

## Submission

Best practices, challenges and lessons learned from insurance-related solutions that address the risk of loss and damage associated with the adverse effects of climate change<sup>1</sup>

### Munich Climate Insurance Initiative (MCII)

With inputs from RESULTS UK

Submitted to the Executive Committee of the Warsaw International Mechanism on Loss and Damage

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<sup>1</sup> This submission from the Munich Climate Insurance Initiative (MCII) (with inputs from RESULTS UK) is part of its mission to develop insurance-related solutions to help manage the impacts of climate change. MCII was founded in response to the growing realization that insurance solutions can play a role in addressing some of the negative impacts of climatic stressors, as suggested in the Framework Convention and the Paris Agreement. With membership on the part of insurers, climate change and adaptation experts, NGOs and policy researchers, MCII provides a forum for insurance related expertise applied to climate change issues.

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## 1. Introduction

Climate change and the associated pressures threaten society through changing rainfall regimes, intensified and more frequent storms, sea level rise, widespread desertification and the loss of geological water sources such as glaciers. This threatens to undermine resilience, especially for lower income countries and their citizens, by weakening their capacity to recover and absorb losses from extreme weather events. In order to support governments and households to reduce the immediate and long-term repercussions from these events, countries can apply comprehensive climate risk management approaches to support adaptation and build climate risk resilience.

There are a range of tools that governments can combine in a comprehensive climate risk management strategy. These include risk prevention and reduction, risk transfer such as insurance, funds for flood protection, contingency planning and other forms of risk management instruments. Countries can decide on how to manage and finance these risks according to detailed methodologies of risk management, for instance through a risk layering analysis, which separates risk into different segments according to their potential frequency and severity. Climate-related risks which happen often (high frequency) but which are less serious (low severity) can be addressed most effectively by preventative and risk reduction activities. The risk posed by more severe and less frequent events can be transferred by using private and/or public insurance mechanisms. The loss and damage that remains once all feasible measures are taken (i.e., residual risk) requires several approaches, such as strengthening institutional arrangements and socio-economic policies or relocation of populations, flood control investments, fund for irrigation systems, etc.

This submission to the Executive Committee of the Warsaw International Mechanism for Loss and Damage:

- Shares insights from the work of the Munich Climate Insurance Initiative (MCII) on designing and implementing climate risk insurance solutions as part of comprehensive risk management approaches;
- Introduces practical climate risk insurance solutions that MCII is currently implementing in the Caribbean - the Livelihood Protection Policy (LPP) which helps protect the livelihoods of vulnerable low-income individuals by providing swift non-bureaucratic cash payouts following extreme weather events and the Loan Portfolio Cover (LPC), a loan portfolio hedge that can help create a space of certainty for institutions with credit portfolios exposed to natural disaster risk.
- Outlines sequencing of key activities and involvement of relevant actors as well as challenges in the process of designing and implementing climate risk insurance solutions as part of comprehensive climate risk management approaches, based on the lessons learned in the Caribbean;
- Reflects on five success factors for direct and indirect climate risk insurance solutions based on insights gathered by MCII expert interviews with thought leaders and innovators from primary and reinsurance companies, pioneers using risk transfer to reshape humanitarian assistance, and practitioners at the vanguard of risk management and adaptation in 2015.

## 2. Practical solutions - the MCII Livelihood Protection Policy (LPP) and the Loan Portfolio Cover (LPC) in the Caribbean

Over the last 30 years in the Caribbean, flood and tropical storm damage affected 1.5 million persons directly and caused over USD 5 billion in damage. Climate change is a reality that can no longer be denied. As extreme weather events such as droughts, floods, hurricanes and storms

increase in frequency and intensity, they place significant stress on societies and natural systems. These events lead to loss of income and productive potential, forcing affected low-income individuals to resort to a variety of desperate coping strategies that include: reducing food consumption, taking children out of school, borrowing money and selling assets. These strategies diminish their ability to cope with current and future climate change impacts. As a result, there is a growing need to explore meaningful options for managing and transferring risks associated with climate change. One feasible measure to support adaptation to climate change is climate risk insurance.

The Climate Risk Adaptation and Insurance in the Caribbean project seeks to address climate change, adaptation and vulnerability by promoting weather-index based insurance as a risk management instrument in the Caribbean. The project has developed two parametric weather-index based risk insurance products aimed at low-income individuals and lending institutions exposed to climate stressors. The following explanations are based on MCII 2013a and MCII 2013b.

