Assessing cost-effectiveness impacts of CDRFI implementation under the InsuResilience Vision 2025

Assessment of indicator 4.b on Low cost of providing coverage

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Executive Summary

In 2019, the InsuResilience Global Partnership (IGP) launched Vision 2025 to strengthen resilience in developing countries and protect poor and vulnerable people from climate shocks and disasters with faster, more reliable, and cost-effective responses. As part of the ongoing efforts to track progress under **Vision 2025**, the Global Shield Secretariat has commissioned Oxford Policy Management (OPM) to conduct three studies on the three indicators under result area 4[1]. The three indicators assess the **cost-effectiveness of Climate and Disaster Risk Finance and Insurance (CDRFI) solutions: a) Basis risk monitoring, b) low cost of providing coverage, and c) competitiveness of the private insurance markets.** These studies complement and validate the data acquired through annual data collections under Vision 2025, which is predominantly self-reported.

The primary objectives of the three studies are to **evaluate the impact and progress made in achieving the targets set under the aforementioned indicators and to contribute to the evidence base on cost-effectiveness of CDRFI more broadly.** Field research was conducted on a small, randomly selected sample of active macro-, meso-, and micro-level CDRFI solutions across fourteen countries (Colombia, Burkina Faso, Ethiopia, Fiji, Kenya, Madagascar, Malawi, Mauritania, Mexico, Nigeria, Rwanda, Pakistan, Solomon Islands, and Tchad). It is important to consider the small sample size when reviewing the results. Additionally, a major challenge in conducting these studies was the low response rate, which further reduced the already limited sample size.

Nonetheless, the findings from these studies offer valuable insights into the fourteen countries where the sampled projects and products are implemented, with a particular focus on the four selected countries (Colombia, Fiji, Kenya, and Pakistan) used for case studies under indicator 4.c. The results shed light **on how basis risk is being managed in relevant programs contributing to Vision 2025, on how these programs are ensuring low cost of financial protection in climate vulnerable contexts, and on the competitiveness of insurance markets,** all of which are relevant for protection of vulnerable people from climate risks. These insights thus contribute to the global knowledge base and could inspire further research activities on cost-effectiveness of CDRFI.

The study on indicator 4.b reveals that assessing cost-effectiveness of insurance products targeting vulnerable population involves complexities beyond cost. Factors such as **affordability, speed of disbursement, and risk and financial education** are crucial and need to be understood and taken into account. This calls for rethinking existing cost benchmarks to encompass these broader factors. Additionally, in relation to the cost benchmarks for meso- and micro-level solutions, **country-specific cost benchmarks** would enable a more context-specific assessment of cost of coverage. Overall, the result of this report indicates the need for further efforts to **refine cost benchmarks and improve coordination for cost-effective insurance product development.**

[1]The indicators under result area 4 cover cost-effectiveness from various perspectives. Indicator 4.a measures the extent of basis risk monitoring for index-based solutions. Indicator 4.b evaluates the costliness of products, ensuring costs are not excessive but sufficient to support high-quality product development. Indicator 4.c examines the competitiveness of the insurance market. Finally, Indicator 4.d assesses how well donor-supported projects promote pro-poor outcomes in vulnerable countries. For further details on Vision 2025 and its indicators, please refer to: Vision 2025

Introduction

This summary report presents performance against Vision 2025 indicator 4.b. targets described in **Table 1** and details the results. Indicator 4.b captures the costliness of macro-level insurance instruments, assuming that costs "should not be excessive[2]" while remaining high enough to enable high-quality product development. The scope of this indicator is restricted to publicly supported products, as these schemes are assumed to be able to share cost data more readily. Under this indicator, the cost-effectiveness of macro schemes is assessed against preliminary benchmarks. In 2022, **24% of macro-level projects reported that they met the cost benchmark**. Given the absence of clear cost benchmarks in the literature for micro- and meso-level schemes for these products, there is no reporting against this indicator yet. Thus, this assessment aims at gathering insights into the schemes' cost structures.

Table 1 Vision 2025 indicator 4.b criteria

Indicator 4.b Low cost of providing coverage		
Target	**Cost benchmarks**	**Criteria/Objectives**
A 10-percentage point increase in the proportion of macro-level publicly funded schemes that meet the relevant cost benchmarks.	• Macro-level (sub-) sovereign insurance: annual costs represent 20% of premiums. Of this, around 10% of premiums are spent annually on reinsurance and 10% on other expenses (industry intelligence). • Macro-level catastrophe bonds: the average insurance multiple in 2018 was 2.05 for cat bonds (World Bank, 2018). • Contingent credit: the World Bank's contingent credits are at IBRD loan lending rate, with a front-end fee of 0.5%. • Micro- and meso- level parametric insurance: no overall benchmarks given how different products are.	Assessment of the appropriateness of cost-benchmarks at the macro-level: • Assess the fulfilment of the indicator target. • Assess the appropriateness of these insurance benchmarks for designing insurance schemes that target poor and vulnerable groups. Micro- and meso-level: • Collection of primary data to generate insights into the cost structures.

