



# CLIMATE RISK INSURANCE

FOR STRENGTHENING CLIMATE RESILIENCE OF POOR PEOPLE IN  
VULNERABLE COUNTRIES

A BACKGROUND PAPER ON  
CHALLENGES, AMBITIONS AND PERSPECTIVES

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Climate change, extreme events like weather-related disasters, as well as slow onset changes such as rising sea levels, threaten sustainable development and resilience, impair socio-economic development and reinforce cycles of poverty across the globe. Vanuatu and Kiribati tragically experienced this in March 2015. The burden of climate change impacts is not evenly distributed across the world due to differing exposures, vulnerabilities and coping capabilities. Because the risks often fall more heavily on those least able to reduce or recover from them, the most vulnerable people and countries need particular assistance. We are seeing an increase in the frequency and intensity of extreme weather events worldwide as a direct consequence of rising temperatures. Average annual weather-related disaster losses in the last five to ten years in “low” and “lower middle income” economies have reached USD 1.3 billion and USD 6.8 billion respectively<sup>1</sup>. The impacts of climate change can set back development by increasing not only the incidence, but also the severity of poverty. Climate impacts undermine resilience and the capacity<sup>2</sup> to recover and absorb losses from these events, especially that of poorer countries and their citizens, by reducing their agricultural productivity, weakening water and food security, increasing the incidence of diseases, and threatening the existing infrastructure, economic productivity and value chains.

Climate change will create new poor, especially in low-income countries, jeopardize sustainable development, and exacerbate migration and conflict. The World Bank (2012, p.65) states that “*climate change in a four degree world could seriously undermine poverty alleviation in many regions*”. Limiting the global temperature increase to less than two degrees Celsius has to go hand in hand with strengthening resilience. While the world’s population is expected to grow to 9 billion by 2050, the projected impact of climate change on food production (crops, livestock, and fish) is predominantly negative<sup>3</sup>, hence risks to food production and food security could affect a significant part of the global population in coming decades<sup>4</sup>. Rural areas are home to 48% of the world’s population; 75% of the poor and 80% of food-insecure people live in low-income countries<sup>5</sup>. Successive adverse weather events have the potential to further diminish this already scarce resource base, thus deepening poverty and exacerbating the vulnerability of these groups. Development progress will be eroded and further advances held up. The absence of economic safety nets which could cushion the adverse impact of these climate-related disasters remains a serious concern.

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<sup>1</sup> Munich Re, Geo Risks Research, NatCatSERVICE, 2013

<sup>2</sup> Collier et al., 2008; Hertel et al. 2010; World Bank, 2010.

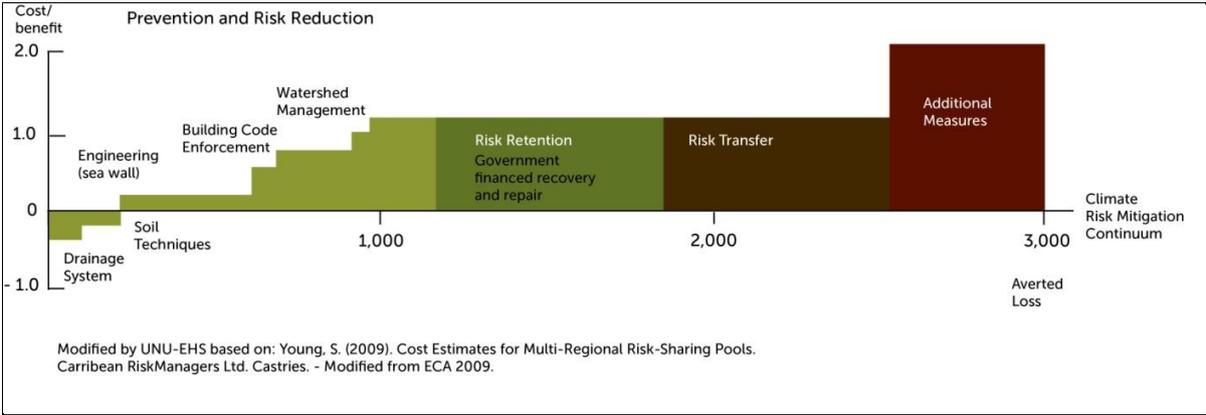
<sup>3</sup> Challinor et al., 2013; Knox et al. 2012; Rosenzweig et al., 2013; Lobell et al., 2008; Rötter et al., 2011; Thornton et al. 2011.

<sup>4</sup> Teixeira et al. 2013; Semenov and Shewry 2011

<sup>5</sup> Easterling et al. 2007; Ravallion et al., 2007; UNDP, 2005; UN-DESA Population Division 2012; Wilbanks et al., 2007.

**THE OPPORTUNITY INCREASING THE RESILIENCE OF SOCIETIES AND THE MOST VULNERABLE – WHAT’S THE ROLE OF CLIMATE RISK INSURANCE?**

Climate risk insurance is a vital instrument within a **comprehensive climate risk management** system, spanning a **continuum** of prevention, risk reduction, risk retention and risk transfer such as insurance schemes. Climate risk insurance can play numerous roles - at individual, community, country, regional (international) and global levels - in providing security against the loss of assets, livelihoods and even lives in the post-disaster period; ensuring reliable and dignified post-disaster relief; setting incentives for prevention; providing certainty for weather-affected public and private investments, and easing disaster-related poverty and spurring economic development.



