



## Concept Paper

# Regulating Climate and Disaster Risk Insurance in Asia: Realities and Options

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## Foreword

This paper explores the role of insurance supervisors in supporting Climate and Disaster Risk Insurance (CDRI). The target audiences of this paper are insurance supervisors, as well as the diverse government and non-government institutions and agencies involved in insurance, climate adaptation, and disaster risk management.

The paper describes the barriers in policy making, market development, regulation and supervision as well as innovative approaches to overcome them. It raises a wide range of open questions related to CDRI such as:

- Is a legal definition for CDRI required (per jurisdiction)?
- How can affordability and take-up of inclusive CDRI be improved?
- What are the lessons learnt as of today regarding insurance pools?
- What capacity building measures could be beneficial to insurance supervisors and other actors?
- What lessons can be drawn from market development and regulation in microinsurance that can be applied to CDRI?

The paper concludes with recommendations about next steps that can be taken up by various stakeholders, from supervisors and policy makers to development cooperation agencies. The recommendations are targeted at generating an enabling environment to close the protection gap for financial climate risk management, while putting safeguards in place and motivating the potential consumers to access and purchase inclusive, reliable, and affordable CDRI products.

## Key messages of this paper

**Inclusive insurance protects the vulnerable from climate and disaster risks.** There is a recognition that with higher frequency and increasing severity of disasters due to climate change, insurance coverage against climate and disaster risks for the vulnerable population is becoming increasingly necessary. Therefore, the reasons for CDRI and its best practices need to be widely promoted.

**CDRI promotion and regulation can pick lessons from how the microinsurance market was developed.** Insurance supervisors have been playing a vital role in making inclusive microinsurance available through insurance education and stakeholder engagement, and by introducing new regulatory approaches. The successes can be seen in the positive microinsurance market development, with a focus on life risks.

**Supervisory commitment to foster Climate and Disaster Risk Insurance (CDRI) is growing.** Some insurance supervisors have started to take a role in inclusive insurance market development with a focus on CDRI. Measures taken range from crafting National CDRI Strategies, to financial education on disaster risks and adapting regulatory frameworks for market-based CDRI. These measures do send a message that supervisors are able to commit and act to support the market development of inclusive CDRI. This comes at a critical point of not only alarming but already damaging climate changes, when there is an urgent and important need to protect both, the life and livelihoods of vulnerable populations around the world.

## 1.0 Background

### 1.1 Introduction

This paper intends to inspire insurance supervisors to support the development of market-based solutions<sup>1</sup> and involve insurance companies in Climate and Disaster Risk Insurance (CDRI). Global stakeholders like the International Association of Insurance Supervisors (IAIS) and the Sustainable Insurance Forum (SIF) discuss climate-related risks as a source of various financial risks, which can translate into prudential risks to insurers, creating underwriting risks, investment risks, liquidity risks, and operational risks.<sup>2</sup> The bottom line is that climate change impacts the overall resilience and stability of financial institutions. Climate change poses real threats. But where there are threats, there can also be opportunities. This paper focuses on opportunities for improving the resilience of the unserved and underserved through inclusive CDRI and it also focuses on opportunities for new business in CDRI involving the insurance sector.

Governments, along with insurance supervisors, can take a strategic decision to support CDRI market development.<sup>3</sup> And insurance supervisors can play a vital role in this strategic decision-making process.<sup>4</sup>

### 1.2 Methodology

This paper draws on literature (see Annex 1) and inputs from insurance supervisory authorities as well as sector specialists particularly from Asia.<sup>5</sup> Insurance supervisors in Asia that provided detailed and extensive inputs were the Securities and Exchange Commission of Pakistan (SECP), the Insurance Commission (IC) of the Philippines and the Insurance Supervisory Authority (ISA) of Vietnam. In addition, examples are cited from other markets inside and outside Asia (e.g. Bangladesh, China, Ethiopia, Fiji, Ghana, India, Indonesia, Senegal, Rwanda, Turkey) and from other insurance institutions (e.g. Indonesia, Kenya, and Uganda).

### 1.3 The Context: Climate change as a threat to sustainable development

**Climate change is recognised as a top global threat.** Climate-induced extreme weather events are a major threat to sustainable development. These events could easily destroy decades of work in development, which in turn could dramatically increase global inequalities.<sup>6</sup> There is increasing frequency and severity of natural catastrophes (NatCat),

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<sup>1</sup> Market-based insurance solution is an approach where the solution is sustainable and scalable, without dependence on subsidies or other support, and insurers see that there is a business case. There are instances when insurers are more comfortable with a non-market-based approach. For instance, in a model where the government always subsidises, the premium insurers bear the risks. This might be an approach that is seen as appropriate as the government aims to unlock the demand and help the insurers to address the affordability obstacle. There might be models where a market-based approach is not present but where insurers could be motivated to participate.

<sup>2</sup> IAIS and SIF, 2021-5

<sup>3</sup> Macro level schemes, however, are not the subject of this paper.

<sup>4</sup> Insurance contracts, which governments purchase for their public assets, are not within the scope of this paper.

<sup>5</sup> The author is thankful for contributions and comments provided by international specialists: Arup Chatterjee, Richard Carpenter, Hui Lin Chiew, Alexander Jaeger, Dante Portula, Regina Simões, Peter Wrede, and Astrid Zwick, as well as the extensive contributions of the three supervisory authorities in the Philippines, Pakistan and Vietnam.