Source: OPM elaboration from "*InsuResilience indicators, targets and assessment methodology*", vivid economics & RMS for IGP, 2020, November.

This research is limited to assessing the indicators and parameters set out in the IGP M&E framework. Therefore, it does not provide an in-depth assessment of cost-effectiveness within the sampled products. The small sample size and low response rates (see **Table 2** below) should be considered when reviewing findings. The results of this research should not be seen as representative but rather as a

[2] The approach to assess the affordability of insurance schemes is detailed in the Background Note on targets and indicators for Vision 2025. For more details, please access the report here. Last access 1st July 2024.

contribution to broader growing evidence on climate insurance. Annex A includes the descriptions of scoring methodologies.

Table 2 Indicator 4.b response rate

	Indicator 4.b				
	Sample	**%**	**Responses**	**%**	**Countries**
n. schemes	**25**		**13**	65%	Solomon Islands, Malawi, Mauritania, Burkina Faso, Madagascar, Nigeria, Ethiopia, Colombia, Rwanda
Macro schemes	**15**		**8**	53%	
Contingent credit	7	60%	**1**	14%	Solomon Islands
Sovereign Risk Transfer	7	40%	**6**	86%	Malawi, Mauritania, Burkina Faso, Madagascar
Sub-Sovereign Risk Transfer	1	-	**1**	100%	Nigeria
Meso-micro schemes	**10**		**6**	60%	
Corporate or Institutional Risk Transfer	-	-	**-**	-	
Microinsurance Households	8	80%	**5**	62.5%	Burkina Faso, Ethiopia, Madagascar, Colombia
Microinsurance Business	2	20%	**1**	50%	Rwanda

Progress results

Macro-level insurance schemes

The implementation year of all products assessed was between 2009 and 2023, with two products still under development and due to begin in 2025/26. Perils covered by these insurance products varied from drought, floods, wildfires and landslides to climate-induced disasters and wider consequences such as health emergencies, pests and diseases. Not all products made payouts every year; however, except for those in development, all products have made at least one payout. **All products across all countries claim to target and support poor and vulnerable people** in line with the definition provided in the InsuResilience Vision 2025 M&E framework, i.e., people living with less than 15 USD per day. **Table 3** illustrates specific methods insurance products use to target the poor and vulnerable.

Table 3 How surveyed insurance schemes target the poor and vulnerable

How products target the poor and vulnerable	
Macro schemes	• By using data on the distribution of the poor and vulnerable e.g., household survey data and wealth indexes. This is used to undertake vulnerability profiling, determine the resilience of households to covariate shocks and subsequently categorise eligible households. • Historical regional data of the peril e.g., previous instances of flooding. This information is used to determine which areas are at higher risk and in some cases regional data was also used to determine the profile of the population e.g., predominately rural smallholder farmers.
Meso-micro schemes	• Targets low-income earners in rural settings e.g., smallholder farmers. • Targeting and distribution often occurs through cooperatives. • By regional profiles e.g., those which are classified by populations who live on less than 2 USD per day or own less than 5 hectares of land and/or are characterised by frequent instances of covariate shocks such as drought or flooding. • Policyholders in some instances are targeted through national social protection beneficiary lists and/or further eligibility criteria.

Table 4 (below) illustrates that most macro-level products target and support poor and vulnerable groups (87.5%). The product which did not meet the above criteria was still under development and, therefore, had not made any payouts at the time of the interview. Macro schemes that support poor and vulnerable groups broadly say that processing claims usually takes under two weeks. The time needed to reach the beneficiary was more uncertain. Contributing factors to these delays include the extent of the emergency/peril, delays associated with banks and the deployment of the payout, the time required to ensure accurate targeting and general governmental administrative delays.