The vertical (y) axis depicts cost per unit of benefit ratio, including loss averted and other positive values. Costs include capital and operating expenses, and potential operating savings generated (therefore costs can also be negative). Measures below zero are beneficial in terms of reducing costs. Actions below the ratio line (1:1) on the y axis are defined as cost-effective. The horizontal (x) axis depicts the reduction of the expected loss by implementing the measure. Costs and benefits are calculated using existing practices and costs (ECA 2009). Cost per unit of benefits is a NPV calculation discounted at local rates. Methodology based on ECA 2009, Caribbean case study by Simon Young. Available at [http://mckinseyonsociety.com/downloads/reports/Economic-Development/ECA\\_Shaping\\_Climate%20Resilient\\_Development.pdf](http://mckinseyonsociety.com/downloads/reports/Economic-Development/ECA_Shaping_Climate%20Resilient_Development.pdf)

By diversifying loss risks among people and across time, insurance reduces the negative impacts of weather-related disasters, enables a timely recovery, and can help to promote adaptation. Insurance-related solutions facilitate the assessment of loss and damage potential as a prerequisite for identifying needs and policy priorities. Applying loss-avoiding measures in many contexts may help reduce insurance premiums — just one way that well-designed insurance can incentivize loss reduction and resilience-building activities of households, firms and governments.<sup>6</sup> The volatility in economies and social systems caused by weather extremes is a challenge to social and economic development. Insurance can reduce the financial repercussions of volatility and the uncertainties of decision-making by helping create a “space of certainty” within which investments and planning can be undertaken. This certainty, in turn, can help foster an environment more conducive to climate-resilient investment in key sectors and temper the downturns that act as a major impediment to escaping poverty.<sup>7</sup> Insurance helps to provide timely and reliable finance to cover loss and damage, in particular compared to other (usually) ad hoc post-disaster financing options, such as aid, loans and family assistance. Insurance clients can access timely payouts to purchase food and get back on their feet while avoiding poverty traps. Payouts can help governments to avoid fiscal deficits and costly post-disaster loans, and to take prompt action, for example to assist the poor people who are most affected by disasters.<sup>8</sup>

<sup>6</sup> Warner et al, p. 16  
<sup>7</sup> Warner et al, p. 16ff.  
<sup>8</sup> Warner et al, p. 19.

Against this background, the **overall objective of the initiative** is to stimulate the creation of effective climate risk insurance markets and the smart use of insurance-related schemes for people and assets at risk in developing countries, thereby complementing intensive climate change adaptation, risk management and poverty reduction and underpinning economic development. It addresses the comprehensive risk management needs of vulnerable people, countries and regions in a way that catalyses climate resilient development. Insurance schemes in poor countries in general and the initiative in particular need a strong participatory approach if they are to match the specific needs of the potential beneficiaries as well as the financial capacities of policyholders.

While the initiative focuses primarily on insurance instruments, it will complement market-driven approaches with an innovative and non-traditional range of approaches to reach vulnerable people. These will be developed in dialogue with the relevant national and regional actors including civil society, for example through regional consultations starting at the end of 2015. **The proposed specific goal of the G7 Initiative on Climate Risk Insurance is to significantly increase the indirect and direct insurance cover<sup>9</sup> of low income people against negative impacts of extreme weather events induced by climate change within the next 5 years.** With this objective in mind, this paper presents an estimated current baseline of people covered by direct and indirect climate risk insurance, a scenario of how these numbers could grow with G7 Initiative on Climate Risk Insurance engagement in different regions, as well as broad cost ranges. The paper further lays out how the G7 Initiative on Climate Risk Insurance would enhance the resilience of particularly vulnerable groups, presents possible parameters for the design, and discusses the relevance of the Initiative in the post-2015 policy context.

## THE POST-2015 CONTEXT

## HOW DOES CLIMATE RISK INSURANCE FIT INTO AND SUPPORT THE POST-2015 POLICY PROCESSES ON CLIMATE, DISASTER RISK REDUCTION AND SUSTAINABLE DEVELOPMENT?

The year 2015 provides the opportunity to shape the trajectory of resilience and sustainable development for the coming decades. In March, countries adopted the Sendai Framework for Disaster Risk Reduction (SFDRR), which aims to achieve a substantial reduction of disaster risk and losses from extreme events. In July, the Addis Ababa Financing for Development Conference sets the direction for development finance, in September governments will determine the shape of the Sustainable Development Goals and the post-2015 development agenda, and in December world leaders will negotiate a new global climate agreement (COP 21).

The need for urgent action on climate change and the related risks is recognised in all high-level processes, first and foremost by the United Nations Framework Convention on Climate Change (UNFCCC), which calls for further enhancing action on adaptation. With the establishment of the Warsaw International Mechanism for Loss and Damage, UNFCCC is addressing the risk of loss and damage associated with the negative impacts of climate change and the need for comprehensive climate risk management and resilience-building. As part of a holistic approach, climate risk insurance is also addressed in the work plan of the Executive Committee of the Warsaw International Mechanism.

