POLICY BRIEF

Linking Social Protection with Climate Resilience and Adaptation

Weather-based insurance and microinsurance as a component of social protection strategies in the Caribbean

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MCII CCRIF SPC The Caribbean Catastrophe Risk Insurance Facility IMPACT INSURANCE ILO DHI

Prepared by CCRIF SPC on behalf of the Climate Risk Adaptation and Insurance in the Caribbean project (CRAIC) Phase II

EXECUTIVE SUMMARY

This briefing presents a set of policy recommendations to assist governments in the region to consider social protection from a climate change perspective and identify how the social protection sector can contribute to increased resilience to the adverse impacts of climate change though the use of catastrophe risk insurance both at the sovereign and microinsurance levels – building on existing mechanisms such as CCRIF SPC and the Climate Risk Adaptation and Insurance in the Caribbean project (CRAIC).

Caribbean countries are highly vulnerable to climate risks

Countries in the Caribbean face a range of primary natural hazard risks, particularly earthquake and tropical cyclone risks, as well as secondary risks from flooding and landslides, storm surge and wave impacts, tsunamis and other climate-related risks such as excess rainfall and drought. It is expected that climate change will exacerbate the risks from hydrometeorological hazards and pose a significant threat to and drain on public resources in the region.

Linking social protection and climate change adaptation

Currently, most social protection systems in Caribbean states are inadequately prepared to respond to emergencies such as natural disasters, with particular consequences for the poor and vulnerable. Social protection systems must recognize the risks arising from natural hazards and climate change and to address these dimensions as part of a holistic and more sustainable effort to reduce vulnerability. Therefore, linking climate risk insurance with social protection policies provides an opportunity for Caribbean governments to reduce the burden of publicly financing post-disaster activities, while at the same time facilitating access by the most vulnerable citizens to resources that can reduce their vulnerability and help them cope with climate impacts.

Climate risk insurance is an important tool for climate change adaptation

Caribbean governments are strengthening their comprehensive climate risk management programmes, which include which include risk identification and assessment as well as risk reduction/mitigation. However, risk mitigation actions can be expensive or politically difficult to implement. Consequently, a range of risk financing instruments is required to handle different layers of risk ranging from the frequent but less damaging events to the rare but catastrophic disasters. Low frequency high impact events such as hurricanes are best handled by transfer of risk through instruments like insurance or catastrophe bonds.

Climate risk insurance can play numerous roles – at the individual, community, country and regional levels – in providing security against the loss of assets and livelihoods from disasters. The incorporation of special-purpose climate risk insurance is particularly important in the Caribbean since the level of traditional insurance in the region is low. A study conducted in 2017 determined that there is potential demand for a microinsurance product for the fisheries sector. The results of the study can be extrapolated to provide a sense of how other vulnerable groups may view insurance as protection against climate risks.

Key recommendations for governments to align social protection and climate adaptation strategies

Some key recommendations for governments to align social protection and climate adaptation strategies to advancing sustainable livelihoods are:

- Strengthen the design of social protection strategies to be more sustainable – that is, these strategies should be inclusive and effective to protect individuals from a range of risks that may occur during the course of his/her life – such as life cycle risks (old age poverty, disability, temporary or permanent incapacity for work, death of a family member, pregnancy), health risks (illness, accidents, epidemics), economic risks (unemployment, price shocks) as well as natural and ecological risks (such as droughts, floods, tropical cyclones and earthquakes)

- At a national level, ensure that social protection policies and strategies are aligned with a country's overall climate adaptation response alongside interventions in such other sectors as agriculture, tourism, infrastructure, and disaster risk management among others

- Include ministries responsible for disaster management and climate change in the development of social protection policies and align poverty reduction and pro-climate objectives with the aim to unlock potentially powerful synergies to advance sustainable livelihoods of the poor and most vulnerable

Specific recommendations related to climate risk insurance

- Incorporate sovereign climate risk insurance as part of social protection strategy, with explicit protocols to use payouts to assist the most affected individuals or communities and to reduce the vulnerability of economic sectors that are dependent on low-income, vulnerable workers; standardization and mandatory adoption of protocols are important for sustainability

- Make a case for governments to purchase sovereign climate risk insurance and support access to microinsurance as part of their overall financial protection strategy – this will involve putting the necessary legislative and regulatory systems in place and will lay the ground work for the more specific alignment with social protection strategies

- Incorporate microinsurance as part of social protection strategy, for example, within local government departments purchasing group policies and using payouts to assist the most affected individuals or communities. The purchase of group policies for LPP would enable effective scaling up of LPP allowing for the low-cost and rapid expansion of both the number of beneficiaries of and its benefits when there is a need.