## 2.1 The Livelihood Protection Policy (LPP)

The Livelihood Protection Policy (LPP) is targeted at individuals; this product helps protect the livelihoods of vulnerable low-income individuals by providing swift un-bureaucratic cash payouts following extreme weather events (i.e. high wind speed and heavy rainfall). This crucial support reduces poverty and vulnerability by enabling these groups to recover quickly following a disaster.

### CHALLENGE

The Caribbean is prone to extreme weather events, making it a challenge for people to cope with the damaging effects of weather-related risks and the threats such risks pose to their lives and livelihoods. The expected increase in the frequency and intensity of extreme weather events brought on by climate change will further exacerbate the plight of vulnerable individuals in the Caribbean, many of whom are employed in climate vulnerable sectors such as agriculture and tourism. Continual exposure to weather-related risk reduces economic opportunity, exhausts financial resources and erodes the overall coping capacity of low-income individuals, leading to lost livelihoods and poverty in the long-term. Protecting the livelihoods of low-income, vulnerable individuals by improving their ability to cope with weather-related risks can make a positive contribution to socio-economic development in the Caribbean.

### SOLUTION

Appropriately designed weather risk insurance solutions can help people respond better to weather-related threats. The LPP is a weather-index based insurance policy designed specifically to help vulnerable, low-income individuals recover from the damage caused by strong winds and/or heavy rainfall during hurricanes and tropical storms. Targeted at all individuals irrespective of income level, the LPP provides timely cash payouts soon after a weather event, enabling policy holders to start rebuilding their lives in the wake of a natural disaster.

### OUTCOME

The LPP stabilizes the financial situation of vulnerable, low-income individuals after a disaster and allows them to avoid adopting coping strategies that could lead them deeper into poverty. The simplicity and flexibility of the LPP makes it easier for people to get the level of coverage they need. Having access to insurance coverage improves the credit worthiness of individuals in the long-term, giving them access to financial services that they previously may not have had access to. Access to credit can create a space of certainty for people to make investments, allowing them to safeguard their livelihoods.

## HOW LPP MAKES A DIFFERENCE

Antoine is a farmer whose family depends on his small plot of land for food and income. In hopes of providing a better life for his family, Antoine took out a loan and bought three greenhouses to grow vegetables. The following year, in 2007, Hurricane Dean struck.

### What Antoine experienced

- **Before the hurricane** Antoine did not know a hurricane was approaching and did not secure his greenhouses or other assets in time.
- **Immediately after** two out of three greenhouses were lost, along with his sugarcane crop and livestock. He and his family barely escaped with their lives.
- **Medium-term** Antoine spent all of his savings on food and medicine for his family. He could not pay back his loan for the greenhouses and must resort to selling other assets and asking relatives for money.
- **Long-term** Antoine and his family ended up deeply in debt. The lost greenhouses were not replaced, making the family more vulnerable to subsequent hurricanes. These are likely to destroy more of their assets and lead them deeper into poverty.

### How LPP could have helped Antoine

- **Before the hurricane** Antoine receives an SMS warning of an approaching hurricane. He secures his property and leads his family to a safe location.
- **Immediately after** as he was able to secure his property, only one greenhouse is lost. The hurricane exceeded the rainfall/wind speed threshold, so Antoine gets an SMS telling him he will receive a payout within 14 days.
- **Medium-term** with the payout deposited in his bank account Antoine can repay his loan and start rebuilding his livelihood without resorting to more desperate coping measures.
- **Long-term** Antoine is able to both repay his loan and rebuild the lost greenhouses with the payout he receives from his policy. This puts him and his family in a better position for when another hurricane inevitably strikes.

#### THE LIVELIHOOD PROTECTION POLICY AT A GLANCE

##### GOAL:

To stabilize the financial situation and livelihoods of vulnerable individuals

##### WHO IS COVERED:

All individuals regardless of annual income (no eligibility criteria)

##### PERILS COVERED:

High wind speed and excessive rainfall (triggers)

##### TYPE:

Trigger-based parametric index insurance (based on observed values of wind, rain)

##### HOW IT WORKS:

The policy pays out when threshold values for wind and/or rainfall are exceeded, without any claims assessment procedure

##### BENEFITS:

Quick cash payouts enable affected households to rebuild their lives soon after a weather event; SMS-based notifications alert policy holders to approaching weather events, allowing them to take precautionary measures and reduce exposure; training and education module to help communities better understand the insurance tool and improve insurance literacy

##### WEATHER DATA MONITORING:

Rain is monitored by DHI (formerly known as Danish Hydraulic Institute); wind is monitored by the Caribbean Catastrophe Risk Insurance Facility (CCRIF)

Source: MCII 2013a.

