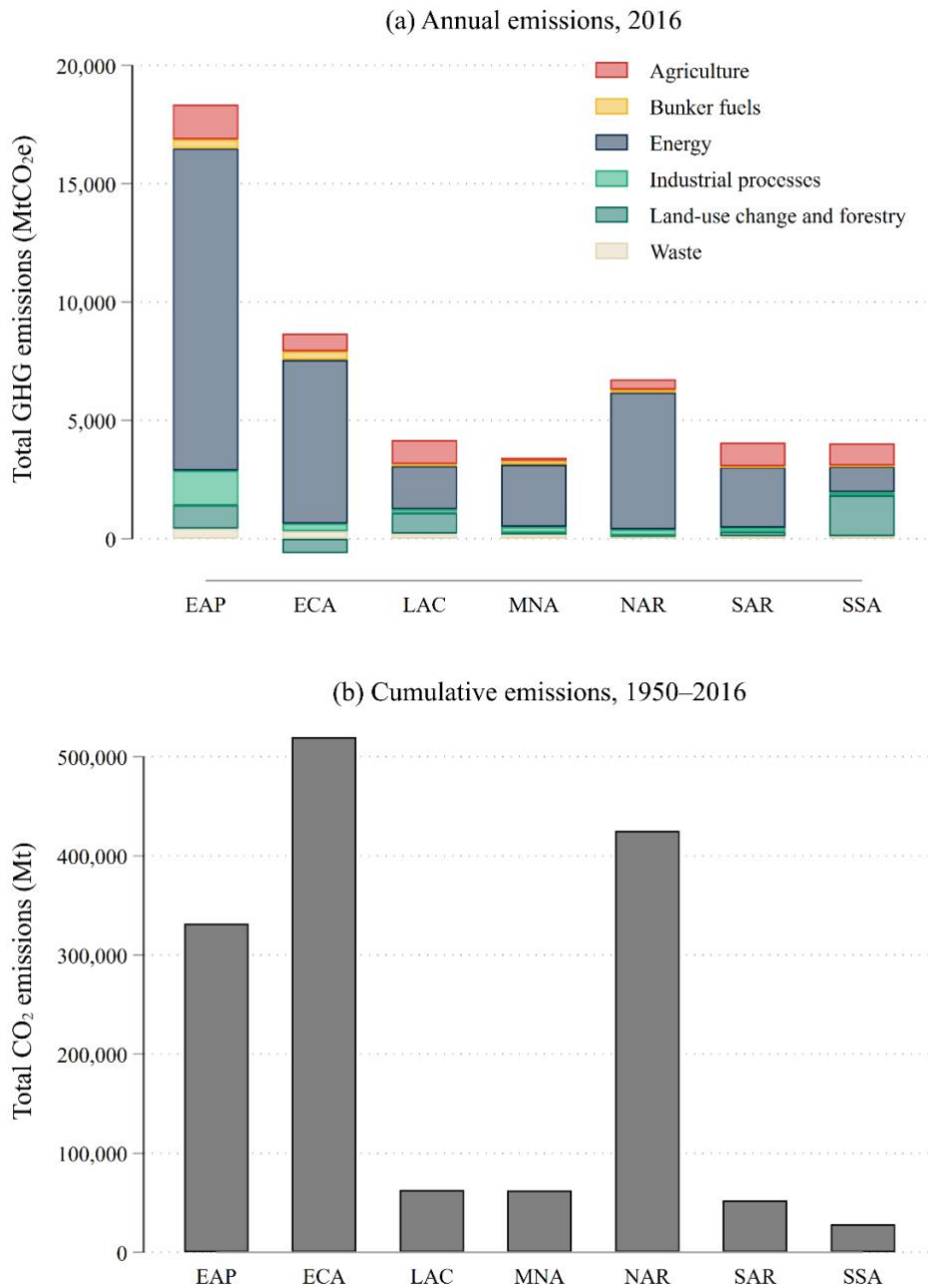
1. DESCRIPTION OF THE PROBLEM: THE CLIMATE CHALLENGE

Recent assessments of trajectories for carbon dioxide (CO₂) and other greenhouse gas (GHG) emissions suggest that global average temperatures will likely increase by approximately 3°C over pre-industrial levels by the year 2100 (Hausfather & Peters, 2020). A growing body of work highlights the substantial negative impacts of such warming. Climate change is likely to negatively affect incomes and economic growth (Burke et al., 2015; Newell et al., 2017), food security (Mbow et al., 2019), public health (Carleton et al., 2020), conflict (Hsiang et al., 2013) and natural ecosystems (Hoegh-Guldberg & Bruno, 2010).

The international community has responded to this challenge in a variety of ways. Global treaties such as the Paris Agreement on climate change have sought to establish emissions mitigation targets and foster international consensus and coordinated climate action. At the same time, national and subnational initiatives have complemented (and sometimes outpaced) international action (e.g. Hsu et al., 2018; International Energy Agency, 2020). However, climate change mitigation is a public good, which frustrates concerted international collective action. First, each country's emissions cumulatively increase global GHG concentrations, while climate impacts are often distributed unequally. This implies that each country's abatement efforts necessarily entail higher national costs than national benefits. Second, unlike other environmental challenges, the effects of climate change will be fully realized farther out in the future. These delayed impacts further dampen enthusiasm for decisive action because humans discount the value of a later reward.

Large regional disparities in who has contributed most to global emissions so far, who will drive emissions growth going forward and who stands to bear the brunt of resulting climate damages pose challenges for designing equitable climate policies. More impoverished regions, in particular, have lower levels of emissions-generating economic activity relative to wealthier regions. As shown in Figure A - 1(a), which presents data on annual regional emissions from Climate Watch (2018), sub-Saharan Africa and South Asia each contributed less than 10 per cent of global emissions in 2016. In addition, Figure A - 1(b) shows that each region's share of cumulative global emissions was even lower (Ritchie & Roser, 2017). Yet countries in these regions will bear a disproportionate burden of future damages. For example, projections suggest that climate change will reduce agricultural yields in sub-Saharan Africa and South Asia by up to 25 per cent by the year 2080; yields in the wealthier, northern latitude countries of Europe and North America, in contrast, are expected to increase (European Environment Agency, 2010). At the same time, relatively poor regions will drive future emissions growth in a variety of sectors as incomes increase. Over the next three decades, for instance, nearly all the growth in energy demand and associated GHG emissions is forecast to come from low- and middle-income countries (Wolfram et al., 2012).

Figure A - 1. Regional emissions patterns



Source: Panel (a): Climate Watch (2018); Panel (b): Ritchie & Roser, 2017

Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; NAR = North America; SAR = South Asia; SSA = sub-Saharan Africa; GHG = greenhouse gas; Mt = metric megatons; MtCO₂e = metric megatons of carbon dioxide equivalent. “Energy” in panel (a) includes (i) building, (ii) electricity/heat, (iii) fugitive emissions, (iv) manufacturing/construction, (v) other fuel combustion and (vi) transportation. Panel (b) reports CO₂ emissions from fossil fuels and cement production only; land-use change is not included.

It is increasingly clear that current efforts are insufficient. Absent dramatic reductions in annual GHG emissions brought on by innovation and technology adoption, behaviour change and policy

reform, the international community is unlikely to limit warming to 1.5°C relative to pre-industrial temperatures, a central objective of the Paris Agreement (Rogelj et al., 2016). Several policy tools and interventions (such as a carbon tax or a global emissions trading scheme) can help drive progress towards meeting these ambitious emissions goals (e.g. Goulder & Schein, 2013). However, breakthrough solutions are needed to bridge the gap between what is needed and what business-as-usual approaches will achieve. RBPs are a unique approach that holds promise. This modality addresses the misaligned incentives at the heart of the climate challenge by making payments to private implementers or beneficiaries contingent on the achievement of specific activities, outputs or outcomes that deliver public benefits for the global commons. They also leverage the creativity and investment of multiple actors, who are free to try different approaches to achieve the same outcome.

2. RESULTS-BASED PAYMENTS: POTENTIAL TO LEVERAGE INCENTIVES FOR CLIMATE ACTION

An RBP contract involves a funder who agrees to make payments to agents for achieving pre-agreed, verified results.¹ In so doing, RBPs convene multiple agents (often in competition with each other) to achieve outcomes and in the process

- align agent-level incentives, thereby partly addressing the market failures that prevent the emergence of well-functioning markets for welfare-improving goods, services and innovations;
- increase accountability by linking financing more directly to desired outcomes rather than specific inputs or outputs, which may be ineffectual or ill-suited for local contexts, thereby increasing funding effectiveness and lowering risks for funders;
- foster autonomy to innovate and adapt by letting agents pick the inputs and processes needed to achieve desired results; and
- crowd-in resources of agents that take on the challenge to achieve the pre-specified outcomes, whether by labour effort they provide or monetary funding to support their effort.

There can be considerable variation in how particular RBP interventions structure, target and deliver incentive payments (see Table A - 1 for a summary of the key RBP interventions that will be the focus of this evidence review). These differences have important implications for how various interventions potentially generate competition, alter the risk–reward payoff for participants and foster nascent markets for beneficial goods and services (Mainville & Narayan, 2017). For instance, grand challenges (such as the XPRIZE) are often structured as winner-take-all competitions designed to incentivize innovation and technological breakthroughs. Because only one prize is typically awarded, grand challenges place relatively higher levels of risk on participants, which can limit participation to those who have the resources needed to make large investments in research and development and take on additional risk. In contrast, payments for environmental services (PES), which are offered to farmers or landowners in exchange for managing land in ways that provide environmental benefits, are typically awarded to multiple beneficiaries who achieve the pre-specified outcome and are not in any competition with one another. This incentive structure makes them uniquely suited to encouraging the adoption and uptake of existing products and practices. It is worth noting, however, that despite this important difference, both approaches bring to bear the creativity and resources of multiple actors on achieving the desired outcome. Specifically, these

¹ Although RBP contracts can also involve a single agent, in this evidence review we will focus principally on those that incentivise multiple entities at the same time, with the exception of impact bonds that do not require multiple agents.

mechanisms foster creativity by giving the agents complete freedom in how they achieve desired outcomes.