<sup>6</sup> IAIS and SIF, 2018

coupled with the lack of insurance protection of individuals and businesses. This situation is a distress call that summons insurance supervisors to take action. Better sooner rather than later. Specifically, insurance supervisors are called upon to revisit their mandate, review their role, and widen their engagement. Amongst others, this could be done through policies that respond to the needs and demands of the microinsurance target market and stakeholders. They could also spearhead technological innovation that could ensure lasting financial protection.<sup>7</sup>

**Data on Asia reveals a huge protection gap.** It is widely known that Asia is a disaster-prone region. In 2020, of the estimated USD 202 billion losses globally (see Box 1), Asia has a USD 71 billion share, with floods being a major peril in that region.<sup>8</sup> Swiss Re Sigma data found that the 19 biggest disasters in the last decade in nine Asian countries caused losses of USD 140 billion. These disasters (including floods, earthquakes, and storms or typhoons) resulted in the deaths of 35,611 persons and rendered 200 million people homeless. Of the USD 140 billion losses suffered, only USD 20 billion or a mere 14.2% were insured across all sectors.<sup>9</sup> Notably, insurance is only one tool among other risk management approaches that people and business can apply to manage climate and disaster risk. The application of a combination of different measures is key.

**Low-income communities take the hardest hit when a disaster strikes.** The rising number and severity of climate-related events are leaving low-income communities extremely vulnerable to financial shocks and economic distress. They have low coping capacity and need more time to rebuild.<sup>10</sup> In terms of response, they tend to rely on traditional ways like seeking assistance from family, friends, or the local government, or by obtaining calamity loans from their cooperative or Micro Finance Institution (MFI). However, these assistance channels could also be constrained when a disaster suddenly strikes and possibly the people of the entire locality are affected all at the same time.

**Private-led CDRI products are non-existent among low-income households and businesses.** In emerging markets most people are employed in the agricultural sector and in the micro-, small- and medium-enterprise (MSME) sector. It can be observed that there is minimal insurance available in these sectors. Insurance coverages for private households, especially for those of lower income, are as well very limited. There may be some insurance for life, but mainly related to microfinance credits. In some markets, there have been a thriving microinsurance market, like in the Philippines, where over 30% of the population has some form of protection. However, even where there is microinsurance, protection is mainly for biometric risks (human life conditions), which are not as immediately affected by climate change and disasters as those covered by property insurance. In emerging markets generally, less than 5% of the people are insured, and less than 1% of post-disaster assistance is pre-arranged (ex-ante). The international community commonly provides ad hoc financing after disasters (ex-post), and not before.<sup>11</sup> A MEFIN study reports that 90% of the population

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<sup>7</sup> Oxfam, 2020 Oct

<sup>8</sup> Swiss Re, 2021

<sup>9</sup> MEFIN, MSC, GIZ, IGP, 2020

<sup>10</sup> Germanwatch, 2020

<sup>11</sup> Oliver Mahul, Milliman Webinar, 4.3.21

in Asia and the Pacific is insufficiently covered against disaster risk.<sup>12</sup> These figures are even higher for low-income households and MSMEs.

**Box 1 - Global losses due to climate change and impacts.<sup>10</sup>**

According to the Swiss Re Institute research, by 2050 the world stands to lose around 10% of the total economic value from climate change, if temperature increases along its current trajectory and if the Paris Agreement and the 2050 net-zero emissions targets are not met. The Climate Economics Index stress-tests show that climate risks will impact 48 countries, representing 90% of the world economy. The same Index shows that all countries will be affected, but some are more vulnerable than others.<sup>11</sup>

Across Asia, since 1980 just over 8% of all natural catastrophe losses have been covered by insurance. More specifically, the Swiss Re NatCat SERVICE databank reveals that this is equivalent to USD 135bn, compared to the total loss amount of USD 1.654 trillion.<sup>12</sup>

In 2020:

- Economic losses: USD 202 billion, of which USD 190 billion are due to natural catastrophes
- Insured losses: USD 89 billion; NatCat insured losses: USD 81 billion or 274 catastrophic events
- Global protection gap: USD 113 billion and global asset losses: USD 300 billion
- Impacts from disasters equivalent to a drop in consumption: USD 520 billion

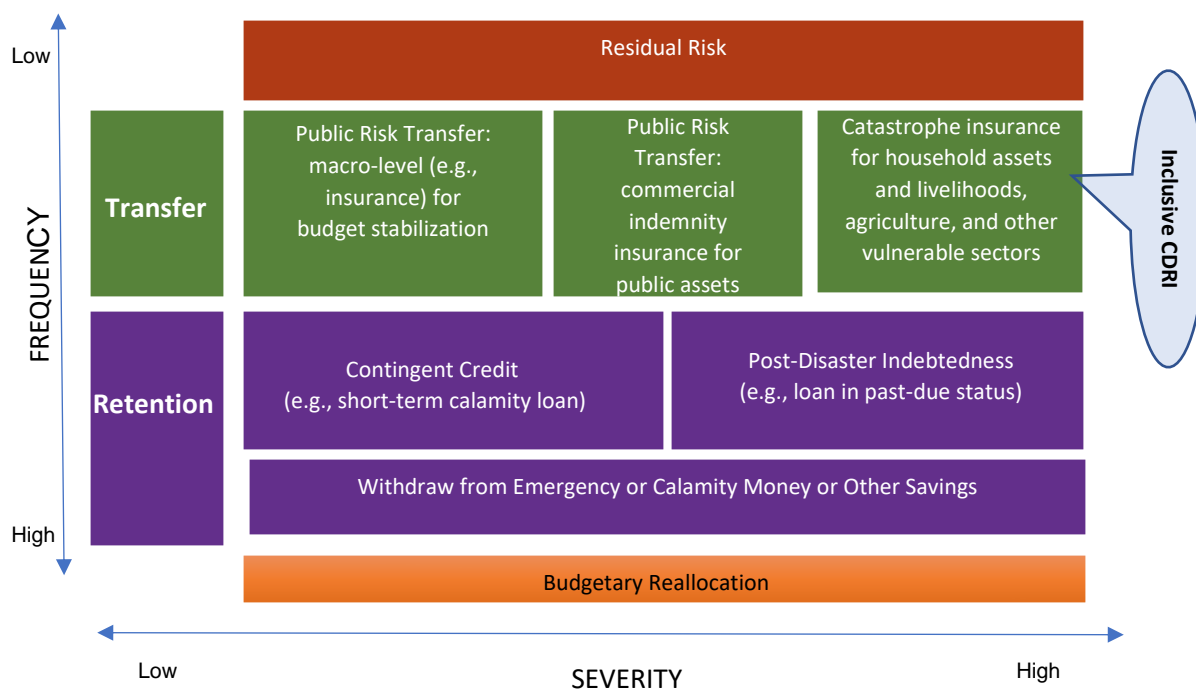
## 1.4 Risk management options of governments