## 2.2 The Loan Portfolio Cover (LPC)

The Loan Portfolio Cover (LPC) is targeted at lending institutions; this product is a loan portfolio hedge that can help create a space of certainty for institutions with credit portfolios exposed to

natural disaster risk. As loan portfolios are insured against climate risk, investment can reach areas previously considered too risky for traditional lending. In the short run, this creates a win-win situation for the lender and the borrower, while also contributing to economic development in the region in the long run.

## CHALLENGE

When extreme weather events affect many borrowers at the same time, financial institutions (e.g. credit unions, cooperatives, etc.) often experience the double blow of heavy withdrawals from savings accounts and the inability of borrowers to repay their loans. Climate shocks are thus one of the leading causes of high loan default rates experienced by financial institutions. These loan defaults can lead to portfolio-level problems that may erode their equity base and liquidity. In the Caribbean, the ability of financial institutions to provide credit is often impeded by recurring extreme weather events (e.g. hurricanes), which leaves them reluctant to lend to climate vulnerable individuals who need it most. The management of portfolio risk needs to be improved to allow financial service providers expand their funding base, and increase lending capacity to vulnerable, low-income individuals and micro, small and medium enterprises (MSMEs). This is critical for ensuring that these groups have access to credit to withstand environmental stressors and invest in their livelihoods.

## SOLUTION

Unmanaged exposure to climate risk limits economic growth and increases the cost of providing financial services. The Loan Portfolio Cover (LPC) is an insurance instrument that transfers risks arising from natural catastrophes to international risk pooling markets. As a parametric insurance policy designed to protect loan portfolios from climate shocks and eventual loan default, the LPC helps financial institutions better manage their credit risk. The simple and flexible structure of the policy allows financial institutions to select the level of insurance cover to be applied to their overall exposed loan portfolio – a payout is triggered when predetermined threshold values for wind speed and/or rainfall are exceeded, irrespective of any proven loan default the financial institution may have suffered.

## OUTCOME

Transferring the risk of a financial institution's weather-related loan default means the financial position of these institutions continues to be stable after an extreme weather event, enabling them to avoid curbing their lending activity or instituting unfavourable terms of credit. The LPC can help overcome the reluctance to invest, improve access to lending and contribute to reducing the cost of providing financial services.

## HOW LPC MAKES A DIFFERENCE

Financial institutions/financial cooperatives (FI) in the Caribbean cater to a wide cross-section of society, many of whom are vulnerable to natural disasters (e.g. small scale farmers). In addition to encouraging savings, they provide credit at favourable interest rates to enable clients to make investments in their livelihoods (e.g. buying greenhouses). However, a modest equity base means that these FIs are vulnerable to weather-related shocks, which compromise their financial position and leave them reluctant to grant loans to vulnerable individuals during times of stress. This was the case in 2007 after hurricane Dean.

### How the FIs were impacted

- **Before the** hurricane The FIs have no forewarning of the approaching hurricane. The number of withdrawals increases exponentially as clients need funds to rebuild their lives and livelihoods.
- **Immediately after** As the number of withdrawals increases exponentially the FIs do not have enough liquidity to honor withdrawals.

- **Medium-term** Loan default rates increase as borrowers are unable to repay their loans on time. The FIs equity base is eroded, forcing them to curb lending activity.
- **Long-term** The FIs institute less favourable terms of credit, which reduces access to credit to those who need it most (e.g. hurricane survivors). Investments are postponed or cancelled, carrying direct consequences for long-term economic growth. Clients are unable to recover fully, leaving them more vulnerable to subsequent hurricanes and driving them deeper into poverty.

### How LPC could have helped

- **Before the** hurricane The FIs receive an SMS to alert them of an approaching hurricane. By being aware of the burden such a weather event would place on their clients, the FIs are in a better position to manage exposure to default risk.
- **Immediately after** The FIs' equity base will not be significantly impacted, as the LPC is likely to ensure that they continue to have access to new credit.
- **Medium-term** The FIs' equity base remains stable. There is no immediate need to curtail credit operations; therefore, clients can rebuild their livelihoods with their savings.
- **Long-term** The LPC strengthens the FIs so that they are able to provide access to credit to enable their clients to rebuild their lives following a disaster. In general, when local FIs manage their risk more effectively, they do not have to curtail lending operations and can lend at lower interest rates. The FIs are even able to write-off some defaulted loans and absorb these losses during critical times, leaving clients in a better position to recover.

