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What do we know about the effectiveness of results-based payment (RBP) interventions?

A synthesis of findings from the IEU evidence review on RBPs (2020)

- ▶ This [evidence review](#)¹ analyzed **428 studies** from both academic and grey literature, to assess the effectiveness of results-based payment (RBP) interventions across various sectors, with the aim to enhance their application in mitigation and adaptation.
- ▶ **RBPs** can be categorized into supply-side, demand-side, and hybrid incentives, targeting service providers, beneficiaries, or both.
- ▶ RBPs have shown effectiveness in various **sectors** such as health, education, climate finance, and energy, driving progress on social challenges.
- ▶ An Evidence Gap Map ([EGM](#)) was created to visualize the impacts of different RBP interventions on outcomes at the levels of beneficiaries, service providers, and investors/systems.
- ▶ The EGM showed that certain **RBP models**, such as vouchers, pay-for-performance, Payment for Ecosystem Services (PES), and Conditional Cash Transfers (CCTs), are well-researched.
- ▶ In contrast, there is less evidence available on grand challenges, impact bonds, Advance Market Commitments (AMCs), and pull mechanisms.
- ▶ The review also found that the use of RBP interventions and the outcomes they target exhibit **regional patterns**, with most studies coming from North America, East Asia and Pacific, sub-Saharan Africa, and Latin America and the Caribbean.
- ▶ South Asia, and particularly the Middle East and North Africa, had fewer studies.
- ▶ **Sector-wise**, the health sector accounted for nearly half of the evidence on RBP applications, followed by agriculture and forestry, and education.
- ▶ There was notably less evidence on RBPs in the energy sector.
- ▶ Additionally, an Intervention Heat Map ([IHM](#)) was developed to showcase the GCF financial commitments to RBPs in **15 recent projects** (listed below on page 2), using the same framework as the EGM.
- ▶ In summary, RBPs are recognized as a potentially effective approach for advancing global climate goals, but the **evidence base varies** by intervention type, region, and sector, with some areas requiring further research and investment.
- ▶ **GCF** allocated funds using results-based modalities across various projects, and Payment for Ecosystem Services (PES) was predominantly used by the Fund, followed by Conditional Cash Transfers (CCTs)-, and voucher-based approaches. See below (page 2) for a list of GCF projects using results-based modalities that this evidence review considered.
- ▶ Specifically, the **GCF** projects targeted global emissions reductions using PES mechanisms, while CCT- and voucher-based approaches aimed at a broader range of sector-specific and socioeconomic outcomes.
- ▶ **GCF** has primarily focused on using Payment for Ecosystem Services (PES) mechanisms to target emissions reductions in its REDD+ pilot program, with less emphasis on other benefits.
- ▶ However, targeting co-benefits could enhance climate change adaptation capacity and long-term sustainability of climate solutions.
- ▶ There is potential for the **GCF** to support projects incentivizing service providers, particularly through Pay-for-Performance (P4P) approaches.
- ▶ Careful consideration of unintended consequences and prospective analysis of different incentive structures are crucial to ensure sustainable impacts and avoid potential setbacks in achieving environmental benefits.

¹ Meuth Alldredge, Josh, Emma De Roy, Elangthoko Mokgano, Peter Mwandri, Tulika Narayan, Martin Prowse, Jyotsna Puri, William Rafferty, Anu Rangarajan, and Faraz Usmani (2020). Evidence review on results-based payments: Evidence Gap Map and Intervention Heat Map. IEU learning paper, December 2020. Independent Evaluation Unit, Green Climate Fund. Songdo, South Korea.

Table. Overview of GCF projects using results-based modalities

GCF PROJECT NUMBER	COUNTRY FOCUS	GCF FINANCIAL INSTRUMENT	RBP INTERVENTION TYPE	TOTAL GCF COMMITMENT (MILLIONS, USD)	RBP-ALLOCATED AMOUNT (MILLIONS, USD)
FP019	Ecuador	Grants	PES	41.2	17.0
FP062	Paraguay	Grants	CCT	25.1	2.4
FP067	Tajikistan	Grants	CCT	9.3	1.6
FP100	Brazil	Results-Based Payment	PES	96.5	94.1
FP110	Ecuador	Results-Based Payment	PES	18.6	18.1
FP117	Lao PDR	Grants	PES	17.8	4.1
FP120	Chile	Results-Based Payment	PES	63.6	62.1
FP121	Paraguay	Results-Based Payment	PES	50.0	48.8
FP125	Viet Nam	Grants	CCT/Voucher	30.2	3.5
FP130	Indonesia	Results-Based Payment	PES	103.8	101.3
FP134	Colombia	Results-Based Payment	PES	28.2	27.5
FP142	Argentina	Results-Based Payment	PES	82.0	80.0
FP144	Costa Rica	Results-Based Payment	PES	54.1	52.8
FP146	Nicaragua	Senior Loans/ Grants	PES	64.1	12.1
SAP002	Kyrgyzstan	Grants	CCT	8.6	3.1