**Governments can bear the risk or transfer the risk to the insurance market.** To deal with residual risk of climate and disasters, governments have the option to purchase a policy from the insurance market directly or from a sovereign risk pool<sup>13</sup>. Additionally, and beneficial for low-income groups, governments can support inclusive CDRI that citizens purchase themselves as a tool for private risk management.

Figure 1 shows how the international climate forum presents the options that governments have, and how development organisations usually present the various strategies and instruments, i.e., the type of retention and transfer instruments considered under the CDRI umbrella. Notably, this figure excludes the concept of life-insurance and biometric risks (such as risks related to human life conditions, e.g., death, birth, disability, age, and number of children), which some insurance supervisors, some insurance specialists, and the author of this study would consider as being included under CDRI.

<sup>12</sup> MEFIN, MSC, GIZ, IGP, 2020

<sup>13</sup> Like SEADRIF for Asian countries see <https://seadrif.org/>

Figure 1: Illustrative Strategy for Disaster Risk Financing (DRF) Options<sup>14</sup>

**Combinations of instruments and financing options work best.** Governments, households, and businesses are best protected by a combination of instruments that include both risk transfer and risk retention, along with other risk management options. People in lower income groups and MSMEs use savings in cash and in kind. Inclusive CDRI, on the other hand, is an instrument for risk transfer that they could, in principle access, assuming that these are available and affordable. However, many vulnerable small property owners, smallholder farmers, agribusinesses, MSMEs, and homeowners generally do not have the CDRI option, as there is little to no supply of this type of insurance in most emerging markets.

There are also the so-called market-based risk transfer solutions that provide cost-efficient financing for medium-level risks. Commercial indemnity insurance, reinsurance, and insurance-linked securities, such as catastrophe bonds are among the market-based risk transfer solutions.<sup>15</sup>

### 1.5 The potential market of inclusive Climate and Disaster Risk Insurance

**The potential market of inclusive CDRI is huge.** The CDRI target market could be segmented into three large groups: those in the agricultural sector, private households that own property, and formal and informal MSMEs (see Figure 2).<sup>16</sup>

<sup>14</sup> Adapted from (GFDRR, 2018) on the DRFI Strategy of St. Lucia, and (WBG, 2018)

<sup>15</sup> ADB, 2020

<sup>16</sup> Government as a target group and macro-level schemes are not within the scope of this paper.

Figure 2: Stakeholders in the focus of this publication (vulnerable and low-income segment)<sup>17</sup>

**While the market is large, these three market segments have characteristics that can make the provision of CDRI difficult:**

- Houses and buildings are weak as they are often made from lower quality materials, and hence can easily collapse.
- Home and business owners may not have property titles which are sometimes required for insurance.
- Property owners generally have fluctuating income streams that then require flexible premium payment schedules.
- Mobile and digitally supported payments are an important opportunity for premium payment and claims payout. However, these can be challenging when disasters disrupt connectivity.

**Non-life insurance products for climate and disaster risks are not yet broadly available.**

While life microinsurance coverages are becoming widespread in emerging markets, non-life coverages are hardly accessible for the wider population and they are almost unavailable for low-income segments; with the exception of China, India, and a few countries having large pilots. The InsuResilience Global Partnership has set a goal to help cover 150 million additional people against climate-related disaster risk through microinsurance.<sup>18</sup>

In principle, insurance coverage against natural hazards of disastrous impact can be included in property insurance such as homeowners' policies. These primarily cover fire, thefts, and other losses. In many markets however, such policies are not commonly available for low-income households and MSMEs. Insurance policies for losses specifically caused by disasters are even less common, except occasionally in some countries for agricultural risks.

In a 2020 mapping, GIZ identified that 265 million people are covered with agriculture index insurance. Of this number, 195 million people are in China, and up to 1 million clients are in Indonesia and in the One Acre Fund in Africa.<sup>19</sup>

<sup>17</sup> EU, 2018

<sup>18</sup> [About - InsuResilience](#)

<sup>19</sup> GIZ (Hazell, Jaeger, Hausberger), 2021-forth-coming



**There are those that did not have CDRI before but some of those in this group could afford CDRI.** CDRI insurance aims to cover broad segments of the population. CDRI target markets are often in locations that are prone to the effects of climate change, like the flood-prone areas in some Asian cities. The poorest, who usually do not even have a bank account nor are using a mobile money account, may struggle to avail of insurance. Some of them may have heard of insurance but do not understand it and or might have limited trust in formal insurance.

However, as has been the experience in microinsurance, there is a segment of people and business that could understand and afford insurance, if explained to them. They may already be knowledgeable about the use of mobile funds, they may be a member of a cooperative or another community group, or they may be in a contract-farming arrangement. While there is insurance uptake potential in these segments though, existing coverage is strikingly low. For example, in Indonesia, the non-bank supervisor OJK reports that only 2.96% of the 64 million Indonesia MSMEs have disaster risk insurance.<sup>20</sup> These MSMEs need coverages for their production, for their assets, and for their employees' biometric risks.