#### THE LIVELIHOOD PROTECTION POLICY AT A GLANCE

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##### WEATHER DATA MONITORING:

Rain is monitored by DHI (formerly known as Danish Hydraulic Institute); wind is monitored by the Caribbean Catastrophe Risk Insurance Facility (CCRIF)

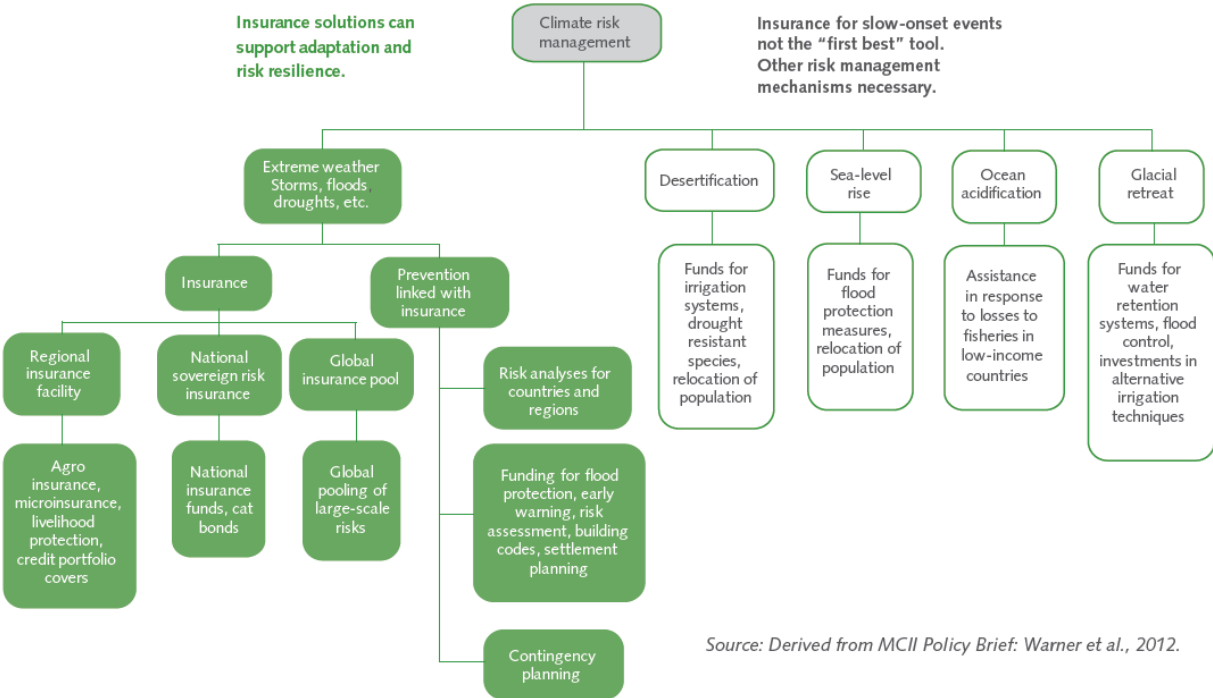
Source: MCII 2013



### 3. Development and implementation of climate risk insurance approaches - lessons learned from the LPP and LPC

It must be emphasized that insurance is not a universal remedy for all types of loss and damage resulting from climate change. As the figure below shows, insurance options can support adaptation and resilience against the risks of extreme weather events, but are not appropriate for many, usually slower-onset, climate-induced impacts.