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<sup>9</sup> Direct approaches are those in which the insured beneficiary benefits directly from transferring risk to a risk-taking entity (such as an insurer) in the event the insurance agreement is triggered. The insured beneficiary receives the insurance payout (direct transfer). Indirect approaches are those where the final intended beneficiary benefits indirectly from payments intermediated by an insured government. Indirect approaches are also those where the final intended beneficiary benefits indirectly from being member of an institution that has insurance.

Using the positive momentum in 2015 to strengthen climate resilience, the G7 Initiative on Climate Risk Insurance has the potential to reinforce the commitment of the G7 in supporting countries' own efforts to forge pathways for climate resilient development with vulnerable countries and people.

## **THE AMBITION                      INCREASING ACCESS TO INSURANCE – HOW MANY BENEFICIARIES CAN OBTAIN DIRECT / INDIRECT ACCESS TO INSURANCE THROUGH THE INITIATIVE?**

Today, insurance is not widely available in vulnerable countries and for vulnerable people. For example and as an illustration, the penetration of non-life insurance (i.e. property, casualty and health insurance) in low and middle income countries was only 0.9% of GDP in 2011<sup>10</sup>; in sub-Saharan Africa it was 0.8% and in South Asia 0.4%. Only 6.2% of people working in agriculture worldwide purchase insurance against climate-related risks; in sub-Saharan Africa the figure is 6.5% and in South Asia only 5.7%.<sup>11</sup> Current market research and expert opinion on global insurance penetration suggest that only about 100 million<sup>12</sup> people of the poor and vulnerable<sup>13</sup> in Africa, Asia and Latin America are covered by direct (55 million) or indirect (45 million) insurance schemes against climate risks. Much work remains to be done to establish and deepen the outreach of regional risk insurance pools, sovereign risk finance, and micro insurance. During the last decade especially, the G7 countries have invested great effort to increasing both the coverage ratios of households with private climate insurance products and the capacities of national governments to deal with climatic catastrophes.

The latter has lately received much attention under the frameworks of e.g. the Caribbean Catastrophe Risk Insurance Facility (CCRIF), the Pacific Catastrophic Risk Assessment and Financing Programme (PCRAFI) and the African Risk Capacity (ARC). These initiatives<sup>14</sup> provide governments quickly with timely funding which stabilizes and fosters the recovery of a large number of the affected population. Analysis of past experience with the financing needs and coverage effects of direct and indirect insurance indicates that the global climate risk coverage for the world's poor and vulnerable people could, based on optimistic assumptions, potentially be extended to as many as 400 million additional beneficiaries within the next 5 years.

Significant financing from the G7 will be necessary and can leverage several billion USD of **risk capital** (insurance and re-insurance capacity) from the private insurance and re-insurance industry. Depending on the region, instrument, and risk insured, the volume of the re-insurance capacity necessary can be similar to the insurance capacity volume needed. Besides providing the risk capital, the private insurance industry is already supporting the G7 Initiative on Climate Risk Insurance, and will give even greater support in future, by kindly supplying data for the risk assessment processes and expertise on how to organize the different insurance systems most efficiently.

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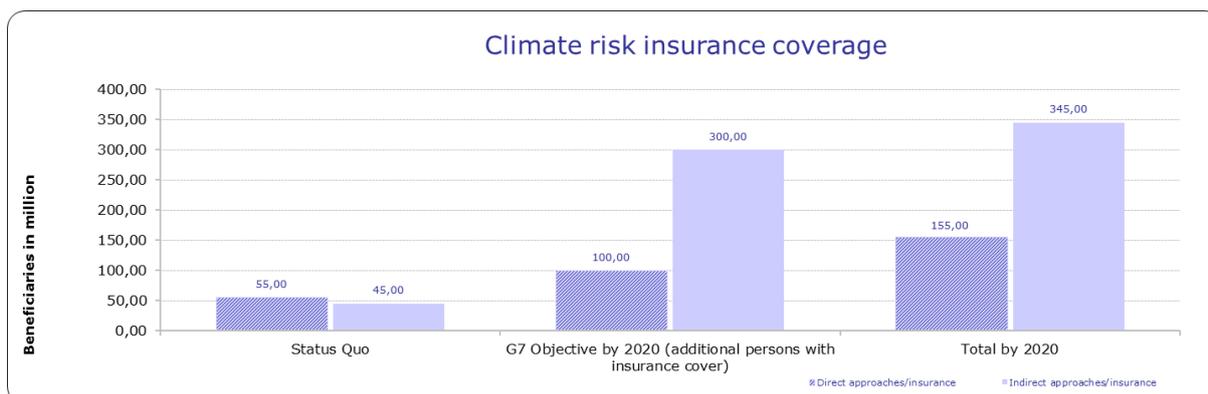
<sup>10</sup> Source: World Bank Financial Development Database, which draws data from Swiss RE sigma reports.