- Facilitate the organization and purchase of group or block policies by professional groups for their members, for example, fisher or farmer cooperatives, or community groups

- Provide an enabling environment to increase access to microinsurance by vulnerable persons, for example, by providing subsidies for policy premiums; waiving associated taxes; incorporating microinsurance within existing government rebates and subsidies for the fisheries, agriculture and tourism sectors, focusing on low-income workers

- Include climate risk insurance requirements in policies covering areas such as fisheries, agriculture or MSMEs (micro-, small- and medium-sized enterprises) – for example, revise national policies to require purchase of microinsurance as part of the registration and licensing process for fishers and farmers etc. The Government of Jamaica is investigating this option in its efforts to upgrade the fisheries sector.

- Support the sensitization of vulnerable persons/low-income persons to the role that insurance and particularly microinsurance products can play in reducing their vulnerability to climate- and weather-related events – this will involve overcoming the general perception that insurance is too expensive and increasing understanding of how these new and different products work. Education and sensitization, involving the government as well as non-governmental actors is a critical part of CRAIC's promotion of the Livelihood Protection Policy.

Purpose of Policy Brief

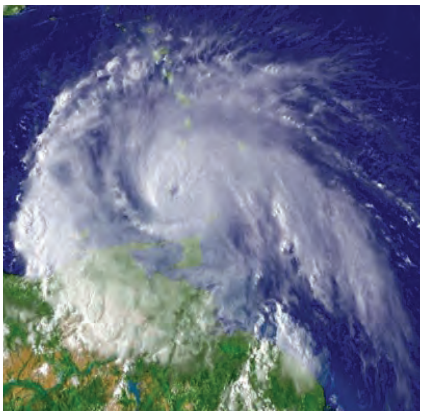
The main purpose of this policy brief is to present a set of policy recommendations to assist governments in the Caribbean to consider linkages between social protection and climate change adaptation and identify how social protection programmes can contribute to increased resilience to the adverse impacts of climate change through the use of catastrophe risk insurance at the sovereign and microinsurance levels. The paper also presents the case for how existing mechanisms such as the sovereign level catastrophe risk insurance offered by CCRIF SPC (formerly the Caribbean Catastrophe Risk Insurance Facility) and microinsurance products offered by the Climate Risk Adaptation and Insurance in the Caribbean project (CRAIC) can be employed as part of effective financial protection, social protection and poverty reduction strategies in the face of a changing climate.

Caribbean countries are particularly vulnerable to climate risks

Countries in the Caribbean face a range of primary natural hazard risks, particularly due to earthquakes and tropical cyclones, and to a lesser extent volcanic eruptions. The region also faces secondary risks from flooding and landslides, storm surge and wave impacts, tsunamis and other climate-related risks such as excess rainfall and drought. In addition, they have intrinsic economic, environmental and social vulnerability due to their small size, a limited natural resource base, a high level of dependence of major economic sectors on the natural environment, fragile ecosystems, and many have limited institutional capacity and low levels of insurance coverage to attenuate the financial impact.

In these small states, single catastrophes can have a disproportionate effect on both the national and regional economies and therefore adequate consideration of catastrophe hazards is an important priority for governments in their pursuit of sustainable development.

The most significant natural hazard risk in the Caribbean is hurricane risk, particularly because of hurricane frequency and severity in the region and also due to the possibly large span of territories which can be impacted by any single such event. Hurricanes have had an inordinate impact on the economies of Caribbean countries, many of which depend on tourism and agriculture as their main economic drivers.



Hurricanes Irma and Maria caused billions of dollars in losses across the Caribbean in 2017

During Hurricane Ivan in 2004, two Caribbean nations – Grenada and the Cayman Islands – each suffered economic losses, which totalled close to 200 per cent of their annual GDP and a further 7 countries were also severely impacted. Regional losses totalled over US$6 billion for the event - reducing economic growth prospects and perpetuating a cycle of poverty. Similarly, 2017 was another defining moment for the Caribbean, which suffered devastation caused by two category 5 hurricanes within two weeks of each other. Damage and loss due to these storms is being estimated at approximately US$130 billion and affected 18 countries, including CARICOM (Caribbean Community) member countries, their populations and social and economic infrastructure. These catastrophic events resulted in CARICOM declaring its ambition for the Caribbean to become the first climate-resilient zone in the world[1].