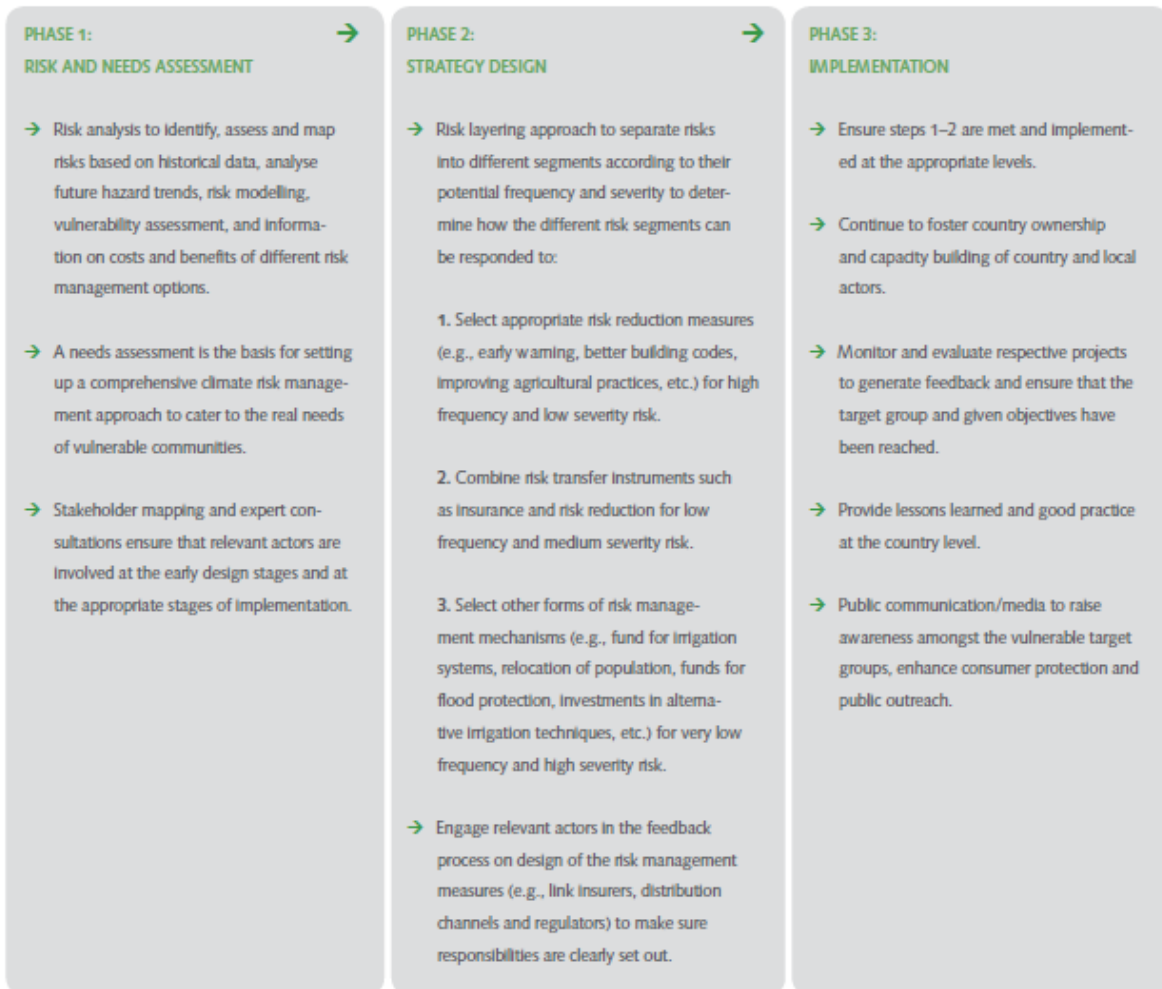
As we see in the figure below, insurance is not appropriate or generally feasible for slowly developing and foreseeable events or processes that happen with high certainty under different climate change scenarios. The losses from long-term foreseeable risks, such as sea level rise, desertification and the loss of glaciers and other cryospheric water sources, are estimated to be substantial in the future. Even for weather-related events, insurance would be an ill-advised solution for disastrous events that occur with very high frequency, such as recurrent flooding. Resilience building and prevention of loss and damage in such instances may be cost-effective ways to address these risks. Insurance is a feasible adaptation measure to address extreme weather events, including insurance for households (e.g., micro-insurance), farms (e.g., index based crop insurance) and also governments with sovereign insurance. As we will be discussing in this document, insurance arrangements at these scales might be usefully supported with regional and global risk management facilities.



#### 3.1 What sequence of key activities and measures are needed in designing comprehensive climate risk management approaches?

A comprehensive climate risk management approach combines ex ante risk assessment to gather information with a subsequent decision on how to manage and finance these risks. Sequencing of key activities starts with a risk and needs assessment, followed by strategy design, making improvements to the enabling environment and finally implementation and ongoing monitoring and adjustment as needed to fit changing conditions. The following graphic, based on MCII 2014, provides an overview of key activities and measures needed in the design process:





**ENABLING ENVIRONMENT**

- Get political buy-in from government & relevant decision makers (i.e. Minister of Finance, etc.).
- Obtain and enhance appropriate data and hazard mapping to better monitor the impact of the proposed measures.
- Provide support services (e.g., technology, loss assessment, actuaries, training institutions) and mobilize resources (investments/donor support) for implementation.
- Explore appropriate back-up mechanisms (e.g., reinsurance, donor support).
- Provide risk management education.
- Approval of policies on measures to be implemented under national finance / insurance regulations (e.g., microinsurance regulations).
- Foster country ownership and capacity building of country and local actors.

### 3.2 What actors need to be involved in the design and implementation process?

The following graphic provides an overview of relevant actors that need to be involved in the key phases of design and implementation of climate risk insurance approaches. It also lists important factors constituting the enabling environment in these phases.