Table A - 1. Overview of key RBP interventions

RBP TYPE	RBP INTERVENTION	INCENTIVE STRUCTURE	KEY FEATURES
Supply-side	Grand challenge	Donor pays out a grand prize, typically to one winner upon achieving a pre-specified outcome.	<ul style="list-style-type: none"> Typically used for technology development (e.g. climate resilient houses) Puts multiple agents in competition with each other Places high risk on competitors because only one (or few) prizes are awarded Encourages participation of agents that have resources for initial investment and the ability to take the higher risk of not winning a prize (because only one or few prizes are awarded) May lead to monopolistic pricing of innovation, especially if only one prize is awarded Increases pool of resources to solve the problem
	Advance market commitment	Donor makes a binding agreement to purchase or subsidize the purchase of a pre-specified quantity of the innovation if it meets predefined characteristics.	<ul style="list-style-type: none"> Used for technology development (e.g. vaccines) Puts multiple agents in competition with each other Encourages participation of agents that have resources for initial investment and ability to take the higher risk (because products of only the winners are purchased) Limits monopolistic pricing because donors set the price at which product is purchased Increases pool of resources to solve the problem
	Impact bonds	Investors and donors enter a contract that prespecifies the outcomes to be achieved by the investment and the payment schedule by which donors repay the investors if the project achieves pre-specified social outcomes.	<ul style="list-style-type: none"> Used for service delivery Does not typically put several agents in competition Focused on investors and service providers rather than private sector Increases pool of resources (from investors) to solve the problem
	Payment for environmental services	Donors (or entities benefiting from the actions) pay agents if and only if they take action that improves environmental outcomes (e.g. planting trees).	<ul style="list-style-type: none"> Used for encouraging beneficiary adoption of existing products and services; reduces their risk of adoption Prizes awarded to multiple agents (beneficiaries), but the agents are not in competition with each other

RBP TYPE	RBP INTERVENTION	INCENTIVE STRUCTURE	KEY FEATURES
Hybrid	Pull mechanisms	Market incentivization prizes are paid to private sector agents if they sell products that meet pre-specified characteristics and sale agreements. Payments can be per unit of sale or proportional to sale relative to other sellers, with or without milestone prizes that are awarded to a limited number of agents.	<ul style="list-style-type: none"> • Simultaneously incentivizes supply and demand of the technology through agent effort to increase sale of technology • Used for encouraging adoption of products and services • Aims to address market failure limiting development of market for a technology • Puts multiple agents in varying degrees of competition with each other, depending on specific incentive structure (proportional, per unit, with or without milestone prizes) • Increases pool of resources (from investors) to solve the problem • Aims to create a market for the technology
	Vouchers	Donor commits to reimburse accredited providers on the basis of services delivered to voucher recipients.	<ul style="list-style-type: none"> • Simultaneously incentivizes supply and demand of the technology through agent effort to increase the use of vouchers • Focused on increased delivery and adoption of services • Brings in multiple actors, but not in direct competition • Increases pool of resources
Demand-side	Conditional cash transfers	Donor promises monetary transfers to families, conditional on those households taking pre-agreed actions that improve social outcomes (e.g. sending children to school).	<ul style="list-style-type: none"> • Focused on adoption of services by beneficiaries • Beneficiaries are typically not in direct competition with each other if there is adequate supply of services available on the basis of which cash awards are made, and as long there is adequate supply of resources for providing cash transfers • Does not increase pool of resources except through households' efforts to utilize socially beneficial services

The different types of RBPs presented in Table A - 1 can be broadly classified into three groups based on the identity of the targeted agent. Specifically, supply-side RBPs alter the incentives for suppliers to increase the supply of beneficial goods and services. Advance market commitments, for instance, are RBP contracts under which funders promise to purchase a predetermined quantity of a desired good or service (such as a vaccine) if and when one is developed. This contract lowers the private sector's risks associated with investing in high-cost research and development by creating a viable market for innovations. Demand-side incentives, in contrast, target final beneficiaries directly to increase demand and promote the consumption of beneficial goods and services. Conditional cash transfers (CCTs), for instance, are incentives offered to households or individuals in exchange for

consuming social services that improve socioeconomic and demographic outcomes. Finally, hybrid incentives combine characteristics of both supply- and demand-side mechanisms. Pull mechanisms are an example of such a hybrid tool, which can incentivize sales of beneficial goods and services by private sector actors. Specifically, by linking incentive payments to verified sales, pull mechanisms encourage service providers to increase their capacity to supply targeted goods or services while also engaging in activities to identify and invigorate demand among potential end users and customers.

There is emerging evidence that the use of RBPs has broken down implementation barriers and driven progress on intractable social challenges in diverse sectors. An initial review of evidence suggests that there is a rich literature on RBPs in the health sector (Audit Commission 2005; Brenzel et al. 2009; Eichler et al., 2013; Eldridge & Palmer, 2009; Gorter et al., 2013; Mendelson et al., 2017; Renmans et al., 2016; Renwick et al., 2016; Suthar et al., 2017; Turcotte-Tremblay et al., 2016; Mueller-Langer, 2013). In particular, CCTs deployed as part of national health systems have increased the use of preventive and maternal health services and have improved health outcomes (Gertler, 2004; Lagarde et al. 2007; Owusu-Addo & Cross, 2014). In the education sector, the use of CCTs has increased enrolment and attendance, although the evidence of impacts on learning outcomes is weaker (Baird et al., 2014). Similarly, vouchers provided to low-income households and individuals – including in high-income settings – have enhanced access to housing, educational and health services; increased competition among service providers; and improved a host of socioeconomic outcomes (Bellows et al., 2010; Kling et al., 2005; Sandström & Bergström, 2005).

Results-based mechanisms have also been used to deliver climate finance (World Bank Group & Frankfurt School of Finance and Management, 2017). In particular, PES delivered through projects based on afforestation/reforestation, improved forest management, REDD+ and sustainable agriculture have become a key modality through which funders pursue climate goals. Prior evidence reviews have assessed the potential of PES (Snilstveit et al. 2019; Samii et al. 2014) and applications for biodiversity conservation (Herzon et al. 2018), but the literature is relatively limited. In addition, although the broader evidence base on the impacts of such payments on deforestation is mixed (Pattanayak et al., 2010), recent rigorous evaluations point to their potential to significantly increase forest cover (Arriagada et al., 2012; Jayachandran et al., 2017). Applications of RBPs in the energy sector – where they have been deployed to incentivize the adoption, sale and use of climate-friendly energy technologies and to promote innovation across the energy supply chain – are also common (Usmani et al., 2017; Vivid Economics, 2013).

There is promise in the potential of RBPs to drive climate action, yet lessons from a multi-sectoral, loosely linked literature make it difficult to distil clear insights. This evidence review seeks to take stock of the disparate evidence base on the effectiveness of RBPs across all sectors. In so doing, it aims to synthesize actionable insights for the enhanced application of RBPs to effectively meet international climate goals.

3. OBJECTIVES OF THE EVIDENCE REVIEW

Two primary research questions guide this evidence review:

- 1) What is the evidence base on the effectiveness of RBP interventions?
- 2) Where has the Green Climate Fund allocated RBP project financing to date?

We will answer these questions through a systematic, multi-sectoral literature search informed by a coherent theory of change and intervention/outcome framework. This will in turn inform the development of an evidence gap map that highlights the evidence base on the effectiveness of RBP

interventions across sectors and geographies, and an intervention heat map that maps the Green Climate Fund's prior RBP investments to the existing knowledge base.

In so doing, we aim to build on and extend prior efforts – which have thus far focused on evidence reviews of specific interventions (e.g. CCTs), narrowly defined sectors (e.g. maternal health) and/or specific methods (e.g. experimental interventions) – by adopting a perspective that incorporates many sectors, outcomes, interventions and methods. This breadth is essential for synthesizing actionable insights from a diverse, often disconnected literature to support the enhanced application of RBP interventions in the climate arena. More specifically, this review will contribute to the evidence base on RBPs by

- presenting a broad taxonomy of RBP interventions by collecting, tracking and synthesizing insights of a variety of different tools that share common features within the scope of one stocktaking effort;
- adopting a broad empirical focus (by drawing on experimental, quasi-experimental and non-causal designs) to precisely highlight where the evidence base is robust and rigorous, and where research gaps remain large;
- relying on a systematic, clearly articulated and replicable search approach, which supports future efforts to update the insights and lessons this review seeks to generate; and
- generating insights distinguished by sector, geography and other dimensions to underscore gaps in the evidence base as well as the relative sector-specific advantages and disadvantages of different RBP interventions.

Although this evidence review seeks to inform the enhanced application of RBP mechanisms for climate action, we note that a key limitation of the insights we generate from across multiple sectors will be that they will not be able to speak to the applicability of **specific** RBP interventions in the climate domain because of the public goods nature of the climate challenge, particularly in the mitigation space. Indeed, even if a particular RBP intervention has been extensively and successfully deployed in other sectors, the ways in which it alters incentives for service providers, beneficiaries or investors may be ill-suited to the needs and constraints in the climate change arena, where clear private benefits typically do not accrue to individuals or households (as in the case of consumption of primary health services incentivized by CCTs) and tangible products that can support future revenue streams (such as vaccines whose innovation is incentivized by advance market commitments) are rare. In particular, this evidence review will not present results from a meta-analysis, which often generates broader, generalizable insights by rigorously drawing on multiple sources of evidence.

B. METHODS

In this section, we first present the meta-theory of change (meta-TOC) that guides our evidence review. We then outline our intervention/outcome framework, which is informed by the meta-TOC. Next, we present the evidence review's inclusion/exclusion criteria and describe the search strategy we will use to search for and identify the relevant literature. Finally, we detail the literature coding, extraction and analysis process we will use to generate the evidence gap maps and intervention heat map that provide insights on the distribution of the broader RBP literature and on the Green Climate Fund's RBP investments, respectively.