For the Caribbean, it is expected that climate change will pose an additional threat to and drain on public resources. Countries in the region continue to grapple with issues related to macroeconomic stability, reducing poverty levels, improving international competitiveness and debt sustainability, to name a few. Climate change will likely lead to more frequent high-intensity hurricanes,

[1] At the "CARICOM-UN High-level Pledging Conference: Building a more Climate-Resilient Community" held in November 2017,

and the warming ocean is already causing a rise in sea level and negative impacts on coral reefs which protect shorelines and are natural storm barriers. Caribbean countries, where the populations and infrastructure are largely concentrated in coastal areas and where a large proportion of economic activity is linked to the coastline or weather, will be particularly vulnerable to stronger winds, greater inundation from more forceful storm surge and waves, heavier rains and also prolonged periods of drought.

The preliminary findings of the Caribbean Economics of Climate Adaptation Study, led by CCRIF in collaboration with other Caribbean institutions and supported by McKinsey & Company and Swiss Re, confirmed that the damage potential under current climatic and economic conditions is already high, with annual expected losses totalling up to 6 per cent of GDP in some countries. In a worst case scenario, climate change has the potential to increase these losses by 1 to 3 percentage points of GDP by 2030. For the countries in the region, this is comparable in scale to the impact of a serious economic recession – but on an ongoing basis. Apart from the social and environmental disruption, the fiscal balance of these states is simultaneously severely undermined. At the national level this translates to cuts in revenue, an increase in spending needs, worsening public finances and increasing debt.

Linking Social Protection and Climate Change Adaptation

Just as small island developing states such as those in the Caribbean are disproportionately affected by the negative impacts of climate change, it is widely acknowledged that the poor within these countries will be particularly disadvantaged as they have less capacity for response and adaptation. Consequently they are at increased risk of losing life, livelihoods and assets due to climate change impacts and often must rely on adverse coping mechanisms with long-term negative implications for human development, such as selling assets and living in unsafe environments. Furthermore, extreme weather shock will make it difficult for poor households to recover between increasingly frequent disasters. Efforts to reduce the vulnerability of communities and individuals are addressed through social protection systems, climate adaptation programmes and disaster risk reduction strategies.

Social Protection refers to policies and actions which enhance the capacity of poor and vulnerable people to escape from poverty and enable them to better manage risks and shocks. Social protection directly reduces poverty, stimulates the involvement of poor women and men in the economy and contributes to social cohesion and stability (adapted from OECD).

Climate Change Adaptation refers to actions taken to help communities and ecosystems cope with a changing climate through a reduction in harm or risk of harm associated with climate variability and climate change.

Disaster Risk Reduction aims to reduce the damage caused by natural hazards such as earthquakes, floods, droughts and cyclones, by addressing the factors that cause disasters, e.g. reducing exposure to hazards, lessening vulnerability of people and property, and improving preparedness for adverse events.

In the Caribbean, social protection programmes typically include social insurance programmes that primarily provide pensions – contributory programmes with employer and employee contributions as well as non-contributory pensions that typically target the elderly poor; national health insurance; cash transfer programmes for the poor, including public assistance and conditional cash transfer schemes such as the PATH Programme in Jamaica. Social Investment Funds and Basic Needs Trust Funds continue to play an important role in project financing and improving social protection policy for Caribbean states. However, most social protection systems in the Caribbean are inadequately prepared to respond to emergencies such as natural disasters or long-term impacts from climate change, with particular consequences for the poor and vulnerable[2].

Therefore, social protection systems must recognize the risks arising from natural hazards and climate change and to address these dimensions as part of a holistic and more sustainable effort to reduce vulnerability. At the same time, existing climate adaptation strategies often do not incorporate sufficient focus on the poor and most vulnerable.

Effective social protection programmes will now require coordination with new partners such as agencies responsible for coordinating climate change and disaster risk management efforts, which are often not involved in developing social protection strategies and programmes. In planning these programmes, the costs of climate-responsive social protection should be assessed against the costs, likely very high, of not addressing vulnerability to the impacts of climate change.

Indeed, in the last few years, social protection mechanisms and strategies have been called upon to help communities affected by climate-related shocks, oftentimes in the form of cash transfers and public works to the affected population. Following a natural disaster, there exists consensus amongst policy makers and the international development community that during the recovery process, getting cash support to the affected population quickly has positively impacted people's sense of safety and security. It has been a prominent first sign of the government's support in a time of acute need. Studies have shown that social protection can be more cost-effective, transparent and rapid in delivering relief than traditional humanitarian aid delivery mechanisms[3].