**Community resilience can be improved by encouraging people and MSMEs to pay for it.** Many stakeholders are hesitant whether CDRI by poorer people and MSMEs could ever be feasible and affordable. Some argue that the potential of microinsurance (life, credit life, hospitalization, agriculture microinsurance) has not been used in the context of non-life products and for disaster coverages. Others are sure this approach is needed, contributing to the diversity of instruments, and that the lower-income groups, the MSMEs and those in agriculture can and should pay for coverages. There are examples (see GIZ mapping 2020<sup>21</sup>) on these, however, the proof of its effectiveness is yet to be provided.

## 1.6 Challenges of market-based climate and disaster risk insurance

**There are challenges in market-based CDRI involving the insurance industry.** These challenges can be grouped into (i) demand side (target group); (ii) supply side; and (iii) in the enabling environment challenges (see Table 1).

Table 1: Challenges on the demand side, supply side, and in the enabling environment

<b>i) Demand-side: smallholders, low-income households, MSMEs</b>
<ul style="list-style-type: none"> <li>○ Lack of understanding of climate risks and awareness of the available strategies to manage those risks. For instance, people might be aware of the risks they are exposed to but might not understand the extent of their impact, how to manage them, what tools are available, or the level of efficiency of these tools depending on the severity and frequency of risks.</li> </ul>
<ul style="list-style-type: none"> <li>○ Awareness, understanding, and knowledge of insurance is weak and awareness on insurance products might be limited. If they know about insurance, it is often about credit life insurance. In the case of index insurance there is weak understanding of the index that could trigger a pay-out, and about associated challenges like basis risk.</li> </ul>
<ul style="list-style-type: none"> <li>○ Trust in insurance providers and in the concept of insurance could be low or even absent.</li> </ul>
<ul style="list-style-type: none"> <li>○ People lack positive experiences. As there are no such products, there is a lack of testimonials.</li> </ul>
<ul style="list-style-type: none"> <li>○ Lack of willingness and ability to pay regular premiums (monthly, or in advance for a season or year) is limited due to cash-flow fluctuations and reluctance to pay for an intangible service.</li> </ul>
<ul style="list-style-type: none"> <li>○ Difficult to reach in order to distribute and deliver insurance.</li> </ul>

<sup>20</sup> OJK (Otoritas Jasa Keuangan), 2020-12

<sup>21</sup> GIZ (Hazell, Jaeger, Hausberger), 2021-forth-coming

ii) Supply side: insurance companies and distribution channels
○ Engagement, skills, and capacity of insurers are constrained.
○ Motivation to work with, and understanding of, the target group is low.
○ Insurance products are not adapted to the situation and preferences of smallholder farmers, MSMEs and poorer homeowners.
○ There is a lack of innovative premium financing options suitable to these groups.
○ Lack of partnerships between insurers and trusted distribution channels that can reach out to the target group.
○ Limited risk data to identify triggers suitable for index insurance (in respect of timeliness, quantity, quality, accessibility and accuracy).
○ High upfront investments are needed to serve a market that is unknown and difficult to reach; recurrent cost of intermediation can be high, and high investment in technology that could lower the operating and marketing costs are required.
○ Insurers may see an increase in new business as the need for insurance becomes more apparent to the public. <sup>22</sup>
iii) Enabling environment: authorities, data, insurance and climate risk literacy, taxes
○ Government authorities like the disaster management (or civil protection) authority, the ministry of agriculture, ministry of finance, and the central bank may be acting in silos and not adequately involving the insurance supervisor because other government agencies do not see them as one of the key actors.
○ Weather, climate, and disaster data are not digitally available, and not easily or cost-effectively accessible. Location data (where people live, where their fields are) and target group data is not accessible. Government databases are not integrated (e.g., ID data, social protection and tax numbers) and often not accessible to the insurance industry or other CDRI stakeholders.
○ Financial education measures like campaigns do not consider climate risk and CDRI (and often focus on banking services to the detriment of insurance literacy).
○ Insurance regulation may not allow for alternative distribution channels, for index insurance, or not accommodate community-based solutions like mutuals. Hence, some providers may be close to the target group and trusted by them, but they have no license to formally provide CDRI.
○ Consumer protection is a topic that will become much more relevant, once more people are covered, and regulatory challenges are still not explored.
○ Taxation of non-life insurance can make insurance expensive.
○ Financial education strategies may leave climate risk and CDRI out.

**Some thoughts may help to make CDRI feasible and inclusive.** In principle, CDRI for smallholder farmers (including herders and fisherfolk), MSMEs, and low-income home owners can be a tool to protect their livelihood, business, and assets. However, to make it valuable and sustainable, certain considerations need to be deliberated, like the following:

- Insurance companies and reinsurers need information, collaboration, support and incentives to appreciate the **business opportunity** in CDRI.
- CDRI has to provide **sufficient and appropriate coverage** to be meaningful, which may mean that coverage is a small but valuable start to avoid the product being too expensive and helping to make it **viable**.
- CDRI **cannot aim to cover events that are too frequent** or provide too high payments even in very severe events because that will threaten affordability or sustainability.
- CDRI should be **combined with other risk reduction measures** associated to climate change, to reduce cost, and to ensure resilience and insurability in the long term.
- CDRI can be **bundled** with other financial and non-financial products and services, or programs, as otherwise, distribution cost can easily outweigh risk cost.