<sup>11</sup> Source: World Bank, FINDEX database 2011, % of people in agriculture purchasing agricultural insurance

<sup>12</sup> This figure is based on market research surveys (e.g. Sigma insurance research, 2014) and expert opinions on regional coverage rates of the global poor and climate vulnerable.

<sup>13</sup> The analysis is based on the definition of "the poor and vulnerable people" as the extreme poor with less than 1.25 USD PPP/day, and the poor with less than 2.00 USD PPP/day which would fall into extreme poverty when disasters occur in climate vulnerable developing countries.

<sup>14</sup> See Annex



In order to achieve this ambitious target, a comprehensive approach is required to extend the initiative on a wide geographical scale, focusing on the extreme poor with less than 1.25 USD PPP/day, and the poor with less than 2.00 USD PPP/day, who would fall into extreme poverty when disasters occur in climate vulnerable developing countries (hereafter referred to as “the poor and vulnerable people”).

**Public and private finance** will be needed to facilitate a comprehensive spectrum of direct and indirect insurance approaches adapted to the differing needs of developing countries. There are a number of possible catalytic roles that public finance could play in G7’s leadership in respect of comprehensive climate risk management:

**On the direct insurance side**, the lack of historical and still insufficient current weather data including accessible databases and of knowledge regarding the potentials of insurance schemes combined with the challenges of climate risk assessment and high risk margins of climate vulnerable countries represent significant market barriers and hamper the development of climate risk insurance markets in many developing countries. In order to stimulate direct insurance market development, the G7 Initiative on Climate Risk Insurance, the G20- and other developed countries should provide **public funds** for increasing the risk bearing capacity of the insurance markets in the form of equity participations in insurance companies in developing countries. Such investments should go along with grants for technical assistance which can contribute overcoming market barriers by improving information technology needed for an adequate risk assessment of the insurance markets or increasing the technical capacities and product offerings of insurance providers in developing countries. Furthermore, public funds can help enhancing the regulatory environment for climate risk management, create a level playing field for the local insurance industry and ensure consumer protection for the poor and vulnerable which have access to the direct insurance market.

**On the indirect insurance side**, public risk capital for the capitalization of insurance schemes (as in the case of CCRIF and ARC regional insurance pools) of the G7 and other developed countries can provide a solid basis for new initiatives and product development. As set-up costs for new insurance schemes represent a major share of the total financing needed for indirect schemes, the impetus provided by public funds can be the decisive factor in spurring the launch and further development of indirect schemes. This can be in the form of grants for product design, innovation, and technical assistance or for increasing the risk bearing capacity of the insurance sector through equity participations in regional insurance entities. With its political support the G7 Initiative on Climate Risk Insurance can spur the creation of regional insurance entities, which allow pooling of risks and regional diversification thus reducing insurance premiums significantly. As an investor in the respective insurance entity the G7 Initiative on Climate Risk Insurance, in its role as shareholder, can mitigate counterparty risks for re-insurers and thus facilitate the provision of **risk capital** (insurance

capacity) from the private insurance industry. Thus, provided incentives, risk-adequate pricing, and prudent design are in place, public sector funds might help leverage private sector investments.

Not only in the set-up phase but also during the first few years of implementation, public support might be needed in the form of premium support and measures to reduce the cost of insurance provision and premiums. For direct insurance public support for premiums is justifiable during the initial stages of market development to reduce market entry barriers and when the premium support significantly makes the market more inclusive. Premium subsidies have to be designed and implemented in ways that maximize social benefits and minimize market distortions as well as mistargeting of beneficiaries. This usually entails, that the final premium to be paid by the poor and vulnerable should not be lower than the pure risk premium. Subsidies should be designed with a clearly stated and well-documented purpose. A clear exit strategy is needed or a long-term financing strategy is put in place. Having actuarially priced premium helps better monitor the risk exposure and administrative cost of the scheme <sup>[1]</sup>

Because of its global leadership and thanks to its concerted efforts, the G7 Initiative on Climate Risk Insurance has a unique opportunity to attract **private sector finance** by co-creating viable, sustainable business cases and incentives for local and international private sector engagement. Provided these incentives, risk adequate pricing, and prudent design are in place, private capital can be mobilized to underwrite climate related risks. With appropriate market development, private investors may show interest in helping to capitalize insurance schemes. Experiences with existing public-private partnerships suggest that a phased approach and development of local capacities are needed to expand risk transfer tools to currently underserved vulnerable countries. These first projections may serve as a departure for discussion for more detailed, participatory steps with vulnerable countries, key stakeholders including the public and private sector, and civil society.

With ambitious and concerted efforts in the public and private sectors, G7 Initiative on Climate Risk Insurance could help facilitate indirect climate risk-related insurance coverage for up to 300 million additional beneficiaries (through national and regional governments), and an additional number of up to 100 million beneficiaries through direct insurance approaches. The realization of this ambitious target will depend on whether the concerted efforts of the public and private sectors will lead to a sufficient increase of the regional market penetration rates with direct and indirect insurance products. Increase factors of up to 10 times of the current regional insurance penetration rates will be necessary. Reaching these penetration rates for direct insurance approaches depends mainly on market dynamics, which can be accelerated under the G7 Initiative on Climate Risk Insurance by lowering market entry barriers, developing market infrastructure regarding necessary weather data as well as building local capacities.