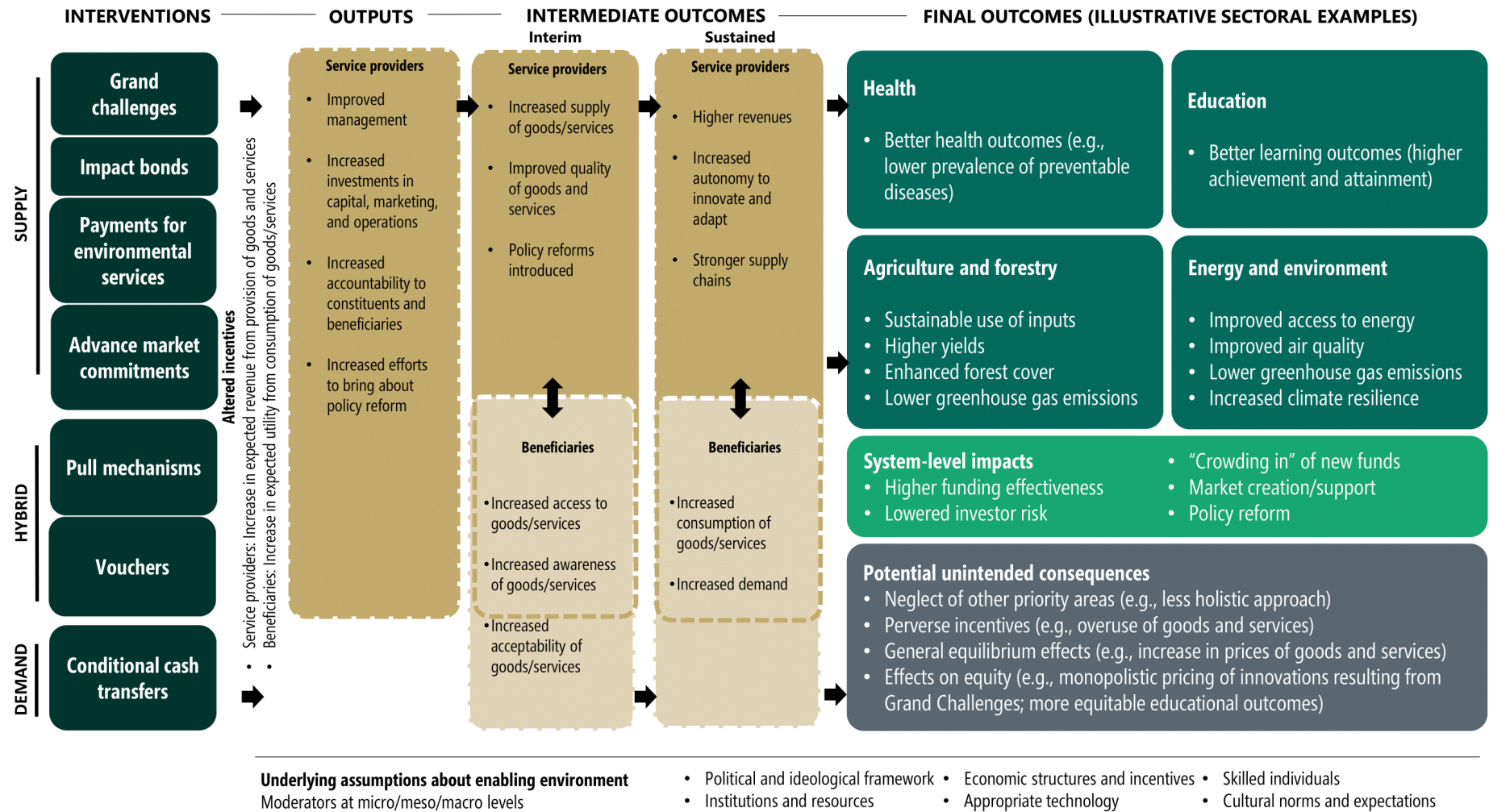
1. META-THEORY OF CHANGE

The meta-TOC shown in Figure A - 2 highlights the key pathways through which the deployment of RBPs alters incentives and promotes the delivery of key outputs, which in turn determines intermediate and final outcomes at the service provider, beneficiary, investor and system-wide levels. These causal pathways start with the recognition that supply-side, demand-side and hybrid RBP interventions target and influence distinct groups of actors/agents and beneficiaries through their distinctive incentive structures. As noted previously, supply-side RBPs exclusively target suppliers or service providers. The supply-side RBPs work by increasing the expected returns to suppliers from investing in either the development of or sale of a socially beneficially good or service. In doing so, the RBPs address underlying market failures, such as lack of awareness of the technology by potential consumers or poor distribution networks. These RBPs incentivize investments in capital infrastructure, operational process and/or management judged necessary by the service provider to achieve desired outcomes. Different types of supply-side RBP interventions entail different levels of competition and risk for participants, and thus can be used to incentivize distinct types of outcomes and market structures (e.g. incentive structures that reward multiple agents favour the development of a competitive market for the technology). In addition, if the targeted service provider is a policymaker or public-sector agency, a supply-side RBP intervention may also be deployed to incentivize output-level investments to bring about policy reform. Because a key advantage of RBP tools is that investments in outputs are left to the discretion of the service provider, such changes typically go unobserved by funders. Nevertheless, they comprise a crucial piece of the causal chain linking the intervention, implementation and results.

Hybrid investments (such as pull mechanisms) share some of these characteristics, but because they incentivize the sale of products or services by suppliers, they simultaneously invigorate supply (directly) and demand (indirectly) because a sale requires that demand is expressed. On the other hand, demand-side RBPs are targeted exclusively at beneficiaries to promote increased consumption of existing goods and services and thus do not incentivize output-level investments by service providers. These RBPs aim to increase the expected utility of adopting the technology by offering a cash reward, thereby addressing underlying market failures that limit adoption.

Moving through the causal chain, the meta-TOC highlights how output-level investments induced by supply-side and hybrid RBPs yield interim outcomes – namely, increased supply and quality of goods and services and, if relevant, the introduction of desired policy reforms. The meta-TOC also outlines the links between interim outcomes at the service provider and beneficiary levels. Increased supply of goods and services by service providers, for instance, gives rise to increased awareness and access by beneficiaries (e.g. through service provider investments in marketing or distribution networks), which can itself be induced by the deployment of demand-side incentives targeted at beneficiaries.

Figure A - 2. Meta-theory of change



Interim outcomes subsequently yield sustained outcomes for both service providers and beneficiaries. Increased awareness, for instance, increases adoption of, as well as demand for, the goods and services targeted by beneficiaries, which in turn leads to increased revenues by service providers. This self-reinforcing interplay between service providers and beneficiaries is central to how intermediate outcomes yield ultimate results, which are often what RBP interventions aim to drive. Accordingly, the meta-TOC in Figure A - 2 highlights illustrative sectoral examples of outcomes in the health, education, agriculture and forestry, and energy and environment sectors that have routinely been targeted by RBP interventions. Notably, the suppliers, incentivized by the RBPs, may learn about the lack of acceptability of the technologies and tweak their products to increase take-up in their quest to obtain incentive payments.

Sectoral RBP applications can also yield improved investor-level and system-wide outcomes. By linking payments directly to results, for instance, RBP interventions lower the risks donors, governments and other investors face, which has the potential to improve funding effectiveness. Bringing multiple actors to compete with each other also “crowds in” new sources of funding. By supporting the dissemination of innovations that improve well-being, RBP interventions also support the creation and expansion of markets for nascent goods and services.

That said, it is worth noting that the same mechanism through which RBP interventions effectively alter and align incentives can also yield unintended consequences. Depending on how underlying incentive structures are designed, RBP tools may lead to overuse of targeted goods and services, sometimes in ways that lead to the neglect of other priority sectors. Similarly, an increase in demand for a good or service can increase its market price in the medium to long term, which in turn has equity implications for end users who do not receive incentives for consumption. Further, a focus on private sector actors to drive results may mean that they exclude the poorest beneficiaries, who face significant constraints in adopting technologies.

The logic of RBP interventions is grounded in the assumption that the goods, services and activities targeted by incentives will yield desired outcomes (e.g. forests left intact by PES recipients will sequester carbon). Underlying assumptions about the enabling environment, which determines the ways in which various actors respond to new incentives, are also crucial. These include complementary economic and political institutions that lend credence to the RBP contract between funders and agents; the availability of context-appropriate technologies and other resources that enable intermediate outputs to translate into final outcomes; and compatible cultural norms and expectations that allow agents to respond to monetary incentives. In the absence of these foundational elements of the causal pathway, incentives alone are unlikely to be sufficient to drive transformational change.

2. INTERVENTION/OUTCOME FRAMEWORK

The meta-TOC described above directly influences the structure of our intervention/outcome framework, which maps key RBP interventions directly onto outcomes at the beneficiary, service provider, investor and system-wide levels, as shown in Appendix 1. This includes sector-specific outcomes (such as higher test scores among beneficiaries targeted by RBP interventions in the education sector), investments in outputs (such as efforts to improve management, supply chains or marketing efforts by service providers) as well as potentially unintended effects (such as the inefficient overuse of goods and services targeted by incentives). Specifically, three key priorities drive this structure:

- *Consistent mapping of interventions onto outcomes:* The intervention/outcome framework connects the meta-TOC to the evidence gap maps and intervention heat map we ultimately look

to develop using a consistent structure that highlights both outputs and intermediate and final outcomes.

- *Recognition of the importance of different actors/agents and levels:* The framework recognizes that supply-side, demand-side and hybrid RBP interventions alter incentives at various beneficiary, service provider and investor and system-wide levels, thereby enabling us to systematically track the effectiveness of specific RBP interventions on outcomes at these differing levels.
- *Multi-sectoral tractability:* Given the diverse sectors and domains within which RBPs have been deployed, we designed the intervention/outcomes framework with multi-sectoral tractability in mind – namely, that the ways in which it categorizes should be both sufficiently narrow to generate valuable insights about the distribution of the evidence on the effects of RBPs while also sufficiently broad to be easily adapted for analyses focused on sectors beyond those highlighted in the meta-TOC.

3. INCLUSION/EXCLUSION CRITERIA

To systematically characterize a large, disparate literature on the effectiveness of RBPs, an underlying focus on breadth (e.g. across sectors, geographies and study methods) guides this evidence review's scope. More formally, we rely on the PICOS (population, intervention, comparator, outcome and study design) model to precisely describe our inclusion/exclusion criteria below (see 0 for additional details).

a. Population

Following the country-level categorizations outlined in the United Nations Framework Convention on Climate Change, we will include studies that assess the effectiveness of an RBP intervention in

- non-Annex I countries,
- low-income contexts/settings (defined in relative terms) in Annex I countries, and
- non-Annex I and Annex I countries (jointly) if associated analyses distinguish effects and report results separately across the two samples.

