

# Premium and Capital Support for Climate and Disaster Risk Insurance: Core Principles and Operational Indicators

Internal Draft, Status July 29, 2021

*For the internal use of the V20<sup>1</sup>*

## 1. Introduction

The current financial protection gap against climate and disaster risks is 98% across climate vulnerable developing countries. Climate and disaster risk insurance (CDRI) offers many advantages as compared to post-disaster financial instruments. At the same time, CDRI is relatively underused in many climate vulnerable low-and lower middle-income countries and small market economies with high-middle income status. This has largely been induced by persisting entry barriers (i.e., high upfront costs) for CDRI, lack of sufficient political incentives to implement and lack of institutional frameworks for insurance, combined with the high costs of disaster insurance<sup>2</sup>.

As of 2021, providing concessional financing<sup>3</sup> e.g., premium and capital support (PCS) is being discussed globally as an important tool to expand the use of CDRI by directly or indirectly reducing the costs of insurance for the beneficiaries<sup>4</sup>. Following the first discussion of this matter at the 4<sup>th</sup> meeting of the InsuResilience High-Level Consultative Group (HLCG) in June 2021, the V20 Summit Communiqué of July calls for the systematic provision of smart premium subsidies and capitalization to close the financial protection gap.<sup>5</sup>

Several forms of concessional support may be considered to support countries in using CDRI including the provision of grants or concessional credit. Broadly, PCS can be defined as *any form of financial support or provision of concessional finance (inclusive of grant finance) to reduce the insurance premium and capital cost*. The use of PCS tools to support CDRI is a relatively new field that should allow flexibility in approaches to be tested and implemented and continue to build on experiments to learn which systems and strategies work best. To ensure maximum impact, development partners need to create and refine operational guidelines based on increasing evidence. Building on the earlier [MCI background brief on premium and capital support](#), the here presented paper develops core prin-

---

<sup>1</sup> Prepared by Panda A, Seifert V, Kreft, S and Ahmed S, Note: This paper is a living document to support discussions on premium and capitalization support - including in the context of the InsuResilience HLCG - and takes into consideration views from a diverse range of climate vulnerable developing countries. This document will be updated continuously to facilitate considerations in the discussion on premium and capitalization support for climate vulnerable developing countries.

<sup>2</sup> see Cummins, J. D. & Mahul, O., 2009. *catastrophe risk financing in developing countries: principles for public intervention*. Washington dc: World Bank and ADB (2020), *Assessing the enabling environment for disaster risk financing a country diagnostics tool kit*.

<sup>3</sup>The term covers any form of financial support or provision of concessional finance (inclusive of grant finance) to reduce the insurance premium and capital cost.

<sup>4</sup> Vivideconomics. (2016). Final Report: Understanding the role of publicly funded premium subsidies in disaster risk insurance in developing countries. Retrieved from <https://www.vivideconomics.com/wp-content/uploads/2019/08/Final-Report-EoD.pdf> and Jarzabkowski, P., K. Chalkias, D. Clarke, E. Iyahan, D. Stadtmueller & A. Zwick. 2019. "Insurance for climate adaptation: Opportunities and limitations." Rotterdam and Washington, DC. Available online at [www.gca.org](http://www.gca.org).

<sup>5</sup> <https://www.v-20.org/activities/ministerial/1st-climate-vulnerables-finance-summit-communique>

ciples of SMART PCS and its operational guidelines.

## 2. Purpose and Role of Premium and Capital Support (PCS)

Theoretically, PCS can play a critical role in accelerating uptake and demand of CDRI. It can provide increased affordability of CDRI products by reducing the cost of insurance premiums or cost of capital. In that way, it can contribute to building new insurance markets and increase insurance penetration rates, provide funding and liquidity for disaster insurance products, and reduce vulnerability. Ultimately, PCS could therefore reduce (implicit) contingent liabilities of the government<sup>6</sup> (see figure 1), thereby helping to maintain macro-fiscal stability in the aftermath of natural hazards.