Outreach and scalability of indirect insurance approaches furthermore require a strong political will on the part of potential partner countries. Moreover, the timing of implementation will depend to a large extent on the role of existing schemes and the possibility of up-scaling them. Taking into account the time needed for the development and set-up of indirect approaches as well as the fixed costs implied, building on existing schemes will be of utmost importance for reaching the targets of the initiative. Thus the choice of instruments applied will ultimately affect the costs and in consequence imply different financing needs for reaching the 400 million beneficiary target of the G7 Initiative on Climate Risk Insurance.

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<sup>1</sup> Using subsidies for inclusive insurance: lessons from Agriculture and Health; Ruth Vargas Hill\* a.o., ILO MicroInsurance paper no. 29, commissioned by GIZ/BMZ

**Table: Persons currently and potentially reached by climate risk insurance and financing needs involved**

<b>Status Quo</b>	
<b>Persons currently covered against climate risks by</b>	Million
Direct insurance	55
Indirect insurance	45
<b>Total</b>	<b>100</b>
<b>G7 Initiative on Climate Risk Insurance Scenario</b> (up to 400 million additional beneficiaries)	
Potential additional beneficiaries, million	
Direct approaches/insurance <sup>a</sup>	100
Indirect approaches/insurance <sup>b</sup>	300
<b>Total</b>	<b>400</b>

<sup>a</sup>Direct approaches are those which the insured beneficiary benefits directly from transferring risk to a risk-taking entity (such as an insurer) in case the insurance agreement is triggered. The insured beneficiary receives the insurance pay-out (direct transfer).

<sup>b</sup> Indirect approaches are those where the final intended beneficiary benefits indirectly from payments intermediated by an insured government. Indirect approaches are also those where the final intended beneficiary benefits indirectly from being member of an institution that has insurance.

The presented projection of the possible outreach are based on numerous assumptions and can thus represent only a basis for discussion to be further validated against experiences and assessment of other G7 members, private stakeholders and the partner countries themselves. The ambitious projection is conditional upon the following assumptions:

- the initiative represents a comprehensive approach encompassing direct and indirect insurance approaches as well as innovative risk financing instruments
- a major share of beneficiaries can be reach via up-scaling existing schemes and new product introduction within existing schemes
- insurance design and risk assessment of existing schemes are valid and reflect actual climate risks
- the initiative can stimulate regulatory enhancement and market development for direct schemes
- assumptions on expected pay-outs are sufficient and address the needs of the partner countries/policy holders
- economic development/domestic resource mobilization support the risk-bearing capacity of policy holders and partner countries while allowing risk-adequate pricing.

Given the pressing needs, it is urgent that scaling-up can be achieved in climate risk insurance. Thus the measures and support activated by the initiative should target **new innovative** schemes and also integrate and **build upon existing, successful platforms and approaches**. Moreover the G7 Initiative on Climate Risk Insurance should replicate/upscale these platforms and schemes to other regions at risk, possibly with additional future oriented innovations. Replication and upscaling are options for direct and indirect approaches. For instance, the replication of CCRIF in Central America or upscaling the Climate Insurance Fund (CIF) would be potential options.

A further decisive factor is the income focus of the initiative, which is designed to address the extreme poor with less than 1.25 USD PPP/day and the poor with less than 2.00 USD PPP/day who would slip into extreme poverty when disasters occur in climate vulnerable developing countries. The capacity to

pay premiums is a decisive and often limiting factor for this target group. As premium level reflects the expected pay-outs, the affordability of the latter will largely be determined by the intended role of climate risk insurance within the spectrum between safety-net programmes securing elementary disaster relief to full financial indemnity-based compensation of losses related to extreme weather events. Price signals indicating risk-adequate pricing, however, are considered essential as an incentive for risk-mitigating measures. Temporary premium support may be necessary to reduce high up-front costs or to increase initial product acceptance. However, the design of climate risk insurance schemes should aim for financial viability and sustainability. Incorporating incentives for risk-mitigating measures and climate adaptation investments in well-designed climate insurance schemes can reduce losses due to extreme weather events and mitigate possible moral hazard by policy holders preemptively.

## **THE REGIONS                      COVERING VULNERABLE REGIONS – WHERE ARE THE GAPS AND HOW CAN THEY BE FILLED?**

A regional breakdown of the 400 million additional beneficiaries is set out in the table below. Vulnerable regions and countries face combinations of climate-related stressors. Similarly, the priorities of regions and countries and self-help capacity differ considerably. Based on the climate risk exposure of each country as captured by the Global Climate Risk Index (CRI)<sup>15</sup> by Germanwatch, the table below provides an illustration of what these needs could look like, and how G7 Initiative on Climate Risk Insurance could contribute to the growth of climate risk management tools including insurance for vulnerable regions, countries, and people.