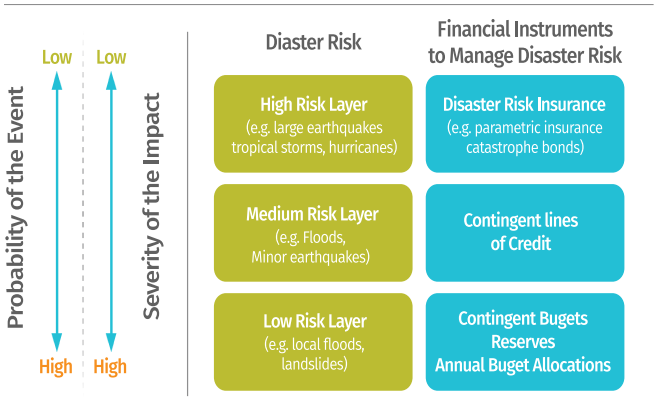
This implies that a social protection strategy and its associated mechanisms should be positioned to occupy a key space on the climate change adaptation agenda, thereby opening up the possibilities for social protection programmes across the region to benefit from climate financing – from both bilateral and multilateral sources that are earmarked for purposes of climate change adaptation. This is because climate change poses significant challenges for social policy and that its impacts threaten to undercut the achievements of social protection interventions. By integrating climate and disaster risk considerations into the planning and design of social protection programmes, the sector can help prevent poor and vulnerable households from falling deeper into poverty, reduce their overall risk exposure, and contribute to long-term adaptation to climate change. At a national level, social protection should therefore form part of a country's overall adaptation response alongside interventions in such other sectors as agriculture, tourism, infrastructure as well as disaster risk management.

[2] World Bank 2013. Tailoring Social Protection to Small Island Developing States

[3] Dercon S, Clarke D. (2016) Dull Disasters: How planning ahead will make a difference, Oxford University Press.

Climate risk insurance is an important tool for climate change adaptation

Caribbean governments are strengthening their disaster and climate risk management programmes, which include risk identification and assessment as well as risk reduction/mitigation. Risk reduction or mitigation is aimed at reducing vulnerability to specific hazards, thereby reducing the physical impact associated with natural hazards and climate change. However, risk mitigation actions such as constructing sea walls or enforcing zoning regulations can be expensive or politically difficult to implement. Consequently, a range of risk financing instruments is required to handle different layers of risk ranging from the frequent but less damaging events to the rare but catastrophic disasters. Low frequency high impact events such as hurricanes are best handled by transfer of risk through instruments like insurance or catastrophe bonds.



Different layers of risk financing[4]

Climate risk insurance can play numerous roles – at the individual, community, country and regional levels – in providing security against the loss of assets and livelihoods from disasters, providing certainty for weather-affected public and private investments, easing disaster-related poverty and spurring economic development.

The incorporation of special-purpose climate risk insurance is particularly important in the Caribbean since the level of traditional insurance in the region is low. According to MunichRe, Latin America and the Caribbean have the lowest levels of insurance coverage, despite the fact that they suffer some of the largest direct damages globally. Caribbean countries generally rely on their governments for post-disaster relief, which places a heavy burden on public finances.

Whilst dealing with the fiscal demands to undertake relief operations such as ensuring the availability of emergency assistance and sourcing funding for shelter, food and medical attention for displaced persons, governments also have to contend with the simultaneous challenges of mobilizing enough resources to undertake the medium- to long-term recovery and reconstruction process. This recovery process can include tasks that range from the clearance of debris to the restoration of critical services such as provision of water and electricity for affected populations through to the reconstruction and rehabilitation of key public infrastructure.

Climate Risk Insurance is insurance that provides coverage against damage or losses caused by extreme weather events, whose frequency and intensity is increasing due to climate change. In direct insurance schemes, individuals are insured and obtain payouts when their policies are activated. In indirect schemes, a number of countries join together to form risk pools and insure each other against climate risks. If a country's policy is activated, the government than uses the payout funds to benefit citizens.

Therefore, linking climate risk insurance with social protection policies provides an opportunity for Caribbean governments to reduce the burden of publicly financing post-disaster activities, while at the same time facilitating access by the most vulnerable citizens to resources that can reduce their vulnerability and help them cope with climate impacts. Climate risk and weather-index insurance instruments help governments, individuals and communities to plan in advance for severe weather events and agree on rules and processes for securing and disbursing budget funds before a natural disaster occurs. Additionally, climate-related shocks and stresses are posing significant obstacles to poverty reduction in many islands in the Caribbean. These climate related shocks are not happening in isolation of economic crises and therefore constrain governments and populations capacity to cope.

Two examples of catastrophe/disaster risk financing and climate risk insurance are central to these efforts in the Caribbean: CCRIF SPC, at the sovereign level, and the Climate Risk Adaptation and Insurance in the Caribbean project (CRAIC) at the individual level (microinsurance). These initiatives support efforts to increase the number of people worldwide with access to direct or indirect climate risk insurance coverage by up to 400 million by 2020 in vulnerable developing countries as a means of managing climate change-related disaster risk through insurance[5].