Table 4 Macro-level schemes interviewed that support poor and vulnerable groups

Macro-level schemes that support poor and vulnerable groups	
YES: the target population is reached by the payout	87.5%
NO	12.5%

Benchmark Assessment

No macro-level scheme interviewed was aware of the international cost benchmarks applied under Vision 2025. Further, no interviewee could provide a detailed cost breakdown to determine whether the product inadvertently met the criteria. In most cases, this was seemingly because the information was not readily available. This differs from the self-reported data included in the InsuResilience Vision 2025 Monitoring database, which shows that 24% of macro-level projects meet the cost benchmarks. As a result, the remainder of this section assesses the cost structure of the macro-level schemes surveyed to the extent possible.

In terms of the cost structure of the macro-level schemes interviewed, **the major direct cost component is the premium**. Considering the surveyed macro-level schemes, the premium was either dependent on the available budget or set up in a way that the premium would gradually be covered by the government or relevant sub-sovereign entity, e.g., the respective entity would subsidise 10% in year one, 20% in year two and so on until the full premium was transferred. In this instance, the remainder of the premium would be financially supported by the relevant donor(s). It can be noted that interviewees for macro-level products emphasised that increased coordination between stakeholders, including national entities and donors, would create more enabling and transparent environments.

Interviewees for sovereign risk transfer products stated that depending on the insured peril, they charge a maximum premium loading of up to 65%, which is lower than the market. This means that a maximum of 65% of the net premium (expected cost of claims to be paid out) is added to the total cost of the premium to cover all additional costs, such as administration or operational costs. They are also tax-exempt for certain products where they act as the insurer, resulting in lower-than-market average premium loadings. Moreover, due to relationships with the local and international reinsurance markets, they have no additional costs for reinsurance brokerage fees. Ultimately, they claim lower expenses and no additional loading for distribution cost, fronting commission, reinsurance commission, or profit loading. However, the interviewees for macro-level schemes stated that no budget was allocated to deal with basis risk events. **No specific budgetary figures were provided for macro schemes to determine a detailed cost breakdown.**

It should be noted that an interviewee for a contingent credit instrument stated that for this particular year, a 5 million USD grant was delivered rather than the usual grant/loan dual financing instrument. As a result of the donor's country classification and graduation policy (based on per capita income and creditworthiness), the policyholder qualified for concessional assistance only. Due to the COVID-19 pandemic, the 2020 model was amended to include a soft trigger, in this case, the declaration of a health emergency. However, there was no oversight by the donor of the overall cost structure regarding how the government chose to spend this grant and no additional reporting mechanism was implemented.

Meso- and Micro-level insurance schemes

All insurance products confirmed that the schemes were designed to specifically target the poor and vulnerable. The profile of policyholders for meso-micro schemes are generally cooperatives, rural smallholder farmers and pastoralists. Interviewees stated that the average policyholder would typically have about 1 hectare of land and/or several livestock and would likely live on less than 2 USD per day. Specific information on the income of the policyholders beyond this was either unknown or unshareable by interviewees.

It is worth noting that the interviewees for micro-meso-level insurance products stated that a set of benchmarks would be beneficial. Although it was recognised that this would be a difficult task, it was also emphasised that more data concerning the cost structure of these products could incentivise others and create more saturation within the market while also allowing for a more realistic picture to be painted in terms of costs associated. Coordination between government, donors, and insurance companies was also raised as a key element for successful implementation.

Cost structure findings

Findings suggest that aside from the premium, **capacity building, operational costs, distribution costs and awareness raising make up a larger proportion of expenses**[3]. For example, for one microinsurance product designed for households, it was estimated that approximately 40% of the premium was attributed to operational costs. This was because operational costs are fixed, and they currently only provide insurance to a small portfolio of policyholders. It is estimated that this would decrease to 15% when the product has been successfully scaled. One other micro-insurance product cited financial education and capacity-building costs as key expenses. For one meso product, capacity building was also a key expense. It included activities such as using cooperatives to train farmers on how to use insurance and on the benefit of the insurance through a train-the-trainer model. **Multiple micro- and meso-level products claimed that distribution was an additional expense for regions in which policyholders do not have access to mobile money**, therefore requiring on the ground distribution. Overall, few budgetary figures were provided, and where given, these figures were estimates.

In terms of revenue, the primary means were premiums for all products interviewed. In some instances, this was partially paid with public funds from local disaster risk management strategies or government subsidies. For one micro insurance product, the government provided in-kind subsidies through donor funding in the form of seeds, whereas subsidised capacity-building initiatives were provided for another.

[3] This is to be expected. See for example vivid economics& RMS for IGP (2020) "*InsuResilience indicators, targets and assessment methodology*", November; Munich Climate Insurance Initiative (2016) "*Making climate risk insurance work for the most vulnerable: seven guiding principles"*, October; and Munich Climate Insurance Initiative (2019) "*Climate risk insurance solutions: understanding the drivers of cost-effectiveness*"**,** February.