We will exclude any study that presents a combined analysis on both non-Annex I and Annex I countries without reporting results across the two samples separately, unless the intervention is carried out in a low-income context/setting in an Annex I country.

b. Interventions

We will include assessments of the effectiveness of RBP interventions

- across all sectors,
- delivered at any administrative level, and
- delivered to any type of beneficiary (e.g. household, individual) by any type of actor (e.g. government, non-governmental organization).

In addition, we will also not impose any restrictions related to intervention-level characteristics (such as modality, intensity, duration or complexity of intervention delivery). In particular, we will not exclude studies based on restrictions related to sample size, thereby ensuring that pilot-scale interventions that often focus on newer, more innovative approaches are captured by our evidence review. Furthermore, we complement our broad focus on RBPs by also focusing on seven specific RBP intervention types (shown in the meta-TOC outlined in Figure A - 2).

c. Comparator

We will consider quantitative studies that clearly identify a comparison/control group. The nature of the comparison/control group will depend closely on the specific methods deployed in the study (e.g. control group in a randomized controlled trial; preintervention outcomes for the unit on analysis in a before-and-after design). We will exclude any study without a clearly articulated control group (e.g. descriptive/predictive analyses highlighting drivers and determinants of selecting into RBP interventions) as well as quantitative methods for which the use of comparison/control groups is not relevant (e.g. life-cycle assessments).

d. Outcomes

Consistent with our multi-sectoral intervention focus, we will adopt a multi-actor focus and look at a range of outcomes measured at the beneficiary, service provider, investor and system-wide levels. In addition, in line with our broad criteria related to study-level characteristics, we will consider studies that measure outcomes at any point following the administration of the relevant RBP intervention.

e. Study design

We will focus on studies that use both causal (experimental and quasi-experimental) and non-causal designs, with one important caveat: for CCTs, we will rely **only** on systematic reviews. Experimental designs include studies that use randomization to delineate statistically indistinguishable treatment and control groups to evaluate causal impacts. Quasi-experimental designs aim to evaluate causal impacts in the absence of randomization and include (but are not limited to) difference-in-differences, regression discontinuity, instrumental variable, and propensity score matching designs. Non-causal designs (e.g. correlation analysis using cross-sectional data) do not aim to evaluate causal impacts but rather offer insights on simple quantitative relationships between key variables.

f. Exclusion criteria

We will exclude all qualitative studies as well as studies that do not clearly articulate a comparison/control group. As mentioned above, we will also exclude studies that do not focus on low-income populations in Annex I countries or which do not report results for Annex I and non-Annex I countries. Finally, we will exclude all published or grey literature that is not in English, as well as all studies published before the year 2000.²

4. SEARCH STRATEGY

Consistent with the broad approach characterized in our inclusion/exclusion criteria, our search strategy is designed to systematically identify relevant publications on the effectiveness of RBP interventions in academic journals as well as in the grey literature. In this section, we describe our three-stage search strategy, outline the databases and repositories our search will target, and describe the search terms that we will use.

² Appendix 4 presents preliminary search results for the published RBP-related literature using three different publication-year cut-offs (1995, 2000 and 2005). Adjusting the cut-off year from 1995 to 2005 lowers the total number of search results by only three per cent, which suggests that the bulk of the potentially relevant literature on RBPs is published after 2005. We select the year 2000 as a conservative cut-off year to capture this literature comprehensively.

a. Search steps

We propose a three-stage search strategy to search for studies germane to this evidence review. First, we will search the titles, abstracts and keywords of studies catalogued by academic databases for terms related to RBPs (excluding those related to CCTs), impact measurement and comparison groups.³

We will then separately search titles, abstracts and keywords of studies catalogued in these databases for a set of terms specific to CCTs and systematic reviews. Consistent with our inclusion/exclusion criteria, this will enable us to deploy distinct, targeted searches for

- systematic reviews on the effects of CCTs, and
- both individual studies and systematic reviews related to all other types of RBPs.

We will complement these systematic searches with manual searches of a set of databases focused exclusively on systematic reviews and evidence syntheses (Table A - 2).

Finally, we will adapt our search terms for the grey literature, for which we will develop a custom search engine using the Programmable Search Engine tool developed by Google. Our custom search engine will enable us to search for and identify relevant publications (such as reports and unpublished working papers) hosted on preselected repositories. We will complement our custom search engine with Think Tank Search, a custom search engine developed by Harvard Library that will enable us to search for relevant publications hosted by over 1,200 global think tanks and research centres.⁴

b. Databases and repositories

Table A - 2 presents the full list of databases and repositories (covering published academic articles and systematic reviews, evidence syntheses and grey literature) that we plan to use.

Table A - 2. List of targeted databases

DATABASE TYPE	DATABASE NAME	COMMENTS
Published academic articles and systematic reviews	Scopus (https://www.scopus.com/)	Cross-disciplinary repository
	EconLit (https://www.aeaweb.org/econlit/)	Economics/social science repository
Systematic reviews and evidence syntheses	<ul style="list-style-type: none"> • Collaboration for Environment Evidence Database of Evidence Reviews • The Campbell Collaboration • Evidence for Policy and Practice Information and Coordinating Centre (EPPI-Centre) systematic reviews • Evidence for Nature and People data portal 	
Grey literature	Custom search engine developed using Google Programmable Search Engine tool covering: <ul style="list-style-type: none"> • World Bank Policy Research Working Papers series 	

³ A full list of the search terms we will use (presented in syntax appropriate for the Scopus database) is shown in Appendix 3, while preliminary search results obtained using these terms are shown in Appendix 4.

⁴ A custom search engine developed using the Google Programmable Search Engine tool uses Google's search algorithms to identify and deliver the 100 most relevant search results from targeted databases and repositories. As we will use two distinct custom search engines, we will retain the 200 most relevant grey literature publications.

DATABASE TYPE	DATABASE NAME	COMMENTS
	<ul style="list-style-type: none"> World Bank Independent Evaluation Group Independent Evaluations and Annual Reviews Abdul Latif Jameel Poverty Action Lab (J-PAL) Policy Publications and Evaluations Innovations for Poverty Action (IPA) Publications International Initiative for Impact Evaluation (3ie) Publications Center for Effective Global Action (CEGA) Research Publications Inter-American Development Bank Office of Evaluation and Oversight Publications AgResults Projects and Evaluation USAID Development Experience Clearinghouse 	
	Harvard Library Think Tank Search (https://guides.library.harvard.edu/hks/think_tank_search)	Covers 1,200+ global think tanks and research centres

c. Search terms

Our systematic search terms (presented in Appendix 3) are organized in the following categories:

1) RBP terminology

- Basic terms:** This subcategory includes terms that are often used interchangeably with or are closely related to the phrase “results-based payments”, including “payments by results”, “performance-based financing” and “pay-for-performance”.
- Intervention-specific terms:** This subcategory includes terms that are often used interchangeably with or are closely related to the specific RBP interventions outlined in the evidence review’s meta-TOC (Figure A - 2). For example, to comprehensively search for studies that focus on “payments for environmental services”, we include “payments for environmental benefits”, “payments for ecosystem services” and “payments for ecosystem benefits”.

2) **Impact measurement terminology:** This category includes terms related to the measurement and tracking of impacts, such as “effectiveness”, “affected”, “increased” and “improved”.

3) **Comparison group terminology:** This category includes terms related to the articulation of comparison groups (such as “treatment” and “control”). It also includes terms related to specific empirical methods (such as “instrumental variable”) that do not always refer explicitly to comparison groups but that generate estimates of causal impacts that are comparative.

4) **General restrictions:** This category contains a set of outlet-, study-, language- and time-specific restrictions to enable us to restrict (academic database) search results to English-language articles and systematic reviews published in peer-reviewed academic journals in or after the year 2000. When adapting terms from this category for our grey literature, we will relax outlet-specific constraints.

Consistent with our inclusion/exclusion criteria, we do not include any geography-related terms (because our evidence review seeks to capture studies that could potentially have a global focus). We also do not include any terms related to specific sectors and outcomes (given the evidence

review’s multi-sectoral focus). To operationalize our search terms, we will deploy Boolean operators to combine our various search terms and categories. Specifically, we will combine search terms within each category using the OR operator, and each of the search categories using the AND operator.

5. DATA COLLECTION AND ANALYSIS

In this section, we describe our study screening procedure, which we will apply to the studies found by our search procedures to identify publications germane to the goals of this evidence review. We then outline the process we will use to extract relevant study- and intervention-level characteristics from each relevant study to generate our evidence review database. For both components, we also describe the steps we will take to ensure consistency in screening, data extraction and coding quality across multiple screeners and coders. Finally, we describe how this data set will inform the development of evidence gap maps and the intervention heat map.

a. Screening of studies

To screen studies for relevance, we will randomly assign all studies identified by our search process to a team of study screeners. The screeners will use a screening tool that represents our inclusion/exclusion criteria in checklist format (following the study inclusion/exclusion criteria presented in Appendix 2) to carefully review the title, abstract and keywords of each identified study for relevance. Note that each study screener will participate in a basic training session on the objectives and scope of the evidence review and, in particular, on the review’s inclusion/exclusion criteria before beginning screening. As part of this training, we will also assign a randomly selected sample of 100 studies to all screeners for simultaneous screening, and follow-up discussion on inconsistently screened studies (e.g. a study that is marked as “relevant” by one screener but not by another) will be used to refine the screening process. Once screening begins, 10 per cent of studies will be assigned to all screeners to continue to monitor screening consistency. Screening will be used to exclude studies that are not germane to the evidence review. Studies that meet the inclusion/exclusion criteria will proceed to the data extraction stage.

b. Data extraction and management

We will randomly assign studies that are germane to the evidence review to a team of two study coders, who will conduct a close review of each study and extract key study-specific characteristics following a coding framework (see Appendix 5 for an outline of the proposed coding framework). This framework will enable extraction of data related to

- relevance status;
- design-specific characteristics (including regional focus, sample size and empirical design);
- RBP-specific characteristics (including the specific type of RBP intervention deployed, as well as identities of the actor administering the RBP intervention, the agent being incentivized by the intervention and the beneficiary being targeted);
- broad sectoral focus (e.g. health, education); and
- study results (namely, the specific outputs or outcomes reported by the study along with information on the direction and, if appropriate, statistical significance of the reported quantitative estimate).