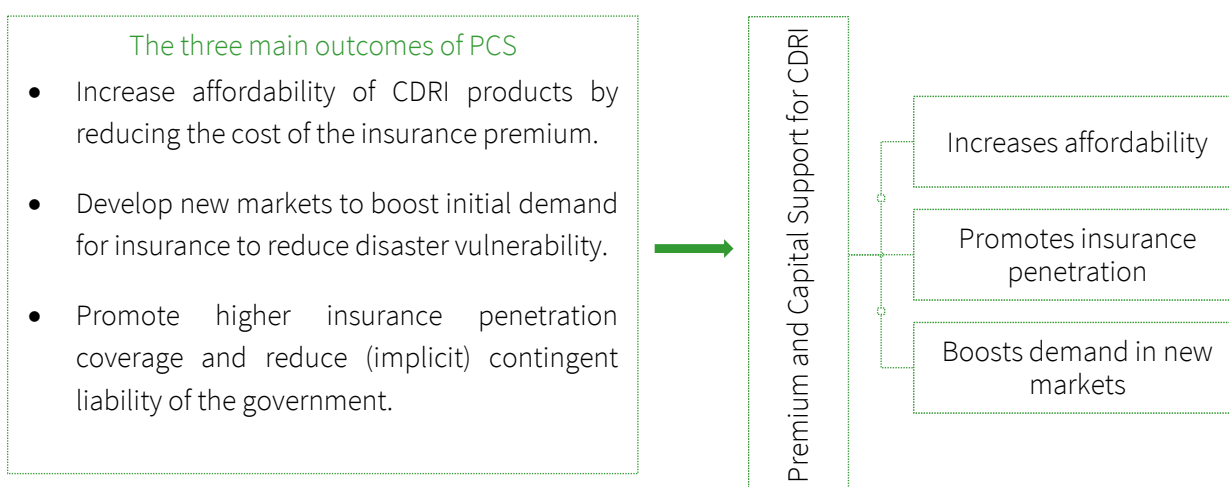


Figure 1: Purpose and role of PCS in CDRI

However, PCS can only deliver on these benefits within a broader risk management framework, which is based on sound fundamental and operational principles and supported by government, private sector, and multilateral organizations. More specifically, the involved actors seeking to use PCS for the benefit of low-income population segments and to reduce the CDRI protection gap, should be guided by a common set of principles. While these core principles may not be a concrete set of guidelines to follow, they should provide a framework for evaluating policy decisions relating to PCS. To start with, figure 2 below, through a theory of change<sup>7</sup> illustrates the types of outcomes, outputs, and impacts PCS can support to achieve the goals of CDRI. Drawing on the log frame presented in figure 2 and based on the definition of PCS provided, three levels of operational indicators of PCS were formulated to represent varying impacts of PCS.

<sup>6</sup> Contingent liabilities are government obligations that are triggered when a potential but uncertain future event such as a natural disaster occurs. They are categorized as explicit or implicit liabilities. Explicit liabilities are those underpinned by legal obligations, such as guarantees and pre-arranged insurance agreements. Implicit liabilities, on the other hand, are expenditures the government is expected to make due to a perceived moral obligation, without formal legal commitment; in some cases, these liabilities include support for public-private partnerships (PPPs) or state-owned enterprises. (World Bank, 2019)

<sup>7</sup> A Theory of Change (ToC) is the thinking behind how a particular intervention will lead to its expected results. It shows the causal links between the activities being undertaken and the specific outcomes and ultimate impact the intervention hopes to produce.

**At *Output* level:** Effective PCS interventions should result in increased affordability, penetration<sup>8</sup>, and growth of the infant CDRI industry. More specifically, these should be the expected results when making a PCS intervention.

**At *Outcome* level:** At the outcome level, if the PCS were effective, indicators such as cost of insurance, increased share of non-life premiums are expected to differ from those that have not received PCS support.

**At *Impact* level:** Outcomes are expected to lead to impacts. It is assumed that ultimate impacts in terms of the proposed indicators presented at the impact level (in figure 2), result from three types of changes i.e. immediate changes, intermediate changes, and medium to long-term changes. For example, while higher purchasing power can be an immediate impact of a PCS intervention, intermediate changes include higher numbers of people participating in the disaster insurance market, while increased resilience can be seen as a medium to long term impacts of PCS intervention.

Inputs	Premium and capital support (PCS) for climate and disaster risk insurance		
Outputs	Increases Affordability	Promotes Insurance Penetration	Boost Demand in New Markets
Outcomes	<ul style="list-style-type: none"> <li>Reduced cost of insurance products.</li> <li>Reduced cost of insurance premium</li> <li>Reduced technical, operational, and capital cost.</li> </ul>	<ul style="list-style-type: none"> <li>Increased non-life insurance premium volume</li> <li>Targeted insurance coverage for low income and vulnerable population.</li> <li>Improved insurance culture</li> <li>Increased trust on insurance among low-income segments.</li> </ul>	<ul style="list-style-type: none"> <li>Higher use of ex-ante market-based risk transfer instruments</li> <li>Higher ability to self-insure or buy substantial disaster insurance.</li> <li>Higher access to capital markets that enable reinsurance and diversification.</li> </ul>
Impacts	<ul style="list-style-type: none"> <li>Higher purchasing power to buy insurance among people from low-income segments.</li> <li>Higher number of people from low-income segments participate in the insurance market</li> <li>Higher insurance coverage.</li> </ul>	<ul style="list-style-type: none"> <li>Higher non-life premium to GDP ratios in low income and climate vulnerable countries.</li> <li>Reduced disaster recovery time.</li> <li>Increased speed and quality of disaster recovery.</li> <li>Increased resilience</li> </ul>	<ul style="list-style-type: none"> <li>Higher capitalized insurance market</li> <li>Reduced contingent liabilities of governments.</li> <li>Higher availability and penetration of disaster insurance</li> <li>Increased private insurance penetration</li> </ul>

Figure 2: Simplified theory of change of premium and capital support based on literature review

<sup>8</sup> Insurance Penetration here is defined here as the ratio of total disaster insurance premiums to gross domestic product in a given year.