Notes: PES - Payment for Ecosystem Services; CCT - Conditional Cash Transfers
 15 projects using results-based modalities were approved by GCF between 2015 and 2020. Eight projects are part of the GCF's REDD+ RBP pilot programme, while the remaining were extracted from an internal GCF dataset. These projects do not represent the totality of the GCF's results-based commitments

Source: Table 4, Meuth Alldredge, Josh, Emma De Roy, Elangthoko Mokgano, Peter Mwandri, Tulika Narayan, Martin Prowse, Jyotsna Puri, William Rafferty, Anu Rangarajan, and Faraz Usmani (2020). Evidence review on results-based payments: Evidence Gap Map and Intervention Heat Map. IEU learning paper, December 2020. Independent Evaluation Unit, Green Climate Fund. Songdo, South Korea.

Summary of key findings per each section/theme of the Evidence Review

EVIDENCE REVIEW ON RESULTS-BASED PAYMENTS: SCOPE AND AIM

The Independent Evaluation Unit of the Green Climate Fund conducted an evidence review on results-based payments (RBPs) to assess their effectiveness in addressing climate challenges. RBPs involve making payments to agents for achieving pre-agreed, verified results. The review aimed to synthesize insights for applying results-based approaches in the climate domain. The study conducted a systematic search of literature to analyze the effectiveness of RBPs in various sectors and contexts.

INSIGHTS FROM THE EVIDENCE REVIEW

The evidence review identified a range of RBPs, including vouchers, pay-for-performance models, payments for environmental services, and conditional cash transfers, which have been extensively studied. However, the evidence base on broader RBP modalities is limited. The review highlighted regional patterns in the use of these modalities, with most evidence coming from North America, East Asia and Pacific, sub-Saharan Africa, and Latin America and the Caribbean. The study emphasized the need for more evidence on RBPs in the energy sector and outlined potential areas for enhancing the application of RBPs in climate interventions (Meuth Alldredge et al., 2020).

ADDRESSING CLIMATE CHANGE CHALLENGES

Climate change poses significant challenges globally, with projections indicating a substantial increase in global average temperatures by 2100. The negative impacts of climate change on various aspects such as incomes, food security, public health, and ecosystems are well-documented. International efforts like the Paris Agreement aim to mitigate emissions and foster coordinated climate action. However, the public goods nature of climate mitigation complicates collective action. RBPs offer a unique approach by aligning incentives to achieve specific outcomes that benefit the global commons, providing a potential solution to the climate challenge (Meuth Alldredge et al., 2020).

EXPLAINING RBPs

Results-Based Payments (RBPs) are a mechanism to incentivize the delivery of services to voucher recipients. RBPs involve monetary transfers to families based on pre-agreed actions that improve social outcomes. They incentivize both supply and demand of technology, focus on increased service delivery and adoption, involve multiple actors without direct competition, and increase the pool of resources. RBPs can be categorized into supply-side, demand-side, and hybrid incentives, targeting service providers, beneficiaries, or both. RBPs have shown effectiveness in various sectors such as health, education, climate finance, and energy, driving progress on social challenges. RBPs alter incentives to promote the delivery of goods and services, leading to improved outcomes in different sectors.

RBPs IN DIFFERENT SECTORS

RBPs have been effective in sectors like health, education, climate finance, and energy. Conditional cash transfers in health systems have increased the use of health services, while in education, they have boosted enrollment. RBPs, including vouchers, have enhanced access to services and improved socioeconomic outcomes. In climate finance, RBPs have been used for afforestation, reforestation, and sustainable agriculture. RBPs in the energy sector incentivize the adoption of climate-friendly technologies. RBPs show promise in driving climate action but lessons from various sectors make it challenging to draw clear insights.

META-THEORY OF CHANGE AND INTERVENTION FRAMEWORK

This section presents a meta-theory of change guiding the review of evidence on RBPs. It outlines how supply-side, demand-side, and hybrid RBPs target different actors and beneficiaries to influence incentives and

outcomes. Supply-side RBPs target service providers to increase the supply of goods and services, while demand-side RBPs focus on beneficiaries to promote consumption. RBPs lead to increased supply and quality of services, policy reforms, and improved outcomes for both service providers and beneficiaries. RBPs can yield unintended consequences like overuse of services or increased market prices. The effectiveness of RBPs depends on the enabling environment and underlying assumptions.

SEARCH STRATEGY AND INCLUSION CRITERIA

The study focused on newer, innovative approaches in results-based payments (RBPs) and specific RBP intervention types. They considered quantitative studies with clearly identified comparison/control groups, focusing on multisectoral interventions and various outcomes. The study included causal and non-causal designs, excluding qualitative studies and those not focusing on low-income populations in Annex I countries. The search strategy involved a three-stage process targeting academic journals and grey literature.