If a study reports multiple effects associated with the RBP intervention in question (e.g. the impact of school vouchers on school attendance, test scores and household expenditures), the coding

framework will enable each outcome to be coded separately. The coding framework will also contain a separate module specifically for systematic reviews related to CCTs (see Table A - 8), which will enable extraction of data on the scope, results and quality of the evidence synthesis presented in each systematic review (e.g. a “low”, “medium” or “high” ranking, partly following the SURE checklist for systematic reviews adapted by Snilstveit et al., 2016).⁵

Once again, to ensure consistency of coding quality, 10 per cent of studies selected for data extraction will be assigned to both coders for independent coding before the start of the full data extraction process. Inconsistencies in the coding of this subset of study will be resolved through additional training and discussions to refine the data extraction process.

c. Evidence gap maps

The intervention/outcome framework template shown in Appendix 1 will define the structure of the evidence gap maps. Specifically, evidence gap maps will map interventions (presented along the *y*-axis) onto outcomes (presented along the *x*-axis). Each grid cell intervention–outcome combination will potentially represent a cluster of studies. We will deploy suitable visual aids (such as the use of shapes or colour gradients) to represent this distribution of studies – and, to the extent possible, differences in methods and the direction of reported effects – across evidence gap maps in intuitive ways.

We anticipate that the study-specific characteristics extracted for our evidence review data set will also enable us to “filter” and visualize distinct evidence gap maps along six dimensions:

- 1) For Annex 1 and non-Annex 1 countries
- 2) By World Bank region
- 3) By country classification (namely, small island developing States and least developed countries)
- 4) By sectoral focus (e.g. health, education)
- 5) By agent type (i.e. the identity of the actor incentivized by the RBP intervention)
- 6) By beneficiary type (e.g. households, farmers)

d. Intervention heat map

As in the case of evidence gap maps, the intervention heat map we create to visually represent the Green Climate Fund’s support for RBP investments will be structured in line with the intervention/outcome framework shown in Appendix 1. Specifically, the intervention heat map will convey the total funding, disbursements to date, and monitoring and evaluation funding (organized by RBP intervention and outcome), as well as visual representations of disbursements to date. If necessary, we will include “filters” that illustrate investments by geography and sector.

C. CONCLUSION

Solving the problem of climate change requires innovative solutions. The efforts thus far have not achieved meaningful impact because of the public goods nature of climate change mitigation, regional disparities in historical and future GHG emissions as well as expected climate damages,

⁵ In line with our inclusion/exclusion criteria (Appendix 2), we will rely on only systematic reviews to characterize the evidence base on CCTs. For systematic reviews focusing on other RBP interventions, we will instead identify the underlying studies included within each review, which we will then code individually as part of our data extraction process.

and the extended temporal scales over which climate damages manifest. RBPs can be a valuable part of the policy toolkit needed to drive climate action. RBPs invigorate innovation by bringing the creativity and resources of multiple actors to solve a problem. They can also help address the misaligned incentives central to the climate challenge: RBPs directly reward efforts to achieve outcomes that deliver public benefits for the global commons, thereby internalizing the externality that causes the market failure.

In this evidence review, we will take stock of a diverse, often disconnected literature on the effectiveness of RBP interventions to support the enhanced application of RBP approaches in the climate arena. In particular, the evidence review will adopt a broad approach to synthesize the literature on the effectiveness of RBP interventions across multiple sectors (such as agriculture, education and health); multiple types of outcomes; and multiple levels (namely, assessments of RBP interventions that target outcomes at the beneficiary, service provider, investor and system-wide levels). Consistent with this broad approach, the evidence review will operationalize a comprehensive search strategy that targets both academic outlets and the grey literature. Based on a rigorous screening and data extraction procedure, this evidence review will generate a final data set that will inform the development of (1) evidence gap maps to shed light on where the literature on the effectiveness of RBP intervention is relatively dense and where key knowledge gaps remain salient; and (2) an intervention heat map to highlight how the distribution of the Green Climate Fund's RBP project financing to date relates to the existing evidence base.

In so doing, the evidence review will provide high-level strategic guidance to the Green Climate Fund on the potential for the enhanced deployment of RBP interventions in the climate arena. Specifically, the review will highlight (1) the types of RBP interventions that have been extensively studied as well as those for which the evidence base is thinner; (2) the relative success that these interventions have met with in different sectors; and (3) the types of outcomes that these interventions have targeted. This comprehensive mapping will point to specific RBP interventions with the potential to drive climate action and, based on implementation priorities, the insights the evidence review generates will enable assessments of this intervention-specific potential. For instance, the evidence review will broadly demonstrate which RBP interventions have been relatively successful at inducing consumption of goods and services by end users across various sectors. This will suggest that these RBP interventions may be similarly deployed to drive adoption and sustained use of innovative technologies that deliver climate benefits. In this regard, by linking the comprehensive evidence base on RBPs to the Green Climate Fund's RBP project financing to date, the evidence review will underscore tangible opportunities for future implementation to meet international, national and regional climate goals.

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APPENDICES

Appendix 1. INTERVENTION/OUTCOME FRAMEWORK

Table A - 3. Beneficiary-level intervention/outcome framework (with illustrative outcome examples)

INTERVENTION TYPE	INTERVENTION	OUTCOMES					
		Awareness of goods and services (e.g. knowledge of harms associated with traditional cookstoves)	Acceptability of goods and services (e.g. preferences for food prepared using traditional cookstoves)	Access to goods and services (e.g. access to electricity)	Consumption of goods and services (e.g. monthly energy consumption)	Final outcomes: Sector-specific	Final outcomes: Socioeconomic
Supply	Grand Challenges						
	Impact Bonds						
	Payments for Environmental Services						
	Advance Market Commitments						
Hybrid	Pull Mechanisms						
	Vouchers						
Demand	Conditional Cash Transfers						

Table A - 4. Service-provider-level intervention/outcome framework (with illustrative outcome examples)

INTERVENTION TYPE	INTERVENTION	OUTPUTS/OUTCOMES				
		Management and investment in capital, marketing, and operations (e.g. acquisition of medical equipment; number of entrants in grand challenge)	Innovation/supply of goods and services (e.g. number of solar panels sold)	Quality of goods and services (e.g. share of facilities with the infrastructure, tools and technologies necessary to provide minimum threshold of care)	Other output changes (if indicated)	Enterprise-level outcomes (including revenue, profit and operational flexibility) (e.g. provider-level revenue, profit and/or financial sustainability)
Supply	Grand Challenges					
	Impact Bonds					
	Payments for Environmental Services					
	Advance Market Commitments					
Hybrid	Pull Mechanisms					
	Vouchers					
Demand	Conditional Cash Transfers					

Table A - 5. Investor/system-wide level intervention/outcome framework (with illustrative outcome examples)

INTERVENTION TYPE	INTERVENTION	OUTCOMES						
		Investment risk	Financial or economic return on investment	Total aid amount	Aid effectiveness	Market creation or expansion	Policy change or reform	Other investor or systemic outcomes
		(e.g. proportion of total investment tied to results)	(e.g. net benefit)	(e.g. total project investment)	(e.g. verification costs as a share of total investment, size of incentive payment relative to service-delivery cost)	(e.g. change in number of active service providers)	(e.g. change in share of sectoral spending tied to results)	(if indicated)
Supply	Grand Challenges							
	Impact Bonds							
	Payments for Environmental Services							
	Advance Market Commitments							
Hybrid	Pull Mechanisms							
	Vouchers							
Demand	Conditional Cash Transfers							

Table A - 6. Capturing unintended consequences on the intervention/outcome framework

INTERVENTION TYPE	INTERVENTION	UNINTENDED CONSEQUENCES
		(if indicated)
Supply	Grand Challenges	
	Impact Bonds	
	Payments for Environmental Services	
	Advance Market Commitments	
Hybrid	Pull Mechanisms	
	Vouchers	
Demand	Conditional Cash Transfers	

Appendix 2. INCLUSION/EXCLUSION CRITERIA ORGANIZED USING THE PICOS (POPULATION, INTERVENTION, COMPARATOR, OUTCOME AND STUDY DESIGN) MODEL

INCLUDED	ILLUSTRATIVE EXAMPLES OF WHAT WILL BE CAPTURED	EXCLUDED
1. Population		
<p>Studies that focus on results-based payment (RBP) interventions in</p> <ul style="list-style-type: none"> • Non-Annex I countries • Low-income contexts/settings (defined in relative terms) in Annex I countries • Non-Annex I and Annex I countries (jointly) if analyses distinguish effects across the two samples 	<ul style="list-style-type: none"> • Evaluation of an education voucher programme in Bangladesh • Evaluation of a housing voucher programme targeting low-income families in the United States • Global evaluation of payments for ecosystem services (PES) that separately reports results by World Bank income classification 	<p>Combination of both non-Annex I and Annex I countries if analyses do not distinguish the two samples (unless the intervention is in a low-income context/setting in an Annex I country)</p>
2. Intervention		
<p>Multi-sectoral focus looking at RBP interventions in, among other things, infrastructure, social protection, health, education, justice, aid, mitigation, poverty, adaptation and conservation</p>	<ul style="list-style-type: none"> • Evaluation of PES in agricultural and forestry sector • Evaluation of use of voucher-based incentives in education sector 	
<p>RBP interventions delivered at any administrative level (national and subnational)</p>	<ul style="list-style-type: none"> • Evaluation of a global grand challenge to incentivize innovation • Evaluation of development impact bond to incentivize improvements in educational outcomes in four Indian states 	
<p>RBP interventions delivered to any beneficiary type</p>	<ul style="list-style-type: none"> • Evaluation of farmer-level delivery of PES • Evaluation of household-level education voucher programme 	
<p>RBP interventions implemented by any actor</p>	<ul style="list-style-type: none"> • Evaluation of advance market commitment contract developed and administered by the World Bank • Evaluation of food voucher programme administered by government agency 	
<p>Studies looking at RBP interventions with different</p> <ul style="list-style-type: none"> • Modes of delivery 		