<sup>22</sup> Milliman White Paper South Africa, 2021-4

- Its provision should rely on **technology** to reduce the cost for client identification, enrolment, distribution, payments, and data for the various steps in the insurance process.
- CDRI needs to be provided to a **large number** of insured risks or people.
- For market development, **smart subsidies** are required such as funding for awareness campaigns, or for weather stations; or for premium financing or tax breaks.<sup>23</sup>
- Providers need to take a **long-term approach to CDRI**, weighing the possible increases of frequency and severity of natural events with the effects of risk reduction measures, and considering the long-term relationship with new customers who will be helped to prosper and become increasingly valuable insurance clients.
- **Affordability** is generally a key issue for the low-income sector and the new-to-insurance segments. Climate change puts pressure on insurance premiums<sup>24</sup> and sustainable insurance comes with its cost, which the low-income sector often considers expensive. Non-life insurance policies typically run for a one-year horizon, and while insurance companies might be able to adapt prices to new climate-induced circumstances on a relatively short notice, this would lead to additional pressure on premiums and can make insurance even less affordable for lower-income groups.

## 2.0 Making Inclusive CDRI Work

### 2.1 Approaches in inclusive CDRI

**Use risk finance instruments that integrate insurance market development.**<sup>25</sup> The InsuResilience Global Partnership recommends an integrated approach that includes the development of national finance and insurance markets, with contingency funds as well as sovereign risk finance instruments like risk pools and credit lines, and complemented by international support. Such a combination is recognised to help effectively address residual risks and improve the cost-effectiveness of insurance instruments. Importantly, it shifts the financing of disaster risk from an ex-post (emergency credit and donor assistance) to an ex-ante approach.

**The role of supervisory authorities to deal with climate change adaptation is recognized.** Insurance supervisors can help to develop the supply of inclusive insurance. They can also help to increase the awareness of people and businesses to transfer their disaster risks to insurance markets. Global policy frameworks like the Sustainable Development Goals (SDGs) call national governments to contribute to financial market development. The role of financial regulators in climate change adaptation is well recognized by global agendas and in national commitments (see Box 2). Among the different financial regulators, insurance supervisors<sup>26</sup> are also called to engage in helping with climate change adaptation measures by promoting inclusive CDRI.

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<sup>23</sup> In Fiji, VAT for climate and disaster risk microinsurance products was abolished, see [No VAT for Climate and Disaster Risk Micro-insurance products – FBC News \(17.7.21\)](#)

<sup>24</sup> NGFS, 2019

<sup>25</sup> InsuResilience, 2021

<sup>26</sup> The term “insurance supervisor” is used for both, insurance regulators and supervisors, as by the IAIS.

**Box 2 - Global frameworks call for climate action to finance climate change adaptation, inclusiveness, and the engagement of the insurance industry**

Global policy frameworks like the Paris Declaration and the Sendai Framework<sup>27</sup> and the UN SDGs, call for joint actions to engage in climate change adaptation and risk transfer. These actions include better implementation and supervisory engagement:

- The call for **implementation upgrade** because three quarters of countries have adaptation plans but implementation falls far short of schedule and what is needed (United Nations Environment Program, UNEP)<sup>28</sup>
- The need to **Integrate Risk Finance into National Resilience and Adaptation Efforts** (NDC Partnership and InsuResilience Global Partnership, IGP) in a multi- and cross-sectoral approach<sup>29</sup>
- The recognition that “financial regulators are commonly expected to contribute to disaster risk reduction through inclusive disaster risk financing” Alliance for Financial Inclusion (AFI)<sup>30</sup>
- The growing recognition of the **multi-faceted role that the insurance industry can play** to enhance the resilience of individuals, businesses, communities and nations to climate change and other natural catastrophes<sup>31</sup> as the Insurance Development Forum (IDF) states. Among others, the IDF has an Inclusive Insurance Working Group (IIWG) stating that **inclusive insurance** is critical to financial inclusion, community stability and overall sustainable development.<sup>32</sup>

**Climate-related risks have long been a concern for insurance supervisors in respect of insurers’ solvency.** The escalating frequency and severity of extreme climate and weather-related events, from wildfires to record heat waves and floods, put the regulatory spotlight on the impact of climate-related risks on the financial resilience and sustainability of insurers, and the banking sector.<sup>33</sup> Moreover, insurance supervisors and the wider financial sectors (including mortgage lenders) are also becoming sensitive to the possibility that spiraling insurance premiums and reduced or even total withdrawal of coverage in certain areas could threaten availability and affordability of insurance for consumers, investors, and lenders who may struggle with considerable amounts of stranded assets.<sup>34</sup>

**Financial inclusion plays a vital role in building resilience to the impacts of disasters.**

Access to finance in its more diverse forms can help in multiple ways the vulnerable groups before and after hazard events. Alongside central banks and other financial supervisors, insurance supervisors recognize their role in improving the finance and protection needs of vulnerable groups. These may be addressed with a combination of risk management and risk transfer, as well as other financial products and services. People generally use a combination of savings (in-kind or financial), loans (formal or informal), insurance (group or individual), and sometimes remittances, to manage disaster risks and cope with the financial impacts. The role insurance can play for new customer segments and for protecting them against climate and disaster risk in the sense of **inclusiveness** and at the same time, market-led and

<sup>27</sup> OECD, 2019

<sup>28</sup> <https://www.unep.org/news-and-stories/press-release/step-climate-change-adaptation-or-face-serious-human-and-economic>

<sup>29</sup> IGP and NDC Partnership

<sup>30</sup> AFI, 2021

<sup>31</sup> IDF (Law, Regulation and Resilience Policies Working Group), 2021

<sup>32</sup> <https://www.insdevforum.org/working-groups/inclusive-insurance/>

<sup>33</sup> Deloitte Center for Financial Services, 2019

<sup>34</sup> Deloitte Center for Financial Services, 2019

privately provided insurance, still has the potential to be explored by research, authorities, and practitioners.