[4] From Caribbean and Central American Partnership for Catastrophe Risk Insurance, World Bank, 2014

[5] G-7 Mandate, 2015

Climate Risk Insurance at the Sovereign Level

CCRIF SPC

In 2007, the Caribbean Catastrophe Risk Insurance Facility was formed as the first multi-country risk pool in the world. It was designed as a regional catastrophe fund for Caribbean governments to mitigate the short-term cash flow problems and limit the financial impact of devastating hurricanes and earthquakes by quickly providing financial liquidity when a policy is triggered. Now restructured as a segregated portfolio company, CCRIF SPC offers parametric policies for earthquakes, tropical cyclones and excess rainfall to 21 Caribbean and Central American governments.

Unlike indemnity insurance, CCRIF's parametric insurance products are insurance contracts that make payments based on the intensity of an event (for example, hurricane wind speed, earthquake intensity, and volume of rainfall) and the amount of loss calculated in a pre-agreed model caused by these events. Parametric insurance enables payouts to be made very quickly after a hazard event. CCRIF's rapid payouts help members finance their initial disaster response and maintain basic government functions after a catastrophic event.

Since inception, the facility has made 38 payouts to 13 member governments totalling US$139 million including a total of US$62 million to 10 member countries during the 2017 Atlantic Hurricane Season. All payments were made within 14 days of the event.

Climate Risk Insurance at the Individual Level (Microinsurance)

The Climate Risk Adaptation and Insurance in the Caribbean project (CRAIC)

CRAIC addresses climate change, adaptation and vulnerability by promoting climate risk insurance as an instrument to manage and transfer risk. It is being implemented in Jamaica, Grenada, Saint Lucia and now Belize and possibly Trinidad and Tobago.

The project developed a parametric microinsurance product called the Livelihood Protection Policy (LPP). Targeted at individuals, the LPP is designed to help protect the livelihoods of vulnerable low-income individuals such as small farmers, tourism workers, fishers, market vendors and day labourers, by providing quick cash payouts following extreme weather events (specifically, high winds and heavy rainfall). The livelihood protection policy is designed to reduce vulnerability and sustain the livelihoods of low-income communities. Policyholders (mainly small farmers) in Jamaica and Saint Lucia have received payouts allowing them to get back on their feet and realize concrete earnings as soon as possible.

Project partners are the Munich Climate Insurance Initiative (MCII), CCRIF SPC, ILO Impact Insurance, DHI and local insurance and financial institutions. Funding for the project is provided by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. (BMU) under the International Climate Initiative (IKI).

The parametric nature of both types of policies provided by CCRIF and CRAIC allow policymakers on one hand and vulnerable persons on the other hand to have access to a set of transfer programmes which could be rolled out precisely when they are needed by the affected population.

Payouts to LPP holders provide some stability to the financial situation of these persons after the storms through the injection of quick liquidity, thereby allowing them to avoid adopting coping strategies that could lead them deeper into poverty and also helping them, when their livelihoods are affected, without them having to wait for help from "external" sources like the Government. In other words, it enables farmers, for example, to have a source of immediate funding to undertake activities such as replanting, draining fields and reconstructing irrigation systems. This innovative insurance coverage is a clear example of proactive planning for climate adaptation at the individual level and augers well during these severe fiscal challenges that Caribbean countries are facing.

Parametric (or index-based) insurance products are insurance contracts that make payments based on the intensity of an event (for example, hurricane wind speed, earthquake intensity, volume of rainfall) and the amount of loss calculated in a pre-agreed model caused by these events. Therefore payouts can be made very quickly after a hazard event. This is different from traditional insurance settlements that require an on-the-ground assessment of individual losses after an event before a payment can be made.

Microinsurance is the protection of low-income people against specific perils in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved. **Weather-indexed microinsurance** refers to policies specifically designed for low-income populations which provide coverage for physical assets or livelihoods in the event of a weather hazard.

Demand for climate risk insurance amongst the most vulnerable

While these climate risk insurance products are available in the region, one of the main challenges is in promoting insurance especially microinsurance, which is often entirely new for low-income people. Therefore, it is important to ascertain the demand among the potential beneficiaries. A study conducted by CCRIF in 2017 in Saint Lucia and Jamaica assessed the demand for the Livelihood Protection Policy amongst fishers and other stakeholders in the fisheries industry (one vulnerable group) and examined possible avenues for Government and organizations such as cooperatives to facilitate access to this microinsurance product.