INCLUDED	ILLUSTRATIVE EXAMPLES OF WHAT WILL BE CAPTURED	EXCLUDED
<ul style="list-style-type: none"> • Doses • Durations • Intensities • Co-interventions • Degrees of complexity • Sample sizes (including pilot-scale tests of recent innovations) 		
3. Comparator		
Studies that identify a comparison/control group	<ul style="list-style-type: none"> • Experimental evaluation of education voucher programme with “control” and “treatment” households • Before-and-after design comparing postintervention outcomes among a sample of farmers that received PES with preintervention outcomes 	Descriptive/predictive analyses without a clear comparison/control group Methods that do not use comparison/control groups (e.g. life-cycle assessment)
4. Outcome		
Outcomes measured at any point following the RBP intervention	<ul style="list-style-type: none"> • Evaluations of RBP intervention reporting outcomes from follow-ups at the three-month, one-year or five-year marks 	
Multi-actor focus with outcomes reported at the beneficiary, service provider, investor and/or system-wide levels	<ul style="list-style-type: none"> • Reported beneficiary-level outcomes (e.g. children’s learning outcomes) • Reported service-provider-level outcomes (e.g. revenues) • Reported investor-level and system-wide outcomes (e.g. aid effectiveness) 	
5. Study design		
Quantitative studies (experimental, quasi-experimental and non-causal designs)	<ul style="list-style-type: none"> • Randomized controlled trials • Difference-in-differences design • Before-and-after design • Correlational analyses 	
For conditional cash transfers (CCTs): Only systematic reviews will be included	<ul style="list-style-type: none"> • Systematic review of the experimental literature evaluating impacts of CCTs on vaccination rates in low- and middle-income countries 	
Peer-reviewed published literature	<ul style="list-style-type: none"> • Articles and reviews published in peer-reviewed academic journals (e.g. <i>Environmental</i> 	

INCLUDED	ILLUSTRATIVE EXAMPLES OF WHAT WILL BE CAPTURED	EXCLUDED
	<i>and Resource Economics, Health Policy)</i>	
Grey literature	<ul style="list-style-type: none"> • Reports, preprints and unpublished working papers from selected repositories and think tanks (e.g. AgResults projects/evaluations database) 	
English-language literature		
Published in or after the year 2000		

Appendix 3. SCOPUS SEARCH TERMS

	CATEGORY	
1	RBP terminology	
(a)	Basic terms	"payment* by result*" OR "result*-based payment*" OR "result*-based financ*" OR "result*-based fund*" OR "result*-based aid" OR "pay*-for-result*" OR "pay*-for-performance" OR "pay*-for-success" OR "performance-based fund*" OR "performance-based financ*" OR "performance-based aid" OR "performance-based pay*" OR "performance-related pay*" OR "performance-based incentiv*" OR "cash on delivery" OR "performance-based incentive*" OR "output-based aid" OR "outcome-based financ*" OR "incentiv* pay*" OR "merit pay" OR "performance-oriented transfer*" OR "performance-based contracting" OR "performance-driven loan*" OR "policy-based loan*" OR "result*-based lending"
(b)	Intervention-specific terms	
	Grand Challenges	"grand challenge*" OR "proportional prize" OR "winner-take-all" OR "inducement prize*"
	Impact Bonds	"impact bond*" OR "social benefit bond*" OR "green bond*" OR "development bond*"
	Payments for Environmental Services	"payment* for ecosystem* service*" OR "payment* for environment* service*" OR "payment* for ecosystem* benefit*" OR "payment* for environment* benefit*" OR "carbon credit*" OR "carbon offset*"
	Advance Market Commitments	"advance* market commitment*"
	Pull Mechanisms	"pull mechanism*" OR "pull fund*" OR "pull financ*"
	Vouchers	(voucher* W/2 (health* OR medic* OR school* OR educat* OR food* OR housing))
2	Impact measurement terminology	impact* OR evaluat* OR effect* OR efficac* OR benefit* OR improv* OR progress OR growth OR increas* OR decreas* OR reduc* OR gain OR declin* OR success* OR statistic* OR affect* OR higher OR lower OR reach OR adopt* OR penetrat* OR outcome*
3	Comparison group terminology	"quasi experiment*" OR "quasi-experiment*" OR quasiexperiment* OR "random* control* trial*" OR "random* trial*" OR "RCT*" OR randomi* OR (matching W/2 (study OR procedure OR "using" OR use* OR observable*)) OR "propensity score" OR psm OR "regression discontinuity" OR "regression kink" OR "fuzzy regression" OR "sharp regression" OR "discontinuous design" OR "rdd" OR "difference* in difference*" OR "difference*-in-difference*" OR "diff in diff" OR "diff-in-diff" OR (random* W/1 (allocat* OR assign* OR select*)) OR "research synthesis" OR "fixed effect*" OR "synthetic control" OR "rapid evidence assessment*" OR "systematic literature review*" OR "systematic* review*" OR metaanaly* OR "meta analy*" OR "meta-analy*" OR "control* evaluation" OR "control* treatment" OR "instrumental variable*" OR "as an instrument" OR (heckit W/2 (model* OR estimat* OR procedure OR method)) OR (heckman* W/5 (sample OR selection OR model OR correction)) OR ((treatment OR intervention OR comparison OR control OR subsidy) W/0 group) OR ((counterfactual OR "counter factual" OR "counter-factual" OR random*) W/2 (study OR studies OR analysis OR experiment*)) OR ((

	CATEGORY	
		counterfactual OR "counter factual" OR "counter-factual" OR random*) W/2 (outcome*)) OR causal* OR "control group*" OR "comparison group*" OR ((control OR treatment) W/0 (communit* OR village* OR school* OR farm* OR household* OR student* OR mother* OR patient*)) OR (experiment* W/1 (study OR studies OR analysis OR design*)) OR ((treatment OR intervention) W/2 effect*) OR "intention-to-treat" OR "intention to treat" OR "econometric analysis" OR (impact* W/1 (evaluation OR study OR studies)) OR ("controlled before" W/2 after) OR "quasi experimental time series" OR "interrupted time series" OR "cross-sectional data"
4	General restrictions	
	Published in or after the year 2000	(PUBYEAR > 1999)
	Source type: Academic journal	(LIMIT-TO (SRCTYPE , "j"))
	Document type: Research article or review	(LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "re"))
	Language: English	(LIMIT-TO (LANGUAGE , "English"))

Appendix 4. PRELIMINARY SCOPUS SEARCH RESULTS (27 OCTOBER 2020)

SCOPUS SEARCH COMMAND		DOCUMENT RESULTS		
		Publication year		
		≥ 1995	≥ 2000	≥ 2005
1	Search for studies and systematic reviews on results-based payments (except conditional cash transfers)			
	(TITLE-ABS-KEY ("payment* by result*" OR "result*-based payment*" OR "result*-based financ*" OR "result*-based fund*" OR "result*-based aid" OR "pay*-for-result*" OR "pay*-for-performance" OR "pay*-for-success" OR "performance-based fund*" OR "performance-based financ*" OR "performance-based aid" OR "performance-based pay*" OR "performance-related pay*" OR "performance-based incentiv*" OR "cash on delivery" OR "performance-based incentive*" OR "output-based aid" OR "outcome-based financ*" OR "incentiv* pay*" OR "merit pay" OR "performance-oriented transfer*" OR "performance-based contracting" OR "performance-driven loan*" OR "policy-based loan*" OR "result*-based lending" OR "grand challenge*" OR "proportional prize" OR "winner-take-all" OR "inducement prize*" OR "impact bond*" OR "social benefit bond*" OR "green bond*" OR "development bond*" OR "payment* for ecosystem* service*" OR "payment* for environment* service*" OR "payment* for ecosystem* benefit*" OR "payment* for environment* benefit*" OR "carbon credit*" OR "carbon offset*" OR "advance* market commitment*" OR "pull mechanism*" OR "pull fund*" OR "pull financ*" OR (voucher* W/2 (health* OR medic* OR school* OR educat* OR food* OR housing)))) AND (TITLE-ABS-KEY (impact* OR evaluat* OR effect* OR efficac* OR benefit* OR improv* OR progress OR growth OR increas* OR decreas* OR reduc* OR gain OR declin* OR success* OR statistic* OR affect* OR higher OR lower OR reach OR adopt* OR penetrat* OR outcome*)) AND (TITLE-ABS-KEY ("quasi experiment*" OR "quasi-experiment*" OR quasiexperiment* OR "random* control* trial*" OR "random* trial*" OR "RCT*" OR randomi* OR (matching W/2 (study OR procedure OR "using" OR use* OR observable*)) OR "propensity score" OR psm OR "regression discontinuity" OR "regression kink" OR "fuzzy regression" OR "sharp regression" OR "discontinuous design" OR "rdd" OR "difference* in difference*" OR "difference*-in-difference*" OR "diff in diff" OR "diff-in-diff" OR (random* W/1 (allocat* OR assign* OR select*))) OR "research synthesis" OR "fixed effect*" OR "synthetic control" OR "rapid evidence assessment*" OR "systematic literature review*" OR "systematic* review*" OR metaanaly* OR "meta analy*" OR "meta-analy*" OR "control* evaluation" OR "control* treatment" OR "instrumental variable*" OR "as an instrument" OR (heckit W/2 (model* OR estimat* OR procedure OR method)) OR (heckman* W/5 (sample OR selection OR model OR correction)) OR ((treatment OR intervention OR comparison OR control OR subsidy) W/0 group) OR ((counterfactual OR "counter factual" OR "counter-factual" OR random*) W/2 (study OR	1409	1388	1362

SCOPUS SEARCH COMMAND	DOCUMENT RESULTS		
	Publication year		
	≥ 1995	≥ 2000	≥ 2005
studies OR analysis OR experiment*)) OR ((counterfactual OR "counterfactual" OR "counter-factual" OR random*) W/2 (outcome*)) OR causal* OR "control group*" OR "comparison group*" OR ((control OR treatment) W/0 (communit* OR village* OR school* OR farm* OR household* OR student* OR mother* OR patient*)) OR (experiment* W/1 (study OR studies OR analysis OR design*)) OR ((treatment OR intervention) W/2 effect*) OR "intention-to-treat" OR "intention to treat" OR "econometric analysis" OR (impact* W/1 (evaluation OR study OR studies)) OR ("controlled before" W/2 after) OR "quasi experimental time series" OR "interrupted time series" OR "cross-sectional data")) AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "re")) AND (PUBYEAR > XXXX) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (SRCTYPE , "j"))			
2 Search for systematic reviews on conditional cash transfers			
TITLE-ABS-KEY ("cash transfer*") AND TITLE-ABS-KEY (condition*) AND TITLE-ABS-KEY ("systematic literature review*" OR "systematic* review*" OR metaanaly* OR "meta analy*" OR meta-analy*) AND (PUBYEAR > XXXX) AND (LIMIT-TO (DOCTYPE , "re") OR LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (SRCTYPE , "j"))	46	46	46

Note: Replace “PUBYEAR > XXXX” (highlighted in the search commands) with appropriate publication year.