## BODY TO GUIDE DEVELOPMENT & IMPLEMENTATION:

Steers and coordinates key activities for the respective country (e.g. appropriate ministries, representatives of public & private sector) supported by technical groups in the Phases below.

### PHASE 1:

#### RISK AND NEEDS ASSESSMENT

Risk assessment and analysis could be performed under the National Meteorological Service and Disaster Mitigation Facility along with research institutions, donor or financial providers and insurance representatives.

Needs assessment could include the Central Statistics Office, NGO's working with target groups, social aggregators, public and private sector specific experts (e.g., agriculture extension services, financial service providers), relevant Ministries (e.g., Development, Agriculture, etc.).

Data services offered by research institutes, Met Offices, insurance companies, regional climate services, WMO, NASA, etc.

### PHASE 2:

#### STRATEGY DESIGN

Risk reduction can include the Disaster Mitigation Facility (e.g., emergency response agency) and Central Statistics Office along with research institutes, building industry, public works (building codes, infrastructure department, etc.), Ministry of Education (e.g., early warning strategy, risk awareness campaign, etc.).

Risk transfer can include the Ministry of Finance, financial service institutions (banks, credit unions, investment groups, cooperatives), insurance and reinsurance associations, and insurance companies.

Other risk management measures can include research and academic groups, disaster risk management offices, the Ministry of Development and Planning, civil society organizations, (e.g., Red Cross), mobile phone providers, technical response units, etc.

International support may include multi-lateral donors (World Bank, development banks, etc.), and development cooperation (GIZ, USAID, DFID, etc.), international policy frameworks (UNFCCC, Hyogo, UNCCD, etc.).

### PHASE 3:

#### IMPLEMENTATION

Risk analysis, risk reduction, risk transfer and other risk management measures: Implemented by the respective actors set-out in Phase 1 and 2.

Monitoring and evaluation can be coordinated by a collaboration between researchers and practitioners. Continuous reporting back loop to the Steering Body is essential.

Media for public outreach and communication.

Long term planning may be conducted by Ministry of Development, Members of Parliament, and Ministry of Environment.

## ENABLING ENVIRONMENT

- Public champions (e.g., relevant ministries and public climate and disaster risk management initiatives).
- Public-private partnership approaches involving insurance companies and governments.
- International development partners (i.e., bilateral and multilateral donors and Non Governmental Organizations) development cooperation, and international policy frameworks.
- Research and academic institutes.

Source: MCII 2014.

## 4. Challenges in implementing climate risk insurance approaches

There are some limitations that countries might need to address when implementing a comprehensive climate risk management approach. The following table is based on MCII 2014.

Country Level	Limitation	Solutions
Community	Policy holders often expect payouts every year.	Insurance products should be complemented by disaster risk reduction and additional services that offer value to their livelihoods.
	Low-income countries often lack resources and capacity for testing new products.	Ensure sufficient resources– for example, technical skills, institutional capacity-building, policy and planning, and knowledge dissemination.
	Overcoming barriers to private sector insurance such as high start-up costs and lack of infrastructure requirements for data collection.	<ul style="list-style-type: none"> <li>&gt; Insurance risk assessment can facilitate regional data analysis and help establish data standards, methods and repositories.</li> <li>&gt; Open source initiatives for catastrophic risk models along with standardized hazard maps can reduce the cost of risk analysis.</li> <li>&gt; New technologies such as satellite data and simulation models.</li> <li>&gt; Weather stations can be used for multiple services to reduce infrastructure costs.</li> </ul>
National	Difficult to provide funds in a post disaster situation under fraud and corruption as well as biases towards certain groups	> Governments have to establish post disaster contingency plans that specify how to disburse and distribute funds to avoid fraud and corruption. These plans should be developed transparently, in meaningful consultation with affected communities, and should set out how they will target and track the most vulnerable groups.
	Institutional inertia: institutions do what they always do.	> Organizational development and capacity building based on an overarching strategy with clear objectives, roles and mandates is required.
	In the case of small island states, sea level rise is expected to increase. Thus, governments need to decide between approaches to address slow-onset events versus extreme weather events.	> Sea level rise can be addressed, for example, through a fund invested at the international market (e.g., risk pooling) where profits can be used to fund adaptation measures in relation to sea level rise.
Regional	High turnover rate in the government and loss of knowledge.	<ul style="list-style-type: none"> <li>&gt; Identify champions on a technical level and ensure government officials have financial and actuarial education.</li> <li>&gt; Knowledge management and transparency.</li> <li>&gt; Elaboration of training modules, documentation of lessons learned and public communication.</li> </ul>
	Governments want to invest into something more visible and short term as opposed to a long-term vision.	> Connect a comprehensive climate risk management approach with a long-term development strategy that is usually medium to long-term.
	Different operating parameters for the public and private sector	<ul style="list-style-type: none"> <li>&gt; Need role models in both the public and private sector that showcase the benefits of insurance in a comprehensive approach.</li> <li>&gt; Public sector capacity building to manage expectations and highlight the value added of integrating insurance into risk management planning.</li> </ul>