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<sup>15</sup> Germanwatch (2014) ; <http://germanwatch.org/en/download/10333.pdf>

**Table: Potential level of additional beneficiaries reached by G7 CRII along regions**

<b>Potential Regional Breakdown</b>	
<b>Sub Saharan Africa</b> , in % of total beneficiaries, thereof	<b>50%-55%</b>
via direct approaches in % of regional total	10%
via indirect approaches in % of regional total	90%
<b>Middle East &amp; North Africa</b> , in % of total beneficiaries, thereof	<b>1%-2%</b>
via direct approaches in % of regional total	35%
via indirect approaches in % of regional total	65%
<b>South Asia</b> , in % of total beneficiaries, thereof	<b>20%-25%</b>
via direct approaches in % of regional total	70%
via indirect approaches in % of regional total	30%
<b>East Asia &amp; Pacific</b> , in % of total beneficiaries, thereof	<b>17%-22%</b>
via direct approaches in % of regional total	20%
via indirect approaches in % of regional total	80%
<b>Latin America &amp; Caribbean</b> , in % of total beneficiaries, thereof	<b>3%-5%</b>
via direct approaches in % of regional total	5%
via indirect approaches in % of regional total	95%

## **THE INSTRUMENTS      PROVIDING INSURANCE SERVICES TO BENEFICIARIES - WHICH INSTRUMENTS CAN BE USED?**

Around 1 billion extremely poor people worldwide live with less than 1.25 USD per day, and 2.2 billion live with less than 2 USD per day<sup>16</sup> and are vulnerable to shocks and therefore constantly at risk of falling again into extreme poverty when, for example, disasters due to extreme weather events occur. They also have little or no access to financial services, including insurance. These poor people are particularly vulnerable to climate-related extreme events. The means for reaching them and increasing their resilience relies strongly on climate risk reduction and adaptation measures. Also insurance solutions provide an additional benefit to prevent them from falling into a poverty trap after a disaster.

The main advantage of **indirect** insurance solutions in the context of the G7 Initiative on Climate Risk Insurance is that a large number of the poor and vulnerable can be reached within a relatively short period of time and that governments know how much and at what time after the catastrophe has occurred they can expect pay-outs. Fast indemnity payments under such schemes avoid a redistribution of government budgets and limit the negative consequences of climate disasters which increase the slower the affected are reached with disaster relief. Furthermore, pooling of risks over a wider geographical spectrum allows risk-diversification: As a result risk premiums can be reduced

<sup>16</sup> 1.25 USD and 2 USD are measured in purchasing power parity terms (PPP). (2011) Source: World Bank Equity and Poverty database,

considerably and thus ensuring affordability for many countries, that might not have the possibility to receive insurance coverage otherwise.

**Direct** insurance addresses individual policyholders. Although direct agricultural and climate risk insurance penetration at a micro-level has not yet reached a substantial scale in any region, direct insurance is a promising instrument for addressing the most vulnerable, provided it meets their specific needs, has been designed in a participatory manner and the payment of premiums is viable. Again, all insurance schemes should go hand-in-hand with risk reduction measures and be designed and implemented in close cooperation with the beneficiaries at risk.

Finally, insurance schemes complement many approaches which aim at reducing the vulnerability of poor people and enhancing their resilience. Like climate risk insurance, weather risk financing instruments help governments, enterprises, and households planning in advance for severe weather events and agree ex-ante on rules and processes for securing funds through their budget and spending this money. Together with the relevant partners further exploration will be conducted into how climate risk-related safety-nets, disaster risk reduction (DRR) measures (such as early warning systems, risk assessment or prevention activities) aiming at enhancing capacities at all levels (national, regional, local, private sector, local communities) can be further stimulated by this initiative.

## **SUMMARY**                      **THE WAY FORWARD – STRENGTHENING CLIMATE RESILIENT DEVELOPMENT THROUGH CONCERTED EFFORT**

For reducing the risks of climate change, mitigation of greenhouse gas emissions and adaptation are paramount. Nevertheless, approaches to address and manage residual risks have to go hand in hand with them. In order to help vulnerable countries and people manage severe climate risks, it is recommended for the G7 Initiative on Climate Risk Insurance to take a **comprehensive and participatory climate risk management system** tailored to the respective needs and vulnerabilities of target groups in developing countries.

In this respect the initiative lends itself to furthering a broad spectrum of insurance tools – including direct and indirect risk insurance at macro-, meso- and micro-levels as set out in the annex – which complement tested risk management approaches that help protect the lives, livelihoods, critical infrastructure and assets of vulnerable people and the institutions that serve them. Promoting climate risk insurance in a broad sense underlines and furthers ongoing or planned efforts of G7 member countries and vulnerable countries with regard to adaptation and managing climate risks and their causes, whilst promoting innovative new schemes in order to complement and support already established instruments and tools. The initiative is well aware that the design of “no-regrets” insurance schemes needs to be participatory, and that an open-minded debate on supportive measures to create a favourable market development and reduce the burden of premiums for policy holders is needed.