Appendix 5. ILLUSTRATIVE DATA EXTRACTION FRAMEWORK

DRAFT

Table A - 7 outlines the range of potential data that could be extracted from the articles identified by the search. Table A - 8 outlines the same for systematic reviews related to CCTs and includes modules to evaluate the quality of each review following the checklist adapted by Snilstveit et al. (2016). The final data extraction frameworks will be informed by and tailored to the final sample of studies uncovered by the evidence review search.

Table A - 7. Draft data extraction framework for articles

TOPIC	POTENTIAL RESPONSES	ADDITIONAL DETAILS
A. General information		
Coding date		
Coder ID		
Publication ID		
Publication type	<input type="checkbox"/> Academic <input type="checkbox"/> Grey literature	
Publication title		
Publication author(s)		
Publication year		
Journal name		For academic publications
Journal quality measure		For academic publications
Regional focus	<input type="checkbox"/> EAP <input type="checkbox"/> ECA <input type="checkbox"/> LAC <input type="checkbox"/> MNA <input type="checkbox"/> NAR <input type="checkbox"/> SAR <input type="checkbox"/> SSA <input type="checkbox"/> Multi-region/global	
Regional grouping	<input type="checkbox"/> Small island developing States <input type="checkbox"/> Least developed country <input type="checkbox"/> N/A	
Country (if single-country focus)		
Coder notes		
B. Intervention		
RBP type	<input type="checkbox"/> Grand challenges <input type="checkbox"/> Impact bonds <input type="checkbox"/> Payments for environmental services <input type="checkbox"/> Advance market commitments	

TOPIC	POTENTIAL RESPONSES	ADDITIONAL DETAILS
	<input type="checkbox"/> Pull mechanisms <input type="checkbox"/> Vouchers <input type="checkbox"/> Conditional cash transfers <input type="checkbox"/> Multi-intervention <input type="checkbox"/> Other, specify: _____	
Beneficiary type	<input type="checkbox"/> Individuals <input type="checkbox"/> Firms <input type="checkbox"/> Households <input type="checkbox"/> Villages/communities <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> Unsure or N/A	The actor that the RBP intervention ultimately aims to benefit
Agent type	<input type="checkbox"/> Individuals <input type="checkbox"/> Firms <input type="checkbox"/> Households <input type="checkbox"/> Villages/communities <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> Unsure or N/A	The actor that the RBP intervention incentivizes
Principal type	<input type="checkbox"/> NGO <input type="checkbox"/> Local/national government <input type="checkbox"/> Foreign government <input type="checkbox"/> Multilateral organization <input type="checkbox"/> Researcher/academic <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> Unsure or N/A	The actor that manages the RBP intervention / delivers the RBP incentive
C. Study design		
Empirical/quantitative method	<input type="checkbox"/> RCT <input type="checkbox"/> Regression discontinuity <input type="checkbox"/> Matching/PSM <input type="checkbox"/> IV/2SLS <input type="checkbox"/> Difference-in-differences <input type="checkbox"/> (Controlled) before-and-after <input type="checkbox"/> Heckman correction <input type="checkbox"/> Interrupted time series <input type="checkbox"/> Cross-sectional regression analysis <input type="checkbox"/> Other, specify: _____	
Sample size		
Unit of analysis	<input type="checkbox"/> Individuals <input type="checkbox"/> Firms <input type="checkbox"/> Households <input type="checkbox"/> Villages/communities <input type="checkbox"/> Other, specify: _____	
Study start year		

TOPIC	POTENTIAL RESPONSES	ADDITIONAL DETAILS
Study end year		
D. Outcomes		
Study primary sectoral focus	<input type="checkbox"/> Health <input type="checkbox"/> Education <input type="checkbox"/> Agriculture and forestry <input type="checkbox"/> Energy and environment <input type="checkbox"/> Other, specify: _____	
Study secondary sectoral focus	<input type="checkbox"/> Health <input type="checkbox"/> Education <input type="checkbox"/> Agriculture and forestry <input type="checkbox"/> Energy and environment <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> N/A	If applicable
Outcome 1: Level	<input type="checkbox"/> Beneficiary <input type="checkbox"/> Service provider <input type="checkbox"/> Investor/system-wide <input type="checkbox"/> Unintended consequence <input type="checkbox"/> Other, specify: _____	
Outcome 1: Type [a]	If outcome level not “other”, select relevant category from I/O framework.	
Outcome 1: Type [b]	Only if unintended consequence, specify: _____	
Outcome 1: Indicator	Specify: _____	
Outcome 1: Result	<input type="checkbox"/> Positive/statistically significant <input type="checkbox"/> Positive/not statistically significant <input type="checkbox"/> Negative/not statistically significant <input type="checkbox"/> Negative/statistically significant <input type="checkbox"/> Unsure or N/A	
Outcome 1: Moderators	<input type="checkbox"/> Unit-specific characteristic (Sex, wealth, education, firm size, etc.) <input type="checkbox"/> Context-specific characteristics (rural/urban, weather/landscape, institutional factors, etc.) <input type="checkbox"/> Unsure or N/A	
⋮	⋮	⋮
Outcome 20: Level	<input type="checkbox"/> Beneficiary <input type="checkbox"/> Service provider <input type="checkbox"/> Investor/system-wide <input type="checkbox"/> Unintended consequence <input type="checkbox"/> Other, specify: _____	
Outcome 20: Type [a]	If outcome level not “other”, select relevant category from I/O framework.	

TOPIC	POTENTIAL RESPONSES	ADDITIONAL DETAILS
Outcome 20: Type [b]	Only if unintended consequence, specify: _____	
Outcome 20: Indicator	Specify: _____	
Outcome 20: Result	<input type="checkbox"/> Positive/statistically significant <input type="checkbox"/> Positive/not statistically significant <input type="checkbox"/> Negative/not statistically significant <input type="checkbox"/> Negative/statistically significant <input type="checkbox"/> Unsure <input type="checkbox"/> N/A	
Outcome 20: Moderators	<input type="checkbox"/> Unit-specific characteristic (Sex, wealth, education, firm size, etc.) <input type="checkbox"/> Context-specific characteristics (rural/urban, weather/landscape, institutional factors, etc.) <input type="checkbox"/> Unsure <input type="checkbox"/> N/A	

Table A - 8. Draft data extraction framework for systematic reviews related to CCTs

TOPIC	POTENTIAL RESPONSES	ADDITIONAL DETAILS
A. General information		
Coding date		
Coder ID		
Publication ID		
Publication type	<input type="checkbox"/> Academic article <input type="checkbox"/> Grey literature	
Publication title		
Publication author(s)		
Publication year		
For academic articles: Journal name		
For academic articles: Journal quality measure		
Regional focus	<input type="checkbox"/> EAP <input type="checkbox"/> ECA <input type="checkbox"/> LAC <input type="checkbox"/> MNA <input type="checkbox"/> NAR <input type="checkbox"/> SAR <input type="checkbox"/> SSA <input type="checkbox"/> Other, specify: _____	

TOPIC	POTENTIAL RESPONSES	ADDITIONAL DETAILS
	<input type="checkbox"/> Multi-region/global	
Regional grouping	<input type="checkbox"/> Small island developing States <input type="checkbox"/> Least developed countries or low- and middle-income countries only <input type="checkbox"/> High-income countries only <input type="checkbox"/> N/A	
Country (if single-country focus)		
Coder notes		
B. Intervention		
Beneficiary type	<input type="checkbox"/> Individuals <input type="checkbox"/> Firms <input type="checkbox"/> Households <input type="checkbox"/> Villages/communities <input type="checkbox"/> Other, specify: ____ <input type="checkbox"/> Unsure <input type="checkbox"/> N/A	The actor that the RBP intervention ultimately aims to benefit
Agent type	<input type="checkbox"/> Individuals <input type="checkbox"/> Firms <input type="checkbox"/> Households <input type="checkbox"/> Villages/communities <input type="checkbox"/> Other, specify: ____ <input type="checkbox"/> Unsure <input type="checkbox"/> N/A	The actor that the RBP intervention incentivizes
Principal type	<input type="checkbox"/> NGO <input type="checkbox"/> Local/national government <input type="checkbox"/> Foreign government <input type="checkbox"/> Multilateral organization <input type="checkbox"/> Researcher/academic <input type="checkbox"/> Other, specify: ____ <input type="checkbox"/> Unsure <input type="checkbox"/> N/A	The actor that manages the RBP intervention/delivers the RBP incentive
C. Study design		
Number of included studies		
Methodological focus	<input type="checkbox"/> Experimental only <input type="checkbox"/> Experimental and/or quasi-experimental only <input type="checkbox"/> Any empirical and/or quantitative study <input type="checkbox"/> Other, specify: ____	
Unit of analysis focus	<input type="checkbox"/> Individuals	