**There are lessons on how microinsurance became an integral part of financial inclusion.**

Microinsurance has shown that there are opportunities for including low-income segments and MSMEs into formal finance and insurance. These opportunities include the bundling of insurance with other financial services, or by using mobile money services to leverage insurance provision. Credit life microinsurance has also made its way in the past two decades. In terms of non-financial services, agriculture risk reduction measures like drought-resistant seeds, building dams or hail nets are important approaches, and could be coupled with risk transfer through insurance.

## 2.2 Perspectives in CDRI

**Climate change makes insurers more risk averse and hence not favoring inclusive CDRI.**

The insurance supervisors' core objective in view of climate change refers to the consideration of climate-related risks as a source of financial risk, which may translate into prudential risk.<sup>35</sup> The IAIS also refers to other broad goals like affordability, consumer protection, and market conduct.<sup>36</sup>

Recently, some insurance supervisors have taken steps to improve their regulatory framework and sector engagement by including new consumer segments, thereby making CDRI more inclusive. This is happening either within a Disaster Risk Financing (DRF) strategy or on their own initiative.

*“Supervisors can act as a bridge and communication catalyst between policymakers, the insurance industry and consumers”  
(IAIS-SIF 2021)*

Some insurers though may become risk-averse and cautious in developing insurance products for new segments that are exposed to climate risk. The IAIS states that “to reduce its exposure to climate-related risks, an insurer may take a number of actions, including: to stop offering insurance to a certain group of policyholders, significantly increase premiums, lower policy limits, exclude cover for specific perils, and/or promote risk reduction measures by policyholders”.<sup>37</sup>

**Supervisors can make choices which help make CDRI more inclusive.** Some global platforms call insurance supervisors to support and leverage market-based solutions, outlining the key role they should play in climate change adaptation.<sup>38</sup> Similar to their experience in microinsurance in developing risk assessments, country strategies, regulatory frameworks and market incentives, insurance supervisors can also support inclusive CDRI provision in a proactive way. Global networks confirm the role supervisors should and can have (see Box 3).

<sup>35</sup> Investment risk, liquidity risk, operational risks, reputational risk, strategic risk, and underwriting risks (from IAIS-SIF Issues Paper 2018, and Network for Greening in the Financial System, NGFS, 2020).

<sup>36</sup> IAIS and SIF, 2018

<sup>37</sup> IAIS and SIF, 2021-5

<sup>38</sup> IIF, 2021-1

**Box 3 – The role of insurance regulators and supervisors (the Perspective of the IDF)<sup>39</sup>**

“Insurance regulators and supervisors<sup>40</sup> are of utmost importance both ex-ante (in terms of establishing the right conditions for insurers to provide coverage through the right channels), as well as ex-post (through their supervisory work and their ability to help coordinate the industry response). Regulators and insurance supervisors also have an important role to play in educating their governmental counterparts and the consumers.”

## 2.3 Defining CDRI from a supervisory perspective

**The commonly used definition of CDRI is a conceptual one from the sustainable development agenda.** CDRI has been officially defined to be a concept or even, “a political tool” (United Nations University). Box 4 presents the UN definition and that of two global platforms, InsuResilience Global Partnership and Access to Insurance Initiative (A2ii).

**Box 4 - The conceptual definitions of climate and disaster risk insurance<sup>41</sup>**

The **United Nations University** Institute for Environment and Human Security (UNU.edu) states that “Climate risk insurance can help protect individuals, small businesses or entire countries from permanent damage caused by the impact of extreme weather events. In the short-term it can reduce the effect of natural disasters. In the longer term it can contribute to preventive disaster risk reduction. It is a **political tool** that allows countries which are affected by climate change to become more independent. Rather than waiting for months, or even longer for international aid to arrive, they are able to manage disaster risk themselves.”<sup>42</sup>

The **InsuResilience Global Partnership** defines CDRI as “a risk transfer solution that aims to protect individuals, businesses and countries against the negative impacts of extreme weather events that are becoming more frequent and more severe due to climate change.”<sup>43</sup>

The **Access to Insurance Initiative** (A2ii) states that “climate risk insurance (CRI) is an insurance solution at the macro, meso, and micro-level that aims to provide coverage against climate risks. These risks could be natural disasters that affect vulnerable households, entrepreneurs, smallholder farmers, whether amplified or not by climate change.”<sup>44</sup>

**Classifications of CDRI according to the international development community.**<sup>45</sup> The following types of non-life products generally fall under the conceptual definition of CDRI:

- Public asset insurance
- Property insurance for homeowners that covers natural hazards
- Non-life microinsurance for disaster risks: property insurance, or business interruption policies (which may or may not be index based)
- Agricultural insurance (index- and indemnity-based, see Box 5)

<sup>39</sup> IDF (Law, Regulation and Resilience Policies Working Group), 2021

<sup>40</sup> In the following, we use the term “insurance supervisor” unanimously

<sup>41</sup> Note that the term CDRI and CRI are used synonymously.

<sup>42</sup> <https://ehs.unu.edu/news/news/7-things-you-need-to-know-about-climate-risk-insurance-2.html>

<sup>43</sup> [www.insuresilience.org](http://www.insuresilience.org)

<sup>44</sup> A2ii (A. Camargo, 2019)

<sup>45</sup> GFDRR, WBG, JAICA, UKAid, 2020; (WBG, 2018)

**Box 5 – Agricultural insurance<sup>46</sup>**

For the purpose of this paper, agricultural insurance can be seen as a subset of CDRI and is used to protect against crop, livestock, and forestry or fishery losses due to different reasons. It can be indemnity-based or index-based.