Accordingly, the key outcomes of PCS are as follows:

- **Affordability:** PCS can reduce the cost of insurance for the beneficiaries and increase affordability for households, MSMEs and ease potential short-term fiscal and political constraints for countries.
- **Insurance Penetration:** PCS can increase insurance penetration by providing lower premiums and help achieving scale and by including low income and vulnerable population segments into insurance nets.
- **New Markets:** PCS can boost new and underdeveloped markets for insurance by facilitating reduced up-front costs of market entry.

### 3. Principles of SMART Premium and Capital Support

In the context of CDRI, PCS should be designed and implemented in ways that reduce the insurance protection gap of disaster risks for vulnerable people and low-income population segments, while minimizing distortions in the market, maladaptation, and mis-targeting.

However, it is also important to build consensus and experience driven principles that can be applied in a wider context to guide premium and capital support. In seeking to develop a first international consensus on the subject matter, **this paper defines five SMART principles to guide PCS as an initial step to promote more reliability and convergence of international climate finance actors.**

The five core principles suggested for application by InsuResilience stakeholders, specifically V20 and G20 governments and development partners, including multilateral organizations, the private sector, academia, and civil society, are: Principle 1: *Sustainability (S)*, Principle 2: *Market Building (M)*, Principle 3: *Affordability, Availability and Accessibility (A)*, Principle 4: *Resilience Building (R)*, and Principle 5: *Transparency and Accountability (T)*. Figure 3 below outlines these components of SMART premium and capital support.