Fisherfolk expressed deep interest in the concept of insurance for their livelihoods – as provided by the LPP – as opposed to traditional life insurance and asset insurance with which they were more familiar but in which they were not necessarily interested and typically did not purchase. Furthermore, in general, fishers are unable to secure life or asset insurance – as insurance companies feel they are high risk clients. Perceived benefits of the LPP included the quick LPP payouts and low cost as well as the flexibility in how the funds can be used. Parametric insurance policies are less expensive than regular insurance as they avoid many of the transaction costs associated with providing a large number of very small insurance contracts in the traditional manner. The LPP would benefit fishers who do not own assets since it is aimed at covering losses to livelihoods. Also, the LPP could be used as collateral to obtain a bank loan – a benefit of the policy even in the absence of it triggering a payout.
Governments expressed interest in both sovereign climate risk insurance and microinsurance specifically for the fisheries sector, which is characterized by a large number of artisanal fishers operating in small boats. In addition, there are large numbers of people employed by spin-offs from the fishing industry such as gear making and repair, engine repairs, boat building, fish processing workers, and fish vendors and middlemen. Although the contribution to GDP is relatively low, this sector sustains the livelihood of many families especially in rural communities.

The results of the study can be extrapolated to provide a sense of how other vulnerable groups may view insurance as protection against climate risks and how governments may support other individuals and economic sectors that include low-income, vulnerable workers.

The analysis of the demand for climate risk microinsurance used a demand function based on the probability of loss, fishers' wealth (earnings), the loss – in terms of lost days of earning. The premise was that a fisher would purchase insurance only if the expected utility of being insured is higher than the expected utility of being uninsured.

The results of the model suggest fishers from both countries would be willing to purchase insurance to protect against probable loss as the utility gained from the purchase of an insurance policy outweighs the utility of remaining uninsured. However, risk averse individuals have a greater desire to avoid risky situations than risk takers (individuals with high risk appetite levels) and therefore would be willing to pay up front to mitigate the consequences of a risk materializing. In this regard, it important to view the results within the context of the general risk appetite of individuals within both territories as this may be informed by factors such as past experiences and culture. These factors, albeit difficult to quantify in many cases, are key components in any decision criteria set for the demand for insurance. The adopted model may be augmented to, among other things, account for other factors that may influence the demand for insurance by a risk averse agent. Anecdotally, some factors that may determine demand include individual demand variables such as:

- Affordability/cost of insurance
- Portion of total earnings derived from fishing
- Assurance of food source
- Tropical cyclones and excess rainfall events
- Climate change: rising sea levels, increased frequency and severity of extreme weather events.

- Knowledge of climate change among fishers

The two main limitations of the study were:

- While the model provides an indication of the willingness of a risk averse agent to purchase insurance, it does not provide a number of policies that may be purchased (demanded) given the price of an insurance policy.
- The results for the individual should not be scaled up to be used as a representation of the willingness of a group of fisherfolk to purchase insurance.

How Government can take an Enabling Role in incorporating Climate Risk Insurance within Social Protection Strategies

Governments can formalize the allocation of funds from national climate risk insurance to social protection if they opt to pre-determine either through their fiscal policy framework or through their disaster risk management strategies the percentage of a payout that could be apportioned to those most affected by the natural hazard and align this with their social protection strategies and programmes. While insurance payouts are made at the national level, the ultimate impact on beneficiaries depends significantly upon the availability and quality of mechanisms to transfer and translate those funds into rapid assistance. This pre-disaster planning is a core requirement of the African Risk Capacity (ARC), a multi-country risk pool for African countries (modelled on the CCRIF example) in which members must develop an operational plan for how the funds will be used in the event of a payout[6].

In the Caribbean, governments have used payouts received under their CCRIF policies to assist the most affected individuals or communities. For example, following the passage of Matthew the Government of Haiti reported that it was able to help 1.4 million persons affected by Hurricane Matthew with about 50 per cent of the CCRIF payout which totaled US$23.4 million. Some of the uses of the payouts by recipient countries over the years have included:

- Provision of food and shelter to displaced persons
- Purchase of tarpaulins for houses
- Purchase of medication
- Providing support to the agriculture sector – for example, Saint Lucia used its payout of US$3.7 million following Matthew to strengthen and rebuild the agriculture sector
- Rebuilding of schools as was the case of the Turks and Caicos Islands following Hurricane Maria in 2017

While these interventions have been aimed at vulnerable persons in these countries, CCRIF member governments are not required to indicate the specific strategies used to target the beneficiaries.

Contingency Planning at the African Risk Capacity

Member countries must develop an operational plan for how the funds will be used in the event of a payout. Contingency plans focus on leveraging existing programmes (such as a social cash transfer) that can be scaled up in the event of a disaster. There is a concerted effort to integrate ARC's plans within the national contingency plans, where they exist, to ensure that ARC is embedded within the national programmes and emergency response.