Political unrest and currency risk.	> Third party country can host the insurance. For example, for the African Risk Capacity Insurance Company Ltd, the financial affiliate will temporarily be in Bermuda as a private, non-profit company.
Sharing of sensitive data at regional level.	Draft agreements outlining how sensitive data may be used by the different parties.

## 5. Success factors for climate risk insurance approaches

The following 9 success factors for direct and indirect climate risk insurance approaches are based on insights gathered by MCII expert interviews with thought leaders and innovators from primary and reinsurance companies, pioneers using risk transfer to reshape humanitarian assistance, and practitioners at the vanguard of risk management and adaptation in 2015. More details can be found in MCII 2015a and MCII 2015b.

### Focus insurance on needs of poor & vulnerable people, securing development goals

Exposure to climate risks causes significant financial losses for the poor. These households also face high uncertainty about whether and when losses might happen. Insurance approaches for the poor should address the most pressing needs – uncertainty to livelihoods, food security and development aspirations – that get in the way of opportunities to reduce poverty. At the micro-level, insurance works when it brings added value to policyholders, and rarely as a standalone product. In an agricultural context this is partly because smallholders and pastoralists typically face multiple, interlocking risk factors and economic barriers. Pro-poor insurance schemes should be integrated with essential livelihood and poverty reduction services – such as credit, savings, quality inputs, extension services and training, and weather alerts – to deliver tangible value in both bad years (when a payout is made) and good (when it is not). To safeguard that existing risk management approaches are enhanced, locally driven and owned schemes will help ensure that local needs and capacities are taken into account. Partnerships that link traditional risk management approaches and social cohesion with new ways of providing financial risk transfer (cooperatives, microfinance, and bundling with cell phone services) can add value to locally driven and owned schemes.

Women are a particularly vulnerable group whose needs must be adequately addressed by climate risk insurance and related instruments. Evidence shows that they are disproportionately affected by climate shocks and natural disasters, disproportionately lack access to financial services, and typically face larger barriers to improving productivity in agriculture and small-scale enterprise. Lessons from both the fields of financial inclusion and community climate adaptation suggest that unless insurance programmes (at micro, meso and macro levels) specifically integrate a gender analysis and framework into their design, implementation, monitoring and evaluation, women are vulnerable to being excluded or even further disadvantaged.

### Provide smart support for insurance related instruments for the poor

Based on lessons learned from current experience and expert interviews MCII defines smart support as including:

A): **Providing targeted premium support:** Experts assert that few if any insurance related approaches worldwide specifically targeted towards the poor have been started and sustained without public private cooperation, often in a way of premium support<sup>2</sup>. Donor countries could:

- Directly cover the mark up part of the premium while *the risk based part* is covered by the beneficiary (see box), thereby incentivizing risk reducing behavior through the price signal.

<sup>2</sup> See e.g. Mecheler, R. /Linnerooth-Bayer, J. 2006: *Disaster Insurance for the Poor? A review of micro insurance for natural disaster risks in developing countries.*

- Directly cover premiums for the poorest of the poor: We documented cases where premiums for the poorest of the poor have been covered by third parties and designed in such a way that beneficiaries contribute to risk reduction in other ways. Examples of this include the R4 Initiative, and innovative insurance funds linked to income support programs and other safety nets currently being developed.
- Provide capital reserves or reinsurance-like capacity which drive down the costs of climate risk insurance products. ARC and CCRIF estimate that premiums for member countries are half that of commercially available insurance for weather-related extreme cover.

**Insurance premiums** usually comprise of two major cost factors: a risk based part and a mark-up part. While the risk based part reflects the actual costs of the risk of insuring a % of the exposure, the mark-up includes transaction, administration and capital/reinsurance costs. In developing countries, mark-ups are often particularly high because of a lack of important data, insufficient risk assessments and therefore the return periods of risks are more uncertain.