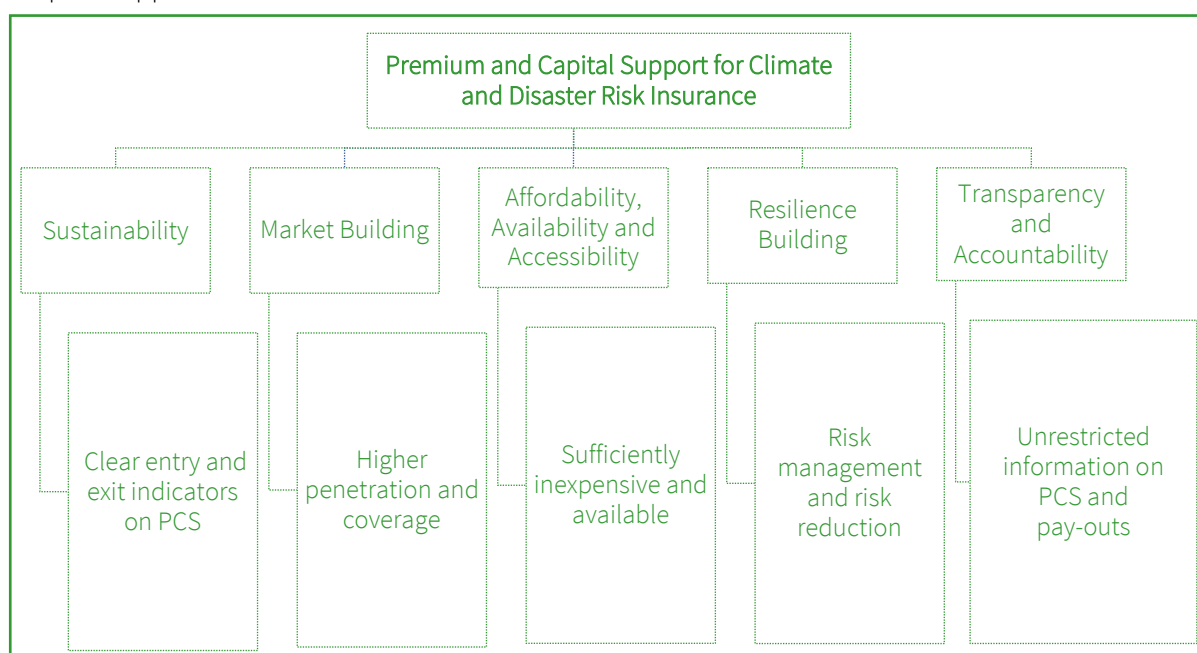


Figure 3: Principles of Premium and Capital Support

### 3.1 Principle 1: Sustainability

Understanding the time duration in the use of PCS is essential. While it is important that pilots and projects on CDRI be experimented on the ground with the help of PCS, it is also essential that **these initiatives reach scale and become sustainable after a certain period**. Every PCS intervention should have clear entry and exit criteria based on the needs and context of the recipient (e.g. individual or households, MSMEs, governments). While a clear entry strategy deals with questions such as when, how much and for whom to provide PCS, an exit strategy addresses the question of time duration to provide PCS and what conditions can make it sustainable after PCS ceases to exist. While examples do exist on the use of premium subsidy in the case of micro insurance<sup>9</sup>, it is too early to draw any conclusions on the use PCS for meso and macro schemes and their sustainability. However, given their sustainability implications for PCS interventions, the below aspects should be considered .

- Generating sustained demand for CDRI though PCS support should demonstrate maximum value for money to generate willingness to pay the premium.
- Financial trade-offs for different use of PCS should be considered i.e. capital injection or upfront premium subsidies based on the needs and priority of the recipients.
- There should be added value for all stakeholders: insurers, delivery channels, governments & donors to make PCS interventions sustainable.
- PCS decision-making should not only consider the interplay of PCS with other, more indirect measures such as risk reduction and resilience investments, but also the trade-offs between using scarce public resources either for risk reduction and adaptation investments *or* PCS.

#### Guiding questions:

- Provider/donor: Can the provider of PCS sustain the financial input over the required time?
- Recipient/beneficiaries: Will the recipient be able to continue their activities without PCS once it is phased out?

### 3.2 Principle 2: Market Building

PCS should incentivize new disaster insurance markets by supporting the use of ex-ante risk transfer instruments, by increasing the capacity of the recipient to subscribe to disaster insurance and by bringing new population segments, who were uninsured before and thereby increase financial resilience. At the national level for example, PCS can contribute to offsetting the share of government contingent liability by working with private insurance market players.<sup>10</sup>

#### Guiding questions:

- Provider/Donor: Is the PCS encouraging a higher penetration of the disaster insurance market among low-income segments of the population?

---

<sup>9</sup> IFAD, 2010, The The Potential for Scale and Sustainability in Weather Index Insurance for Agriculture and Rural Livelihoods

<sup>10</sup> For additional information on the importance of providing assistance beyond and in conjunction with PCS, e.g. for risk reduction measures, the building of distribution channels, or awareness raising and financial literacy, kindly refer to the earlier version of this paper, the content of which is complemented by the here presented update.

- Recipient/beneficiaries: Are there increasing numbers of beneficiaries among low-income segments after providing PCS?
- Recipient/beneficiaries: Is there a stronger enabling environment for risk transfer markets and reliable reinsurance protection?

### 3.3 Principle 3: Affordability, Availability and Accessibility<sup>11</sup>

For one, the PCS instruments available for the specific range of risk transfer products existing in a particular market should reflect the country's disaster risk landscape and social and economic context. Further, to allow for increased insurance uptake, PCS should aim to expand the range of available products suitable for households, specifically from lower income segments, MSMEs and sovereigns, and be accessible and affordable for the targeted consumer.

PCS is likely to be more effective than other interventions in reducing the cost of insurance. However, premium *or* capital support are not perfect substitutes for each other. For example, while technical assistance provided to sovereign risk pools can be necessary and effective to start a risk pool, it is not a substitute for premium support. Thus, although PCS interventions should be used to ensure that they help achieve the target of affordability of CDRI products, it is important to evaluate the needs on a case-by-case basis.

#### Guiding questions:

- Provider/donor: Is the PCS making insurance products sufficiently inexpensive and available for the low-income segments of the populations/countries?
- Recipient/beneficiaries: Is the PCS contributing to a premium that is flexible enough for low-income segments to buy insurance products?

### 3.4 Principle 4: Resilience Building

By providing financial protection at different scales through closing the insurance protection gap in low and lower middle-income countries, PCS can help build resilience to climate change equitably. In doing so, PCS should aim to contribute to comprehensive disaster risk management practices and thus be realized as part of a comprehensive financial protection strategy that mobilizes different instruments. In this context, any criteria driven approach aimed at building resilience should account for changing climatic risks and vulnerabilities in addition to other socio-economic indicators. It is important that PCS interventions have flexibility to adjust sufficiently to the changing current and future climate risks by integrating climate risks considerations into decision making. Further, in this context, PCS should also not undermine efficient outcomes within the insurance industry. For example, it should not encourage

---

<sup>11</sup> For additional information on the importance of providing assistance beyond and in conjunction with PCS, e.g. for risk reduction measures, the building of distribution channels, or awareness raising and financial literacy, kindly refer to the earlier version of this paper, the content of which is complemented by the here presented update.

beneficiaries to overinvest in risky and damaging activities, but rather aim to incentivize risk reduction activities among recipients and build long term resilience.<sup>12</sup>

#### Guiding questions:

- Provider/donor: Is the PCS contributing to increased comprehensive risk management capacity and long-term resilience?
- Recipient/beneficiaries: Is the PCS incentivizing risk reduction behavior for climate resilience?