[6]ePact, 2017. Independent Evaluation of the African Risk Capacity

In addition to providing assistance to individuals or households, governments can use payouts from sovereign insurance products to benefit economic sectors which include highly vulnerable workers. For example, payouts could be used for overarching interventions after a severe weather event such as clearing and rehabilitating fishing beaches to facilitate fishers to resume their work.

Government should also consider the inclusion of microinsurance in its social protection strategies, for example, by purchasing group policies (or blocks of policies) and using those policy payouts to assist the most affected persons or communities. By purchasing a group policy, a government can determine which communities and individuals therein could receive payouts. This would be based on pre-determined criteria for selection of communities/ individuals and the levels of damage after an event. Severe storms and tropical cyclones can inflict varying degrees of damage or loss on individuals depending on their location or the path the weather system travelled. One key benefit is the speed with which the payout is received – typically within 1-2 weeks. The requirement of governments and other aid agencies to address various priorities means that delays in emergency funding result in severe delays for helping individuals and providing a humanitarian response. These delays can cause individuals to resort to undesirable management strategies such as selling income-generating assets or borrowing at high interest rates. A group LPP policy can provide a basic level of immediate assistance for individuals to help them with their most urgent needs.

Towards Advancing Sustainable Livelihoods - Key Recommendations for Governments to Align Social Protection and Climate Adaptation Strategies

Globally, policy responses such as those aligned to social protection that aim to address the underlying causes of poverty and vulnerability and are able to reduce the increasing risk of climate shocks and the impoverishing effects of disasters are increasingly gaining traction. Climate adaptation strategies include both risk reduction and risk transfer options such as insurance. Some key recommendations for government action to link social protection systems and climate adaptation are presented below, with an emphasis (for the purpose of this paper) on climate risk insurance as a key component of climate adaptation. Many of these recommendations were suggested by participants (from government representatives and other individuals) in the study that assessed the demand for microinsurance in Jamaica and Saint Lucia.

- Strengthen the design of social protection strategies to be more sustainable – that is, these strategies should be inclusive and effective to protect individuals from a range of risks that may occur during the course of his/her life – such as life cycle risks (old age poverty, disability, temporary or permanent incapacity for work, death of a family member, pregnancy), health risks (illness, accidents, epidemics), economic risks (unemployment, price shocks) as well as natural and ecological risks (such as droughts, floods, tropical cyclones and earthquakes)
- At a national level, ensure that social protection policies and strategies are aligned with a country's overall climate adaptation response alongside interventions in such other

sectors as agriculture, tourism, infrastructure, and disaster risk management among others

- Include ministries responsible for disaster management and climate change in the development of social protection policies and align poverty reduction and pro-climate objectives with the aim to unlock potentially powerful synergies to advance sustainable livelihoods of the poor and most vulnerable.

Specific recommendations related to climate risk insurance

- Incorporate sovereign climate risk insurance as part of social protection strategy, with explicit protocols to use payouts to assist the most affected individuals or communities and to reduce the vulnerability of economic sectors that are dependent on low-income, vulnerable workers; standardization and mandatory adoption of protocols are important for sustainability – as noted above, such "contingency plans" are a key feature of the African Risk Capacity

- Make a case for governments to purchase sovereign climate risk insurance and support access to microinsurance as part of their overall financial protection strategy – this will involve putting the necessary legislative and regulatory systems in place and will lay the ground work for the more specific alignment with social protection strategies

- Incorporate microinsurance as part of social protection strategy, for example, within local government departments purchasing group policies and using payouts to assist the most affected individuals or communities. The purchase of group policies for LPP would enable effective scaling up of LPP allowing for the low-cost and rapid expansion of both the number of beneficiaries of and its benefits when there is a need.

- Facilitate the organization and purchase of group or block policies by professional groups for their members, for example, fisher or farmer cooperatives, or community groups

- Provide an enabling environment to increase access to microinsurance by vulnerable persons, for example, by providing subsidies for policy premiums; waiving associated taxes; incorporating microinsurance within existing government rebates and subsidies for the fisheries, agriculture and tourism sectors, focusing on low-income workers

- Include climate risk insurance requirements in policies covering areas such as fisheries, agriculture or MSMEs (micro-, small- and medium-sized enterprises) – for example, revise national policies to require purchase of microinsurance as part of the

registration and licensing process for fishers and farmers etc. The Government of Jamaica is investigating this option in its efforts to upgrade the fisheries sector.

- Support the sensitization of vulnerable persons/low-income persons to the role that insurance and particularly microinsurance products can play in reducing their vulnerability to climate- and weather-related events – this will involve overcoming the general perception that insurance is too expensive and increasing understanding of how these new and different products work. Education and sensitization, involving the government as well as non-governmental actors is a critical part of CRAIC's promotion of the Livelihood Protection Policy.