### B): Providing sustainable, credible delivery channels

To reach the target group, experts recommend using aggregators like regional rural banks, mutual, refinancing banks, microfinance institutions, social protection pools of governments. Awareness building, marketing, and claims assistance need face-to-face interaction (e.g. by civil society organizations). A national identification system through which people can be identified and reached and mobile phone networks in remote areas, can facilitate effective insurance enrollment. If regulators permit, premiums can also be collected through technology (e.g. mobile banking).

Other important factors that should not be neglected include the following:

#### Enhance capacity

Reaching poor and vulnerable people with climate risk insurance requires significant capacity building measures, often involving actors not yet familiar with the tools or principles of insurance.

**For beneficiaries:** Measures to improve financial literacy include knowledge of personal financial issues, skills to manage personal finances, and confidence to make sound financial decisions including building up savings, protecting themselves against risk, and investing prudently. Beneficiaries need specific understanding of index insurance, trust and transparency with insurance providers, and comprehensive knowledge of links between disaster risk reduction and insurance.

**For local primary insurers:** Build capacity in catastrophe risk modeling to price risk-adequate premiums, train financial services experts with skills to access and market to new beneficiary groups and financial institutions that serve them (microfinance, credit unions, etc.), as well as capacity to manage claims and payments.

**For distribution channels:** Build capacity of value chains, safety net programs, etc. to manage financial services such as hiring trained financial experts, building incentives to reduce risks, building capacity for marketing, enrollment, and claims management assistance.

**For governments:** Building capacity in producing data that is required (socio-economic, losses, exposure, etc.), modeling weather risk, operational capacity and expertise, financial protection strategies, and systematically integrating contingency plans into policies (e.g. NAP, agricultural strategy plans, construction policies, etc.).

#### Embed in regulatory frameworks and risk management policies

An insurance supervisor maintains trust and ensures consumer protection by overseeing all insurance activities. Reputable insurers will not engage without regulatory frameworks and guidelines for insurance licensing and operations. Governments can incentivize industry sector participation through tax exemptions on products for poor people. Furthermore, policies and measures for risk reduction and adaptation reduce the exposure to risks and can indirectly reduce premiums. Governments can strengthen provision of relevant data including hazard, asset exposure, agricultural production, and market demand assessments.

### Incentivize climate adaptation and disaster risk reduction

Prevention and insurance should be closely linked with an ex ante climate risk management strategy that prioritizes reducing human and economic losses. Such activities include: Mapping risks and avoiding settlements in high-risk zones; Building hazard-resistant infrastructures and houses; Protecting and developing hazard buffers (forests, reefs, mangroves, etc.); Improving early warning and response systems; Mainstreaming risk reduction in National Adaptation Plans (NAPs).

### Foster financial inclusion

Poor people need access to tools like savings, loans, remittances, and insurance that helps them smooth household consumption and break the cycle of poverty. Financial inclusion could be improved by identity cards, financial or bank accounts to make and receive insurance payments, and processes to establish a financial history. Insurance schemes need to be designed to receive premium payments in appropriate time intervals that are linked to the financial cycles of poor households. Similarly, schemes must make timely payouts after an insured event.

### Apply a participatory approach and foster public private partnership

Successful insurance schemes are based on the effective involvement of all relevant actors, providing the basis for a meaningful long-term partnership. Facilitating stakeholder dialogue is a first step in this process. It is crucial to include beneficiaries in the co-design and implementation of insurance solutions to assure products truly match needs. Target group ownership is essential for effective use of insurance as a risk management tool. There should be effective and meaningful representation of the target groups in discussions about the design and delivery of insurance programmes (including through substantive consultation on government contingency planning). Civil society can help engage the target group, build capacity through training, builds trust with financial intermediaries, and monitor and evaluate scheme governance and implementation. Development cooperation partners can support risk and needs assessments, product design, and other forms of technical support. To harness the strength of all those partners, the most effective way to set up such insurance schemes is to strive for innovative and effective public private partnerships. The risk management expertise of the private sector must be utilized to assess risks, design viable insurance products, and reach beneficiaries through effective distribution channels. The involvement of governments is key to political buy-in, ownership and integration of the insurance approaches in national planning, policies, and regulations (such as consumer protection). Governments can set incentives that facilitate insurance provision across a range of programs, including social protection and risk management, education, and agriculture.

### Design for sustainability and viability

To effectively chart climate resilient pathways, activities need to be sustainable and viable, both in economic and social terms. Planning with a view towards long-term engagements is crucial as most insurance interventions need time to mature and be fully incorporated into local risk management strategies. Applying risk adequate premiums is one of the central elements for ensuring the viability of approaches and incentivisation of risk reduction measures.



## 6. References

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