### 3.5 Principle 5: Transparency and Accountability

PCS should aim to share relevant, adequate, and comprehensive information on a timely basis which provide a clear view of the performance of the PCS outcomes and build evidence to learn in the medium and long term. Transparent and accountable PCS is expected to enhance the understanding and management of the risks to which the insurers and beneficiaries are exposed. This is necessary to help sound and effective decision-making that can lead to improved conditions for the value recognition and uptake of CDRI.

#### Guiding questions

- Provider/donor: Are there relevant, comprehensive, and adequate information on a timely basis in a non-restricted and transparent manner on PCS?
- Is the provider of PCS accountable to the communities and countries at risk?
- Recipient/beneficiaries: Are there accessible and transparent information on pay-outs (how and when) and verifiable information on losses on the ground?

## 4. Applying SMART Principles at Different Scales

Deciding on the adequacy, length, and target group for applying PCS is hard to judge simply by examining the available CDRI products. Additionally, the knowledge on these aspects is further complicated by lack of detailed data and evidence on performance of CDRI schemes. While the SMART principles can be applied at different scales i.e., micro, meso<sup>13</sup> and macro, its adequacy, length, and determination of the target group will vary across scales and there is a need to recognize the complexity, similarities, and differences of these scales. Based on the SMART principles the subsequent section provides broad indicators and guidelines for the application of PCS across scales.

---

<sup>12</sup>For additional information on the importance of providing assistance beyond and in conjunction with PCS, e.g. for risk reduction measures, the building of distribution channels, or financial literacy, kindly refer to the earlier version of this paper, the content of which is complemented by the here presented update.

<sup>13</sup> **Micro-insurance** refers to micro-products to insure the most vulnerable individuals in low-income countries, a parallel with the concept of micro-finance. **Meso-insurance** refers to those situations in which the insured is not an individual, but rather an aggregation of individuals under a collective body. **Macro-Insurance** refers to situations where the insured are countries or states.

#### 4.1 To Whom Should Premium or Capital Support be Provided?

The target group of PCS can vary depending on the objectives of the specific CDRI product. However, three important criteria to consider when applying PCS are:

- **Physical vulnerability** to climate-related disaster risks including future risks: Which locations, countries, or regions are vulnerable to the impacts of current and future climate change i.e., high and medium risk zones?
- **Economic and social vulnerability** to climate change: Which economic and social segments of the population/countries are vulnerable to the impacts of climate change i.e., low-income segments, population with high gender imbalance, etc.
- **Protection gap argument**: Can the PCS intervention aim to extend to those areas and segments of population/countries where the insurance protection gap is higher?

Based on the above criteria PCS can be either designed as “universal” or as “targeted”, in the sense that either all clients of a particular insurance vehicle or only a selected sub-group benefit. Fundamentally, **premium support initiatives can specifically be targeted to groups based on any of the above criteria depending on the need. In contrast, having one single universal premium support criteria runs the risk of benefitting the well-off sections/nations disproportionately.**

#### 4.2 For How Long Should Premium and Capital Support be Provided?

One of the major aims of providing PCS is to reduce the insurance protection gap and build long term resilience to climate change. For micro level instruments, there is considerable experience with providing protection to people in need, for example in the context of agricultural insurance, where PCS has been provided for multiple years. For meso and macro level instruments, there is less evidence available. However, building on the experience that exists to date and depending on the scale and conditions on the ground, the below considerations should be accounted for when deciding on the time span of providing PCS:

- PCS should only be provided with a **clear phase out schedule** in place.
- PCS may be deemed necessary over the **long term** for the most vulnerable populations and countries.
- PCS should be provided based on the conditions that progress is made towards achieving efficient outcomes including the building of enabling conditions for long term resilience i.e., risk reduction, removing market imperfections, clear economic gains, etc.
- PCS may be provided till the point where the marginal benefits are higher than the marginal costs of PCS.

At the micro and meso scales, the principal benefit of providing PCS arises from correcting market failures, externalities and achieving broader social and political goals (i.e., support farm income). There has been considerable experience from agricultural insurance subsidies<sup>14</sup> implemented in different

---

<sup>14</sup> World Bank (2017) When and How Should Agricultural Insurance Be Subsidized? Issues And Good Practices



countries and set up with differing intentions of achieving specific benefits, from which lessons can be learnt. In this context, it has been considered important not to lose track of the intended purpose of PCS, when aiming to determine the time span required for effective PCS interventions. Therefore, further key considerations include:

- If PCS is intended to help insurers **overcome initial establishment problems** for the insurance scheme: The PCS should be carried out in a time bound manner, which ideally is determined beforehand.
- If PCS is intended to serve the **purpose of a broader social and political goal**: The PCS intervention should be built on a long-term financing strategy that ensures not to make PCS a burden on public finance.