Table 5 Average premium cost and renewal rate

Average range of premium across all products surveyed	Percentage of products which considered affordability	Renewal rate
Between 8 USD – 70 USD	100%	Where known, between 60-80%

All interviewees stated that affordability was considered when determining the premium. This was done through various means, including socio-economic studies, assessment of the eligibility and/or targeting criteria, and the ability to seek public sector funding to grant subsidies. However, one microinsurance product reported that affordability was an ongoing challenge. An assessment on a separate microinsurance product stated that the product was deemed unaffordable in 2019. The premium and coverage levels were therefore revised, which resulted in increased affordability and, at present, a 60% renewal rate. The cost structure changed for 4 micro- and meso-level products interviewed during implementation. Interviewees stated that these were not substantial changes and largely came from minor adjustments required after the initial pilot period. This included changes to coverage or operational costs to ensure affordability.

In addition to affordability, timely payouts are also critical, especially for lower-income groups, and for attaining cost efficiency in terms of speed of disbursement. More efficient payouts can lower administration and processing costs, allowing for better resource allocation. Moreover, greater policyholder satisfaction due to quick payouts can lead to higher renewal rates and increased retention and scalability. This ultimately means that insurance providers can offer more competitive premiums that are more cost-effective, allowing them to reach more policyholders and potentially diversify risk.

Table 6 Average speed of disbursement

Average time taken to process claims	Average time taken for payout to reach beneficiary
Between 7-15 days	Can be instant where beneficiaries have digital bank accounts, however, usually between 14-30 days.

As outlined in **Table 6, the speed of disbursement and the time taken for payouts to reach the beneficiaries varies.** Most interviewees stated that delays can occur due to difficulties in delivering money by field partners for those who do not have access to mobile money, delays to final index results or delays in reporting claims. One microinsurance product, for example, claims that payments should reach beneficiaries 14 days after the publication of the final index result. However, interviewees recognise that this promise is not always kept due to the time-consuming nature of payout delivery. This is particularly challenging as most beneficiaries do not have mobile money accounts.

Key takeaways

This summary report presents progress against InsuResilience Vision 2025 indicator 4.b, as described in **Table 1**. Ultimately, **the cost benchmarks were not known to interviewees, and due to the limited data provided, this study cannot confirm with certainty whether products meet the cost benchmarks.** However, lessons shared by macro-level schemes suggest that coordination is a key component to developing cost-effective insurance products. Interviewees stated that the insurance industry needs to work in conjunction with donors and the government to ensure that all parties are aware of the process and costs.

For meso- and micro-schemes, interviewees stated that country-specific cost benchmarks would provide a useful barometer of success and create a more attractive picture for governments. Key categories of expenses included capacity building, operational and distribution costs, and awareness raising**.** Findings suggest that increased scaling of products to garner better economies of scale would lower costs. Interviewees from meso-micro level schemes echoed the need for better multi-partner engagements to create enabling environments for government and incentivise engagement from other stakeholders in the private sector. Future research would benefit from exploring what cost benchmarks might look like for meso- and micro-level schemes.

Yet, this research concludes that **limited access to cost structures coupled with the lack of awareness of international cost benchmarks and challenges with ensuring affordability call into question the extent to which cost benchmarks (cost per unit) are an effective indicator to assess cost-effectiveness for insurance products that target the most vulnerable**. As highlighted in the literature, beyond costs, cost-effectiveness needs to be understood in conjunction with other parameters, including, for example, affordability, speed of disbursement (as included under result area 5.b), geographical coverage, and co-benefits generated by the product, such as risk and financial education. In the future, climate disaster risk insurance programmes may reconsider how to assess the cost of providing protection by adding additional criteria for assessment.

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Published by the Global Shield Secretariat

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Annex A – Assessment criteria for the costliness of insurance schemes

Indicator 4.b Costliness of insurance schemes	
Criteria 1: Macro-level scheme targets poor and vulnerable group	
yes	The target of the insurance scheme is the population living with less than 15 USD per day
no	The insurance scheme knows and comply with benchmark cost

Criteria 2: Macro-level scheme supports poor and vulnerable group	
yes	*In case there were triggering events:* The target population is reached by the payout.
no	*In case there were triggering events:* The target population is not reached by the payout.

	Criteria 3: Macro-level scheme knows and comply with benchmark cost
yes	The insurance scheme knows and comply with benchmark cost
no	The insurance scheme does not comply with benchmark cost