Alignment with 2030 Agenda for Sustainable Development

When properly designed and executed, social protection strategies and interventions can offer versatile coping mechanisms for climate shocks and natural disasters. Social protection is a powerful tool to protect populations at greater risk of climate-related impacts and those adversely affected and can therefore support efforts to transition countries to advance more sustainable livelihoods and practices in support of the Sustainable Development Goals.

Caribbean governments have signalled their commitment to the 2030 Agenda for Sustainable Development and its central premise of "leaving no one behind" by aligning the Sustainable Development Goals with national development plans. This provides a framework for strengthening social protection programmes through incorporating climate risk insurance, which specifically supports Goals #1 "End poverty in all its forms everywhere" and #13 "Take urgent action to combat climate change and its impacts".

This emphasis will directly contribute to achieving the following targets:

- By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters

- Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

- Integrate climate change measures into national policies, strategies and planning

- Fits in with new focus on climate-resilient Caribbean and climate-smart movement

CONCLUSION

Caribbean countries are highly vulnerable to climate-related hazards such as hurricanes, excess rainfall (and associated risks of landslides and flooding) and drought – all of which are expected to have increased negative impacts due to climate change. Additionally, these small island and coastal states continue to grapple with issues related to macroeconomic stability, reducing poverty levels, improving international competitiveness and debt sustainability.

Countries rely on their social protection systems to enable poor and vulnerable people better manage economic, social and environmental risks and shocks in an attempt to escape from poverty. While most states have some level of social protection – typically focusing on pensions, health and public assistance – most social protection systems in the Caribbean are inadequately prepared to respond to emergencies such as natural disasters or long-term impacts from climate change, with particular consequences for the poor and vulnerable.

Therefore, social protection and climate adaptation mechanisms must be linked to effectively provide assistance to communities affected by climate-related shocks.

Caribbean governments are strengthening their disaster and climate risk frameworks and have recognized that risk transfer options are important to address low-frequency high-impact hazard events – such as the catastrophic hurricanes Irma and Maria. Nineteen Caribbean governments are now members of CCRIF SPC, which provides parametric insurance coverage for tropical cyclones, earthquakes and excess rainfall. At the same time, some countries are promoting a microinsurance solution to low-income, vulnerable citizens to protect their livelihoods against weather-related hazards. Thus, climate risk insurance is a key component of climate change adaptation.

Governments can take an enabling role in linking social protection mechanisms with climate change adaptation measures in general and incorporating climate risk insurance in particular. This can be done with sovereign level insurance where governments by pre-determining the percentage of a policy payout that could be apportioned to those most affected by the natural hazard and align this with their social protection strategies and programmes. Governments can also increase access to microinsurance by the most vulnerable through creating an enabling environment to keep costs low and sensitize potential policyholders to its benefits. The state can also consider purchasing blocks of policies or supporting organizations to do the same – where payouts would be used to assist the most affected persons or communities.

MCII

The Munich Climate Insurance Initiative (MCII) is a non-profit, charitable initiative ("Gemeinnütziger e.V") founded by representatives from insurance, World Bank, NGOs and science and is hosted at the United Nations University Institute for Environment and Human Security (UNU-EHS) in Bonn, Germany. MCII brings together insurers, experts on climate change and adaptation, NGOs, and policy researchers intent on finding solutions to the risks posed by climate change and informing climate policy on innovate risk reduction and insurance solutions for weather-related risks.

www.climate-insurance.org

CCRIF SPC
The Caribbean Catastrophe Risk Insurance Facility

CCRIF SPC is a segregated portfolio company, owned, operated and registered in the Caribbean. It limits the financial impact of catastrophic hurricanes, earthquakes and excess rainfall events to Caribbean and – since 2015 – Central American governments by quickly providing short-term liquidity when a parametric insurance policy is triggered. It is the world's first regional fund utilizing parametric insurance, giving member governments the unique opportunity to purchase earthquake, tropical cyclone and excess rainfall catastrophe coverage with lowest-possible pricing.

www.ccrif.org

International Labour Organization

IMPACT INSURANCE

The only tripartite U.N. agency, since 1919 the ILO brings together governments, employers and workers of 187-member States, to set labour standards, develop policies and devise programmes promoting decent work for all women and men. The ILO's Impact Insurance Facility is enabling the insurance sector, governments, and their partners to embrace impact insurance to reduce households' vulnerability, promote stronger enterprises and facilitate better public policies.

www.impactinsurance.org

DHI

DHI is the largest provider of flood forecasting systems worldwide. With knowledge of water environments from over 50 years of dedicated research and real-life experience in more than 140 countries. DHI strives to make this knowledge globally accessible to clients and partners by channelling it through their local teams and unique software.

www.dhigroup.com