TOPIC	POTENTIAL RESPONSES	ADDITIONAL DETAILS
	<input type="checkbox"/> Firms <input type="checkbox"/> Households <input type="checkbox"/> Villages/communities <input type="checkbox"/> Multi-unit <input type="checkbox"/> Other, specify: ____	
Start year of period covered by search		
End year of period covered by search		
D. Outcomes		
Sector	<input type="checkbox"/> Health <input type="checkbox"/> Education <input type="checkbox"/> Agriculture and forestry <input type="checkbox"/> Energy and environment <input type="checkbox"/> Multi-sectoral <input type="checkbox"/> Other, specify: ____ <input type="checkbox"/> N/A	
Outcome 1: Level	<input type="checkbox"/> Beneficiary <input type="checkbox"/> Service provider <input type="checkbox"/> Investor/system-wide <input type="checkbox"/> Unintended consequence <input type="checkbox"/> Other, specify: ____	
Outcome 1: Type [a]	If outcome level not “other”, select relevant category from I/O framework.	
Outcome 1: Type [b]	Only if unintended consequence, specify: ____	
Outcome 1: Indicator	Specify: ____	
Outcome 1: Result	<input type="checkbox"/> Positive/statistically significant/strong <input type="checkbox"/> Positive/not statistically significant/weak <input type="checkbox"/> Negative/not statistically significant/weak <input type="checkbox"/> Negative/statistically significant/strong <input type="checkbox"/> Unsure <input type="checkbox"/> N/A	
Outcome 1: Moderators	<input type="checkbox"/> Unit-specific characteristic (Sex, wealth, education, firm size, etc.) <input type="checkbox"/> Context-specific characteristics (rural/urban, weather/landscape, institutional factors, etc.) <input type="checkbox"/> Unsure	

TOPIC	POTENTIAL RESPONSES	ADDITIONAL DETAILS
	<input type="checkbox"/> N/A	
⋮	⋮	⋮
Outcome 20: Level	<input type="checkbox"/> Beneficiary <input type="checkbox"/> Service provider <input type="checkbox"/> Investor/system-wide <input type="checkbox"/> Unintended consequence <input type="checkbox"/> Other, specify: ____	
Outcome 20: Type [a]	[Select relevant category from I/O framework]	
Outcome 20: Type [b]	Only if unintended consequence, specify: ____	
Outcome 20: Indicator	Specify: ____	
Outcome 20: Result	<input type="checkbox"/> Positive/statistically significant/strong <input type="checkbox"/> Positive/not statistically significant/weak <input type="checkbox"/> Negative/not statistically significant/weak <input type="checkbox"/> Negative/statistically significant/strong <input type="checkbox"/> Unsure <input type="checkbox"/> N/A	
Outcome 20: Moderators	<input type="checkbox"/> Unit-specific characteristic (Sex, wealth, education, firm size, etc.) <input type="checkbox"/> Context-specific characteristics (rural/urban, weather/landscape, institutional factors, etc.) <input type="checkbox"/> Unsure <input type="checkbox"/> N/A	
E. Methods used to identify, include and critically appraise studies		
Are the criteria used for deciding which studies to include in the review reported?	<input type="checkbox"/> Yes <input type="checkbox"/> Partially <input type="checkbox"/> No	Did the authors specify: <input type="checkbox"/> Types of studies <input type="checkbox"/> Participants/settings/population <input type="checkbox"/> Intervention(s) <input type="checkbox"/> Outcome(s) YES: All NO: None PARTIALLY: Any other
Was the search for evidence reasonably comprehensive?	<input type="checkbox"/> Yes <input type="checkbox"/> Partially <input type="checkbox"/> No	Were the following done: <input type="checkbox"/> Language bias avoided (no restriction of inclusion based on language)

TOPIC	POTENTIAL RESPONSES	ADDITIONAL DETAILS
	<input type="checkbox"/> Can't tell	<input type="checkbox"/> No restriction of inclusion based on publication status <input type="checkbox"/> Relevant databases searched (Minimum criteria: All reviews should search at least one source of grey literature such as Google; for health: Medline/PubMed + Cochrane Library; for social sciences IDEAS + at least one database of general social science literature and one subject-specific database) <input type="checkbox"/> Reference lists in included articles checked <input type="checkbox"/> Authors/experts contacted YES: All PARTIALLY: Relevant databases and reference lists are both reported NO: Any other
Was bias in the selection of articles avoided?	<input type="checkbox"/> Yes <input type="checkbox"/> Partially <input type="checkbox"/> No	Did the authors specify: <input type="checkbox"/> Independent screening of full text by at least two reviewers <input type="checkbox"/> List of included studies provided <input type="checkbox"/> List or number of excluded studies provided YES: All PARTIALLY: Independent screening and list of included studies provided are both reported NO: All other
Did the authors use appropriate criteria to assess the quality and risk of bias in analysing the studies that are included?	<input type="checkbox"/> Yes <input type="checkbox"/> Partially <input type="checkbox"/> No	Did the authors specify: <input type="checkbox"/> The criteria used for assessing the quality/ risk of bias were reported <input type="checkbox"/> A table or summary of the assessment of each included study for each criterion was reported <input type="checkbox"/> "Sensible" criteria (such as a recognized tool or checklist) were used that focus on the quality/risk of bias (including selection bias, contamination, attrition bias, detection bias and reporting bias)
F. Methods used to analyse the findings		
Were the characteristics and results of the included studies reliably reported?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> N/A	Was there: <input type="checkbox"/> Independent data extraction by at least two reviewers <input type="checkbox"/> A table or summary of the characteristics of the participants, interventions and outcomes for the included studies

TOPIC	POTENTIAL RESPONSES	ADDITIONAL DETAILS
		<input type="checkbox"/> A table or summary of the results of all the included studies YES: All PARTIALLY: First and third only NO: All other N/A: If no studies/no data
Are the methods used by the review authors to analyse the findings of the included studies clear, including methods for calculating effect sizes if applicable?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> N/A	YES: Methods used clearly reported. PARTIALLY: Some reporting on methods but lack of clarity NO: Nothing reported on methods N/A: If no studies/no data
Did the review describe the extent of heterogeneity?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> N/A	<input type="checkbox"/> Did the review ensure that included studies were similar enough that it made sense to combine them, sensibly divide the included studies into homogeneous groups, or sensibly conclude that it did not make sense to combine or group the included studies? <input type="checkbox"/> Did the review discuss the extent to which there were important differences in the results of the included studies? <input type="checkbox"/> If a meta-analysis was done, was the I^2 , chi square test for heterogeneity or other appropriate statistic reported? If no statistical test was reported, is a qualitative justification made for the use of random effects? YES: First, second and (if relevant) third PARTIALLY: Only first NO: Any other
Were the findings of the relevant studies combined (or not combined) appropriately relative to the primary question the review addresses and the available data?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> N/A	How was the data analysis done? <input type="checkbox"/> Descriptive only <input type="checkbox"/> Vote counting based on direction of effect <input type="checkbox"/> Vote counting based on statistical significance <input type="checkbox"/> Description of range of effect sizes <input type="checkbox"/> Meta-analysis <input type="checkbox"/> Meta-regression <input type="checkbox"/> Other, specify: ____ <input type="checkbox"/> N/A (e.g. no studies or no data) How were the studies weighted in the analysis? <input type="checkbox"/> Equal weights (this is what is done when vote counting is used) <input type="checkbox"/> By quality or study design (this is rarely done)

TOPIC	POTENTIAL RESPONSES	ADDITIONAL DETAILS
		<input type="checkbox"/> Inverse variance (this is what is typically done in a meta-analysis) <input type="checkbox"/> Number of participants (sample size) <input type="checkbox"/> Other, specify: _____ <input type="checkbox"/> Not clear <input type="checkbox"/> N/A (e.g. no studies or no data) Did the review address unit of analysis errors? <input type="checkbox"/> Yes - took clustering into account in the analysis (e.g. used intra-cluster correlation coefficient) <input type="checkbox"/> No, but acknowledged problem of unit of analysis errors <input type="checkbox"/> No mention of issue <input type="checkbox"/> Not applicable - no clustered trials or studies included YES: Appropriate table/graph/meta-analysis, appropriate weights, and unit of analysis errors addressed (if relevant) PARTIALLY: Appropriate table/graph/meta-analysis, appropriate weights, but unit of analysis errors not addressed (if relevant) NO: If narrative OR vote counting (where quantitative analyses would have been possible) OR inappropriate reporting of table, graph or meta-analyses N/A: If no studies/no data
Does the review report evidence appropriately?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> N/A	<input type="checkbox"/> The review makes clear which evidence is subject to low risk of bias in assessing causality (attribution of outcomes to intervention), and which is likely to be biased, and does so appropriately <input type="checkbox"/> Where studies of differing risk of bias are included, results are reported and analysed separately by risk of bias status YES: Both criteria should be fulfilled (where applicable) NO: Criteria not fulfilled PARTIALLY: Only one criterion fulfilled, or when there is limited reporting of quality appraisal (the latter applies only when inclusion criteria for study design are appropriate) N/A: If no studies/no data
Did the review examine the extent to which specific factors might	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partially	<input type="checkbox"/> Were factors that the review authors considered as likely explanatory factors clearly described?

TOPIC	POTENTIAL RESPONSES	ADDITIONAL DETAILS
<p>explain differences in the results of the included studies?</p>	<p><input type="checkbox"/> N/A</p>	<p><input type="checkbox"/> Was a “sensible” method used to explore the extent to which key factors explained heterogeneity?</p> <p><input type="checkbox"/> Descriptive/textual</p> <p><input type="checkbox"/> Graphical</p> <p><input type="checkbox"/> Meta-analysis by subgroups</p> <p><input type="checkbox"/> Meta-regression</p> <p><input type="checkbox"/> Other</p> <p>YES: Explanatory factors clearly described and appropriate methods used to explore heterogeneity</p> <p>PARTIALLY: Explanatory factors described but for meta-analyses, subgroup analysis or meta-regression not reported (when they should have been)</p> <p>NO: No description or analysis of likely explanatory factors</p> <p>N/A: Too few studies, no important differences in the results of the included studies, or the included studies were so dissimilar that it would not make sense to explore heterogeneity of the results</p>

Independent Evaluation Unit
Green Climate Fund
175, Art center-daero, Yeonsu-gu
Incheon 22004, Republic of Korea
Tel. (+82) 032-458-6450
ieu@gcfund.org
<https://ieu.greenclimate.fund>



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