**Indemnity products include:**

- Named peril crop insurance (NPCI), as single peril or combined peril (e.g., hail and frost)
- Multi-peril crop insurance (MPCI) (yield guarantee)
- Livestock insurance (accident and mortality)
- Forestry insurance
- Aquaculture insurance

**Index-based products include:**

- Weather index insurance (WII) using ground-based data or remotely-sensed measures of weather variables
- Area yield index insurance (AYII) using ground-based data
- Satellite-based insurance, using remote-sensing and sometimes a combination of ground information to either monitor cropping conditions, or monitor pasture conditions (for livestock)

**Life risks are generally not formally included in these definitions.** Notably, biometric risks have so far not been included in the conceptual definitions of CDRI. In recent years, record heat waves in various parts of the world have killed many people, a trend expected to continue, highlighting the impact of a changing climate on people's health and productivity. Flooding also kills people. And health risks are also widespread in the event of flooding.

**Which risks should be included in the concept of inclusive CDRI?**

- The type of hazards generally covered under CDRI protection includes any type of (not-man-made) disasters such as storms, typhoons, flooding and excess rain, hailstorm and lightning, drought, heat waves and wildfires.<sup>47</sup>
- There recently arose questions like could pandemics and epidemics be considered under the broad heading of CDRI. Or, could a dam failure be considered a catastrophic risk?
- Insurance for personal and biometric risks<sup>48</sup> is considered **inclusive CDRI**, however, this is not very explicit in some international discussions. A2ii, IGP and ADB recognize this, as it is one of the inclusive insurance areas, and is also considered important in the wake of disaster.
- Generally used definitions of CDRI do not cover personal risks or are not very explicit. Notably, ADB emphasizes that financial inclusion (credit, savings, remittances and insurance) is important and disaster insurance is considered a complement to a package of resilience building policies consisting of financial inclusion, access to health and non-health insurance, and stronger social protection shields.<sup>49</sup>

<sup>46</sup> IFAD, 2017 and WBG, 2019

<sup>47</sup> Adapted from <https://home.kpmg/xx/en/home/insights/2019/03/combating-climate-risks-the-future-of-insurance-fs.html>

<sup>48</sup> Biometric risk covers all risks related to human life conditions, such as death, birth, disability, age, and number of children. <https://www.collinsdictionary.com/de/worterbuch/englisch/biometric-risk>

<sup>49</sup> ADB, 2020

**Insurance supervisors may have their own working definition of CDRI.** When asking insurance supervisors, they generally consider non-life lines of business and agricultural insurance as classes of insurance under the broader CDRI category. **From a supervisory perspective, there is no specific definition of CDRI nor is there a legal definition in any law, as far as the author is aware.** See the debate in chapter 3.3 and in Annex 2.

**The term “inclusive CDRI” is conceptually defined in various ways.** Inclusive CDRI refers to a subset of inclusive insurance (primarily non-life coverages) that are tailored to the unserved and underserved, in alignment with the IAIS definition of inclusive insurance (see Box 6). However, life-coverages that are disaster-related and that cover biometric risks like health, life, and accidents are also important to protect people and even businesses (e.g., in the case of a disaster or slow-onset emergency like heatwaves) and are hence included into the term “inclusive CDRI”.

**Box 6 - How has Inclusive Insurance been defined? And what is “inclusive CDRI”?**

Inclusive insurance is a broad term, reflecting a more general strategic approach to reaching the unserved and underserved market. The International Association of Insurance Supervisors (IAIS) states: *“inclusive insurance is ... in the broad sense of the word, denoting all insurance products aimed at the excluded or underserved market, rather than just those aimed at the poor or a narrow conception of the low-income market. In developing countries, the majority of the population is often classified as underserved or excluded. Thus, inclusive insurance is a mainstream topic of relevance to the development of the retail insurance market as a whole.”*<sup>50</sup>

The IAIS definition is anchored on the target group which can be inferred to include inclusive CDRI, i.e., CDRI accessed by the excluded and underserved groups.

## 3.0 Obstacles for supervisors when supporting inclusive CDRI

### 3.1 Policy and sector obstacles

**There is often a lack of a clear mandate and role of the insurance supervisor relating to CDRI.** The mandate of insurance supervisors is usually defined in the insurance law and typically this does not include disaster risk financing (DRF). Many supervisors, however do have a broader mandate in inclusive insurance.<sup>51</sup> Such a mandate gives them the authority to support inclusive CDRI. Nevertheless, insurance supervisors may still be excluded from the policy debate of DRF, and due to a lack of mandate and a lack of finances, many supervisors are not allowed nor equipped to engage in DRF.

**National DRF strategies may not take into account the role of insurance supervisors.**

Insurance is not always recognized as a supportive tool, and supervisors are not sufficiently involved in the national policy debate on DRF. Hence, the integration of CDRI as a risk transfer tool in diverse forms may be weak or even lacking.

**DRF covers diverse policy areas and insurance is one tool.**

The policy agenda of CDRI include climate and disaster risk management, financial market development and agriculture (see Figure 3).<sup>52</sup> In principle, all these can rely on insurance

<sup>50</sup> IAIS, 2015

<sup>51</sup> WBG (M. Hafemann), 2020) indicating that out of 31 insurance supervisors, 17 have a market development mandate

<sup>52</sup> WBG, 2018



solutions for people and businesses (and also for the government) to secure the overarching goal of disaster risk financing, relying on public or private risk transfer mechanisms.