In order to **achieve scale** and build on solid experience, existing and successful facilities and insurance schemes like ARC, CCRIF or PCRAFI could be replicated in other regions, such as is being done with the extension of CCRIF from the Caribbean to Central America. As appropriate, the benefits of a component linked to GFDRR, the multi-donor trust fund which is well established, e.g. as a special programme under the Disaster Risk Financing and Insurance (DRFI) Program for the objectives of the G7 Initiative on Climate Risk Insurance should be discussed. Similarly, good practices of insurance market development approaches to foster direct insurance systems could be introduced. Replication and upscaling of indirect insurance schemes must go hand in hand with

substantial efforts in promoting direct insurance and disaster risk reduction. Finally, the various insurances would need to provide products and services in a responsible and beneficiary oriented way, providing true client value at all levels, to informed policy holders and beneficiaries. Effective consumer capability and consumer protection that works in these settings and for the various types of consumers will be guiding principles.

The initiative aims to reach up to 400 million additional people vulnerable to climate risk within a 5-year window until 2020, but its ambitions reach far beyond. A new global climate agreement will be signed in Paris at the end of 2015, building a platform for new partnerships which may engage in the initiative.

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## ANNEX

The table below shows examples of direct and indirect insurance approaches, classified as follows: Direct approaches are those which the insured beneficiary benefits directly from transferring risk to a risk taking entity (such as an insurer) in case the insurance agreement is triggered. The insured beneficiary receives the insurance payout (direct transfer). Indirect approaches are those where the final intended beneficiary benefits indirectly from payments intermediated by an insured government. Indirect approaches are also those where the final intended beneficiary benefits indirectly from being member of an institution that has insurance.

There are many instances where a direct insurance approach can also be thought of as providing additional, indirect benefits to vulnerable people. For example, sovereign countries that are members of a regional risk insurance pool can directly receive insurance payouts that are intended for governmental goods and services (public buildings and assets like roads, maintaining police forces, keeping ministries running following a major catastrophe). The recipient government and national ministries directly benefit from those payouts. The citizens that rely on these goods and services benefit indirectly—they did not receive the payout directly but they enjoy the benefit that the insurance payout make possible. Another example relevant to vulnerable people specifically is when a financial institution that serves low-income clients (credit unions, microfinance institutions, savings clubs, etc.) has weather-related insurance cover (such as to prevent against loan default by farmers facing widespread drought). In this case the financial institution receives an insurance payout, which can allow loan forgiveness, prevent loss of liquidity, or other kinds of financial benefits for the vulnerable people who may be members or clients of these organizations.

## Examples of predominantly direct insurance

Insurance scheme	Who benefits from insurance coverage?	Where does the money for premiums, product development, & related activities come from?
<p><b>ACRE</b> is the largest agricultural insurance programme in sub-Saharan Africa is an agency specializing exclusively in crop insurance with the mission to managing farmer's risk and insuring sustainability. ACRE Insurance offers both crop insurance as well as biotech yield insurance (BYI).</p>	<p>Households, individuals receive insurance payout.</p>	<ul style="list-style-type: none"> <li>• The Agriculture and Climate Risk Enterprise (ACRE) is the largest index insurance programme in the developing world in which the farmers pay a market premium.</li> <li>• It is also the first agricultural insurance programme worldwide to reach smallholders using mobile technologies (IFC 2013). An innovative feature of ACRE is its distribution channels--mobile banking (over 19.3 million users) allows premiums and payouts to be paid. Mobile banking also supports easy registration and tracking of individual clients, and lowers transaction and delivery costs.</li> <li>• Product development: ACRE has built on links with lending institutions and input providers, and demonstrates that innovative technology solutions can contribute to scale in smallholder agricultural insurance.</li> <li>• 285.000 policies sold in three east African countries</li> </ul>
<p><b>The Horn of Africa Risk Transfer for Adaptation (HARITA) (now R4 Rural Resilience Initiative)</b>, allows food-insecure farmers to pay insurance premiums in cash or a labor-for-insurance option where farmers work on community risk reduction projects to reduce agricultural risk.</p>	<p>Vulnerable people that are served by groups or organizations that help their members better manage climate risk.</p>	<ul style="list-style-type: none"> <li>• Product Development: Swiss Re is providing financial support and technical expertise as the partnership is exclusive insurance sector sponsor, and also acts as the reinsurer for the project.</li> <li>• Premiums: HARITA allows cash-poor farmers the option to work for their insurance premiums by engaging in community-identified projects to reduce risk and build climate resilience, such as improved irrigation or soil management.</li> <li>• 26, 132 Farmers (2014)</li> </ul>
<p><b>Loan portfolio cover</b> (LPC, Eastern Caribbean) protects finance institutions that serve vulnerable communities (rural credit, microfinance, credit unions).</p>	<p>Vulnerable people that are served by groups or organizations that help their members better manage climate risk.</p>	<ul style="list-style-type: none"> <li>• Product Development: Funded by the International Climate Initiative (ICI) of the German Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety (BMUB).</li> <li>• Premiums: Premiums for the LPC are being collected from the individual financial institution that wishes to cover their loan portfolio against weather shocks.</li> </ul>
<p>The <b>Livelihood Protection Policy</b> (LPP, Eastern Caribbean) make a rapid payout after a weather event and focuses on livelihood stabilization. The LPP is also linked to early warning via mobile phone.</p>	<p>Households, individuals receive insurance payout.</p>	<p>LPP</p> <ul style="list-style-type: none"> <li>• Product Development: The project has been funded by the International Climate Initiative (ICI) of the German Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety (BMUB). The project's activities included the different steps in product design (i.e. weather data and risk modeling, trigger design, needs assessment, supporting the creation of an enabling environment, stakeholder alignment, etc.).</li> <li>• Premiums: Two sources have been established – (a) clients pay the premiums directly, and (b) a credit union pays the premium for the basic protection (one slice) and clients may choose to top-up their plan and add additional levels of protection through direct premium payment.</li> </ul>