STUDY SCREENING AND DATA EXTRACTION

A study screening procedure was applied to identify relevant publications, resulting in 428 studies included in the evidence review. The distribution of studies by RBP intervention type showed vouchers as the most studied, followed by pay-for-performance (P4P) and payment for environmental services (PES) interventions. The evidence on conditional cash transfers (CCTs) was drawn exclusively from systematic reviews. The literature documented evidence mainly from North America, East Asia and Pacific, sub-Saharan Africa, and Latin America and the Caribbean.

REGIONAL DISTRIBUTION AND INTERVENTION TYPES

Over a quarter of the literature on RBPs was from North America, with significant contributions from East Asia and Pacific, sub-Saharan Africa, and Latin America and the Caribbean. Studies on voucher-based interventions predominantly focused on North America, while those on PES interventions were concentrated in Latin America and the Caribbean, East Asia and the Pacific, and sub-Saharan Africa. Few studies focused on South Asia, Europe and Central Asia, or the Middle East and North Africa.

STUDIES ON P4P INTERVENTIONS AND CCTs

Most studies assessing Pay-for-Performance (P4P) interventions were conducted in sub-Saharan Africa, with recent evaluations in Rwanda and Tanzania (Basinga et al., 2011; Binyaruka et al., 2018; Mayumana et al., 2017). Studies on Conditional Cash Transfers

(CCTs) took a multi-region/global approach, focusing on systematic reviews to evaluate the impacts of CCTs across different countries and sectors.

SECTORAL DISTRIBUTION OF STUDIES

The majority of studies on Results-Based Payments (RBPs) were in the health sector, with others spread across agriculture, forestry, education, and other sectors. While there was an increasing use of RBPs in energy outcomes, very few studies focused on RBPs in the energy sector. Different types of RBPs were applied based on sectors, with PES schemes mainly focusing on agriculture and forestry, P4P and CCT interventions skewed towards the health sector, and voucher interventions targeting health, education, and other sectors.

GREEN CLIMATE FUND'S RESULTS-BASED APPROACHES

The Green Climate Fund (GCF) allocated funds using results-based modalities across various projects, with a significant portion dedicated to results-based payments. PES mechanisms were predominantly used by the GCF for results-based commitments, followed by CCT- and voucher-based approaches. The GCF projects targeted global emissions reductions using PES mechanisms, while CCT- and voucher-based approaches aimed at a broader range of sector-specific and socioeconomic outcomes.

IMPLICATIONS OF RBPs FOR CLIMATE GOALS

RBPs have been extensively used to incentivize individuals, households, and service providers across different sectors. While the evidence base on voucher-, P4P-, PES-, and CCT-based approaches was substantial, there was thinner evidence on grand challenges and other mechanisms. RBPs primarily targeted sector-specific outcomes and were effective in driving progress in multisectoral settings to achieve climate goals by addressing both demand- and supply-side constraints.

GCF'S USE OF RESULTS-BASED APPROACHES

GCF has primarily focused on using Payment for

Ecosystem Services (PES) mechanisms to target emissions reductions in its REDD+ pilot program, with less emphasis on other benefits. However, targeting co-benefits could enhance climate change adaptation capacity and long-term sustainability of climate solutions. There is potential for the GCF to support projects incentivizing service providers, particularly through Pay-for-Performance (P4P) approaches. Careful consideration of unintended consequences and prospective analysis of different incentive structures are crucial to ensure sustainable impacts and avoid potential setbacks in achieving environmental benefits.

ANALYSIS OF RESULTS-BASED APPROACHES

An evidence review of 428 studies on results-based interventions across sectors revealed that vouchers, P4P models, PES, and Conditional Cash Transfers (CCTs) have been extensively studied. However, there is limited evidence on other approaches like grand challenges, impact bonds, Asset Management Contracts (AMCs), and pull mechanisms. Regional and sectoral patterns in the use and outcomes of these interventions were identified, with a significant portion of evidence coming from North America, East Asia, Pacific, sub-Saharan Africa, and Latin America. The health sector had the most evidence, followed by agriculture and forestry, while evidence on energy sector interventions was scarce.

IMPLICATIONS FOR GCF FUNDING

Comparing the broader evidence base on results-based approaches to the GCF's funding patterns suggests potential for increased utilization of such approaches in the GCF's project portfolio. Careful consideration of incentive structures, focus on addressing core constraints, and creating demand for emissions-reducing goods and services are essential for sustainable impacts. Incentive structures should prioritize achievable intermediate outputs and processes proven to reduce greenhouse gas emissions, ensuring that activities are sustainable even after the results-based payment mechanism is removed.

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