At the macro level (e.g., catastrophe risk pools) principal benefits can arise from risk diversification, joint reserves, and larger reinsurance transaction size, which help in reducing the cost of insurance. However, establishing governments' long-term commitment to premium payments (incl. through time-bound PCS) is one of the biggest challenges for the sustainability of sovereign catastrophe risk pools. Important considerations in this regard include:

- PCS should be provided - **in an objective and targeted fashion** - to sovereigns with weak fiscal positions and in line with clear measurable benefits arising from PCS in terms of disaster liquidity which would not have been possible otherwise; taking the developments and time needed to stabilize fiscal positions as an indication of the expected length of PCS interventions. Special considerations should be given to countries with high climate risk exposure and relevant impairment of their economic base.
- PCS should **incentivize the optimal use of risk reduction, risk retention and risk transfer mechanisms** to reduce dependency on PCS and avoid lock-in for continuous PCS commitments of countries.

#### 4.3 How Much Premium or Capital Support Should be Provided?

PCS interventions will be dependent on the scale, need and context of PCS support. Yet, while highly context-specific, important considerations when aiming to determine the size of PCS interventions include assessing the following questions:

- What is the **elasticity of PCS support** with demand and uptake of insurance at different scales?
- What is the **cost-effectiveness of PCS i.e., Value for Money (VfM)**?
- What is the **risk exposure level** of the target groups?

#### 4.4 SMART Principles and Potential Responsibilities of InsuResilience Stakeholders

Based on the SMART principles above table 1 gives an indication of the potential roles and responsibilities of InsuResilience stakeholders involved in the PCS implementation, most specifically V20 and G20/donor governments and the broader risk industry, including academia.

Table 1: Matrix of potential responsibilities of InsuResilience stakeholders

PRINCIPLES AND RECOMMENDED ACTION	V20/ RECIPIENT GOVERNMENTS	G20/ DONOR GOVERNMENTS	RISK INDUSTRY
<b>Principle 1: Sustainability</b>			
Ensure that decision-making is informed by the formulation of concrete subsidy objectives, considering the trade-offs between targeted and universal subsidies.	X	X	
Enhance targeting techniques to establish a clear differentiation of low- and higher-income segments to prevent the undermining of incentives in the insurance industry and encouraging overinvestment in risky and damaging activities.	X	X	
Develop a phase-out strategy and ensure systematic and actuarially pricing of premiums to ensure premium support interventions help the facilitation of effective risk markets striving towards fully risk reflective premiums, and to allow for easily budgeting and differentiation of subsidies.	X	X	
Assess the long-term sustainability benefits and life spans of other forms of concessional support (including grant instruments), such as capital investments against the direct price effects of time-bound premium financing, and when deciding upon premium financing consider the effectiveness implications of selecting specific recipients (e.g., the insured or the insurer).	X	X	
Support the strengthening of national capacities and the international unification and standardization of relevant data, assessment, and climate-sensitive budgeting to create joint understanding and consensus on the identification of premium support needs, effective execution, and feasible concessional instruments (including grant-based instruments).			X

Determine fiscal space for and appropriateness of investment in premium payments (e.g., to regional or municipal risk pools) or premium subsidies (e.g., for national micro or meso schemes), dependent on simultaneous and complementary investment in risk management, specifically risk reduction and preparedness interventions, when seeking to address climate related, macro-economic and financial risk.	X		
Put in place plans for raising government revenue, including through enabling income generating activities for MSMEs and households, to ensure long-term viability and security of subsidy and support interventions, if needed, and shield from fiscal budget negotiations.	X		
Lead the creation of equitable, climate risk adjusted distribution criteria for international premium support and concessional finance	X		
<b>Principle 2: Market Building</b>			
Enhance regulatory environments to enable the development and implementation of high value-add products, including through product-bundling, modified premium payment schedules, and marketing and distribution services that enhance climate risk and financial literacy.	X		
In support of the V20-led Sustainable Insurance Facility (SIF), consider how to effectively link risk reduction, behavioural shifts, and better access to financial services, including through marketing services, distribution strategies and modified premium payment requirements, to premium support by examining MSMEs' willingness and ability to pay for insurance solutions considering changes in risk exposure and pricing over time.	X	X	