## Examples of predominantly indirect insurance

Insurance schemes	Who benefits from insurance coverage	Where does the money for premiums, product development, & related activities come from?
<p><b>Africa Risk Capacity (ARC)</b> is specialized agency of the African Union which insures African countries against droughts, based on a precipitation index. The pay-out to participating countries is based on defined index-values indicating regional droughts. Country specific contingency plans elaborate ex-ante how insurance pay-outs will be used, such as stockpiling of food, providing support to farmers, and other activities to reduce risk.</p>	<p>The population of participating countries which receive catastrophe support from governments (5 million food insecure people in 2014)</p>	<ul style="list-style-type: none"> <li>• Premiums are paid for by ARC member states</li> <li>• Product development: Initial capital from external donors and investors (UK's Department for International Development and Germany's KfW on behalf of BMZ, the German Ministry for Economic Cooperation and Development).</li> <li>• Related Activities: Together with ARC Agency product insurance solutions against other climate risks are developed</li> </ul>
<p><b>Caribbean Catastrophe Risk Insurance Facility (CCRIF)</b> is a sovereign risk insurance pool making rapid payouts to 16 member governments. Payouts can be used inter alia to keep public services running following catastrophes, repair public infrastructure, and other national priorities.</p>	<p>Sovereign countries receive insurance payout (such as from regional insurance pools).</p>	<ul style="list-style-type: none"> <li>• Capitalization: contributions to a multi-donor Trust Fund by the Government of Canada, the European Union, the World Bank, the governments of the United Kingdom and France, the Caribbean Development Bank and the governments of Ireland and Bermuda, as well as through membership fees paid by participating governments.</li> <li>• Product development: grant from the Government of Japan.</li> <li>• 29 policies for hurricane and earthquake risk in 16 member countries (2014).</li> </ul>
<p><b>FONDEN</b>, Mexico's Natural Disaster Fund, provides rapid insurance payouts to help the public sector manage disaster situations. The Government uses payouts for roads and bridges, schools, low-income housing, and water infrastructure. The damage assessment and reporting system crowds in the private sector (re)insurers.</p>	<p>Facilities, institutions, sub-national insurance schemes that cover certain sectors or public assets.</p>	<ul style="list-style-type: none"> <li>• Capitalization: Resources allocated through the Federal Budget with the Program for Reconstruction as primary budget account. It channels resources to the FONDEN Trust and the Emergency Relief Fund, which in turn create specific financial accounts for each reconstruction program.</li> <li>• By Law, FONDEN and its related funds must receive no less than 0.4 percent of the annual budget including any uncommitted funds in the Trust from the previous fiscal year.</li> </ul>
<p>The <b>Disaster Risk Financing and Insurance (DRFI)</b> Program is a partnership between GFDRR and the World Bank to improve financial resilience in developing countries.</p>	<p>Government, businesses, and households against natural disasters.</p>	<ul style="list-style-type: none"> <li>• The DRFI Program is a joint effort within the World Bank to mainstream disaster risk financing and insurance within the World Bank's development agenda. It builds on a partnership between the Non-Bank Financial and Private Sector Development Vice Presidency, the Global Facility for Disaster Reduction and Recovery (GFDRR) and in close coordination with the World Bank Treasury.</li> <li>• The DRFI Program also builds on external partnerships for specific DRFI initiatives: Sovereign DRFI for Middle Income Countries with the Swiss State Secretariat for Economic Affairs (SECO); Agricultural Insurance Development Program with the Netherlands Ministry of Foreign Affairs; Pacific DRFI Program with the Government of Japan; Sovereign DRFI Impact Appraisal Program UK Department of International Development (DFID)</li> </ul>

<p>The <b>Climate Insurance Fund (CIF)</b> is a Global fund which provides financing to insurance- and re-insurance companies in developing countries, offering insurance solutions against climate risks on macro-, meso-, and micro-level). In addition to financing, the Fund provides technical assistance e.g. for product design and development</p>	<ul style="list-style-type: none"> <li>• Macro-level: population of participating countries which receive catastrophe support from governments</li> <li>• Meso-level: customers of intermediaries</li> <li>• Micro-level: insurance policy holders and their families</li> </ul>	<ul style="list-style-type: none"> <li>• Premiums: private insurance policy holders + optionally by CIF through partial and temporarily premium subsidies</li> <li>• Product development: CIF and private (re)insurance companies</li> </ul>
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