Modify performance metrics to include socio-economic outcomes and macroeconomic considerations, including improved ability to deal with non-financial shocks.		X	
<b>Principle 3: Affordability, Availability and Accessibility</b>			
As premium support is only sensible if appropriate instruments exist, ensure that current sovereign insurance products and other contingency instruments are constantly improved, expanded (both in terms of geographical coverage and perils) and benchmarked according to V20 risk needs, which may shift as extreme weather events become more intense and frequent.	X	X	X
Collaborate with the country members of regional risk pools to enhance instrument appropriateness and consider complementing and supporting parametric insurance with other insurance options, such as cat-bonds.		X	X
Strengthen effort and emphasis on developing insurance solutions for smaller markets such as SIDS, which are increasingly exposed to climate impacts.		X	X
<b>Principle 4: Resilience Building</b>			
Mainstream climate resilience considerations into national budgeting and investment planning to support climate-resilient growth and development strategies and lead on developing comprehensive disaster risk management and disaster risk finance strategies.	X		

<p>Enable access to finance and advisory for the development and implementation of comprehensive risk management strategies, specifically, risk reduction and preparedness investments, including through but not limited to supporting the international risk industry in enabling open access to data and risk modelling and other international bodies, such as the IMF, in providing macroeconomic and - financial risk surveillance and management advisory services.</p>		<p>X</p>	
<p>Enable access to finance and capacity-building for the development and implementation of comprehensive risk finance strategies, following a risk-layered approach, including through supporting the international risk industry in enabling open access to data and risk modelling, and premium financing.</p>		<p>X</p>	
<p>Support the strengthening of national capacities, including through open access to data and modelling, to support climate-sensitive investment planning and the implementation of risk reduction and preparedness commitments</p>			<p>X</p>
<p>Enable open access to data and risk modelling and contribute capacity-building expertise for national stakeholders, including the local risk industry and governmental planning agencies, to support the integration of a risk layered approach when developing national risk management and finance strategies.</p>			<p>X</p>
<p>Incentivize and commit to risk reduction and preparedness investments complementary to the uptake and support of risk transfer solutions to enhance the cost-effectiveness of both.</p>	<p>X</p>		

Commit to risk reduction and preparedness investments, dependent on the availability of relevant and equitable support in exchange for premium support, viewing insurance and premium support as a vehicle to build a contractual partnership that decreases the dependency on donor countries.	X		
Account for vulnerable country governments' efforts of developing and implementing climate resilient and risk reduction investment programmes in the context of limited fiscal space, relative poverty and market size context when deciding upon the provision and feasibility of premium support.		X	
Ascertain the quality of insurance schemes to prevent moral hazard and rent-seeking behaviour of private actors by subsidizing poorly designed schemes and maladaptation.	X	X	
<b>Principle 5: Transparency &amp; Accountability</b>			
Build transparency around previous and recently provided premium support interventions to enhance the availability of data to help determine best practice and address knowledge gaps.	X	X	X
Contribute transparent decision-making on the identification of national premium support needs and execution to contribute to increasing the availability, variety, and access to international premium support instruments.	X		
Commit to and enhance the creation of national capacities for transparent tracking, measuring and evaluation of premium support and financing interventions at all scales, responsive to commonly agreed upon evaluation criteria	X		

Make available data and lessons learnt on the quality of currently existing insurance schemes and on the effectiveness of previously or currently subsidized schemes.	X	X	X
Support the strengthening of national capacities to track, measure and evaluate the effective execution of premium financing and concessional support interventions.		X	
Make available detailed quantitative analysis of the effectiveness of different kinds of concessional support, including through contributing to and implementing the disaster risk finance evidence roadmap currently developed by InsuResilience stakeholders.			X
Support the creation of unified data and reporting standards for measuring and evaluating premium support interventions.	X	X	X
Utilize machine learning and other technology options, while being sensitive to potential discriminatory biases of artificial intelligence and the lack of data feasible for application in vulnerable country contexts.			X

## 5. Conclusion

The SMART principles on PCS described here are derived from consultations with climate vulnerable government representatives as well as literature review and desk research intend to provide a conceptual background and guidelines for decision makers, recipients, and donors of PCS. They are meant to allow for using PCS as an effective tool to realize the goal of reducing the insurance protection gap and building long term climate resilience through affordable and sustainable risk transfer measures. At the international level, it is essential to have a common understanding and platform on the use of PCS to enhance premium payment security, and to drive forward the establishment of an inclusive and global premium support structure, governed by objective principles and criteria as outlined in this paper to support the application of feasible, reliable and climate equitable PCS interventions. As indicated in box 1, such structure may potentially build on relevant programmes and actors best equipped to operationalize the provision of PCS at macro, meso and micro scales, or establish new ones as needed.

### Box 1: Delivery Structure for Premium and Capital Support

Beyond the need for commonly agreed upon principles and methodologies to guide the smart application of PCS and transparently and reliably estimate the size, time span and target group of PCS, the building of a less fragmented global risk financing architecture also requires the identification of suitable PCS delivery mechanisms.

With view to macro level instruments, sovereign risk pools like CCRIF-SPC and ARC as well as global financing facilities specifically aimed at (sub-) sovereign risk, such as the World Bank's Global Risk Financing Facility (GRIF), may represent feasible delivery channels. However, for micro and meso level insurance schemes, the situation seems more fragmented.

In this context, InsuResilience stakeholders may consider three key elements when discussing the design of an internationally accessible and systematic delivery structure for smart PCS for micro and meso schemes, including: 1) operational efficiency; 2) the individual political economy contexts of target countries and markets; and 3) acceptance and credibility towards donor and recipient countries as well as international finance institutions, such as development banks. Potential options to explore may include an international investment fund structure modelled, for instance, on the example of the InsuResilience Investment Fund (IIF), which has been set up by the KfW Development Bank and is managed by the global impact investment manager BlueOrchards. Operating through sub-funds, the IIF provided capital support in the form of debt and equity investments to existing or new (re)insurers based or operating in climate vulnerable countries.<sup>15</sup> Another option could be to set up funds within regional multilateral development banks (MDBs), such as the Asian Development Bank (ADB), the African Development (AfDB) or the Inter-American Development Bank (IADB), requiring the submission of PCS requests by implementing entities or governments. As per the GRIF's concept note, regional MDBs may be eligible to access the GRIF,<sup>16</sup> implying that such an established fund structure may therefore also help to further streamline the global support and implementation of CDRI.

Moreover, given the strengthening of macro-to-micro approaches, where regional risk pools become increasingly involved in the design and implementation of micro and meso insurance schemes,<sup>17</sup> regional pools may provide an additional route via which smart PCS for the micro and meso level may be made more systematic. Further examples to explore could also include lessons learnt from Ghana's Social Trust Project, implemented together with ILO, and concluded in 2014.<sup>18</sup>

Ultimately and in combination with an internationally integrated PCS delivery structure, the SMART principles should help to align funding for PCS with many of the ongoing initiatives providing climate vulnerable countries and low-income/at-risk populations with insurance and resilience support. Further, more research and operational principles and indicators are needed for discussing questions of how much PCS, for whom and when is optimal. While many vulnerable countries/households/MSMEs appear underinsured, one cannot infer that their choice is suboptimal

<sup>15</sup> <https://www.insuresilienceinvestment.fund/about-insuresilience-investment-fund/>

<sup>16</sup> <https://www.globalriskfinancing.org/sites/default/files/2020-09/GRIF%20Operations%20Manual%20November%202019.pdf>

<sup>17</sup> [https://www.ccrif.org/sites/default/files/publications/annualreports/CCRIF\\_Annual\\_Report\\_2019\\_2020.pdf](https://www.ccrif.org/sites/default/files/publications/annualreports/CCRIF_Annual_Report_2019_2020.pdf)

<sup>18</sup> [https://www.ilo.org/global/about-the-ilo/mission-and-objectives/features/WCMS\\_075517/lang-en/index.htm](https://www.ilo.org/global/about-the-ilo/mission-and-objectives/features/WCMS_075517/lang-en/index.htm)



without some benchmark for assessing optimality or adequacy considering their risks. Therefore, there is a greater need for examining questions such as: 1) Adequacy of PCS in relation to debt sustainability and growth considerations; 2) How to avoid sub-optimal PCS choices when deciding on how much PCS to be provided and for whom; 3) How to make decisions on the desirable or optimal level of insurance to fit the circumstances of the insured; 4) What kind of benchmarking formulas can be used to decide how much PCS should be provided, which also reflect indicators such as climate change vulnerability, rate of insurance protection gap, geography, population, and level of risk.

Any progress on building a needs-responsive and country demand-led global risk financing architecture will therefore not only focus on discussing smart PCS principles. But also on ensuring their effective operationalization through reducing the fragmentation of the international risk financing architecture and on developing objective methodologies and indicators to transparently address the aforementioned questions.

Authors: Architesh Panda (MCII Associate Project Manager), Viktoria Seifert (MCII Manager - Disaster Risk Finance & Policy), Soenke Kreft (MCII Executive Director), Sara Jane Ahmed (MCII Member)

The Munich Climate Insurance Initiative was initiated as a non-profit organization by representatives of insurers, research institutes and NGOs in April 2005 in response to the growing realization that insurance solutions can play a role in adaptation to climate change, as suggested in the UN Framework Convention on Climate Change and the Kyoto Protocol. This initiative is hosted at the United Nations University Institute for Environment and Human Security (UNU-EHS). As a leading think tank on climate change and insurance, MCII is focused on developing solutions for the risks posed by climate change for the poorest and most vulnerable people in developing countries.