Figure 3: The policy areas of Disaster Risk Financing



**National strategies may neglect the potential of market-driven insurance provision.**

Supervisors may not be involved in dialogues, strategy development, and action planning in the area of DRF. The lack of a mandate of insurance supervisors for inclusive insurance and market development may hinder a proactive approach to support CDRI provision, including creating a market and encouraging or incentivizing retail insurance providers. The involved ministries may act in silos, and overlook or even not consider inclusive CDRI at all. The supervisory authority may lack flexible funding when seeking to promote CDRI (e.g., for its own capacity building), creating sector working groups, or for consumer education measure. Not all supervisors will have a clear mandate to support CDRI provision, and even fewer may have funding allocated for the task to develop strategies and programmes to promote inclusive CDRI.

**Coordination and collaboration among the different parties in the government and including the private sector is often still weak.** At the international level, there are coordination bodies reporting to the Paris Agreement and COP structures, and insurance supervisors are involved via bodies like the IAIS and the A2ii. At the national levels, the coordination bodies of DRF are the National Adaptation Committees, which are in charge of National Adaptation Plans (NAPs) and National Adaptation Programs of Actions (NAPA).<sup>53</sup> Insurance supervisors' role in the NAP-processes are still evolving, as supervisors frequently are not involved into NAPCC processes, like in India.<sup>54</sup>

There is a call to involve the supervisors into the process of developing national strategies like NAPAs or DRF. There is also a call to involve the private sector, for example to articulate the business case for adaptation measures and to include private players like insurance companies in the development of the NAP financing strategy.<sup>55</sup>

<sup>53</sup> UNFCCC, 2019 "NAPs are the primary United Nations Climate Change Secretariat (UNFCCC) instrument for adaptation, helping to plan for sustainable development while adjusting to climate impacts. A robust NAP can help reduce the risks facing vulnerable states, increase resilience, and strengthen adaptive capacity".

<sup>54</sup> GIZ, 2019

<sup>55</sup> GIZ and NAP Global Network, 2019

It is beneficial to fostering CDRI when public and private stakeholders, and insurance supervisors are aligned and sitting at the same table to discuss the national vision on climate adaptation. Such discussion could include the role insurance can play, the implementation challenges, and the opportunities. Some countries have established a Technical Working Group (TWG) for CDRI, for example in agricultural insurance (e.g., Uganda, Vietnam) where stakeholders from different sectors are coordinating. In the Philippines, a TWG for CDRI was established led by the Philippine Insurance Commission (IC). In the Philippines, there is also the CDRI National Task Force (NTF), which is chaired by the Department of Finance (DOF) through the National Treasurer. The Philippine IC also coordinates with the private sector through the Philippine Insurance and Reinsurance Association (PIRA). These two are among the 14 institutional members of the CDRI NTF. The NTF provides strategic directions about inclusive CDRI in the Philippines. There is also a NTF in Vietnam. Stakeholders in these markets have felt a need for greater national coordination, and here the insurance supervisors play a key role.

**Data related needed to design insurance products remain scarce.** There is broad recognition that quality data regarding weather, climate, water levels, crop growth and yield, livestock and data on the target group are needed to develop responsive insurance products and business models. There is, however, a huge funding gap for these datasets, the technologies required to collect them, and the specialists who translate them into insurance products.

In the European Commission, there is a call for collaboration between public and private sectors, where governments and the insurance sector exchange data, set common objectives and assign responsibilities, which can lead to cost-effectiveness of insurance in the private property sector.<sup>56</sup> This call could also be said for emerging market countries.

### 3.2 Regulatory obstacles

Table 2 shows some areas of the regulatory debate topics in CDRI.

Table 2: Overview of regulatory topics concerning CDRI (examples)

Regulatory topics	Regulatory sub-topics	Regulatory topics	Regulatory sub-topics
1. Insurance	Products and definitions Intermediation and outsourcing InsurTech (technologies, licenses)	4. Commerce	Start-up licenses Remote communication E-commerce
2. Finance	Payment systems / mobile money/ digital payments FinTech Bancassurance	5. Fiscal	Taxation
3. Telecommunication	Remote sales (mobile insurance) Mobile banking Sharing of customer data		

**The research on regulatory obstacles in CDRI is only starting.** There are many aspects where CDRI face regulatory obstacles.<sup>57</sup> Among them there is the regulatory treatment of index insurance<sup>58</sup>, the restrictions of alternative distribution channels, and the use of

<sup>56</sup> EU, 2018

<sup>57</sup> A2ii (Wiedmaier-Pfister, Ncube), 2018; A2ii (Wiedmaier-Pfister, Chiew, Grant, 2016

<sup>58</sup> In jurisdictions where the definition of an insurance policy by law is strongly linked to the concept of indemnification of actual loss or damage, index-based risk transfer contracts are not recognized as insurance. (A2ii (R. Simões), 2021)

technology in the insurance value chain.<sup>59</sup> The three Asian insurance supervisory authorities contributing to this study reported the following regulatory obstacles (see Table 3):

Table 3: Obstacles Asian supervisors are reporting related to regulatory frameworks (insurance and other topics)<sup>60</sup>

Topic in insurance regulation	Obstacles and country example
Index insurance is not recognized	The insurance law does not explicitly recognise index insurance (Vietnam, the Philippines and Pakistan) In Pakistan, insurance law does not prohibit transacting index insurance, therefore, index insurance is being conducted in various parts of the country, for example in the Punjab Area yield index insurance is implemented (AYII).
Coinsurance pools are not recognized	Insurance law does not provide for the concept of a risk pool (Vietnam)
Insurance licenses for mutuals or microinsurance companies as trusted and close provider	Mutual provider licenses, e.g., for the groups that involve millions of members, combined with re-insurance by insurance companies, could provide an important avenue to get insurance to many people; however, such structures are not allowed in some countries (Vietnam) Microinsurance companies (Pakistan)
Taxation and stamp duties	Philippines
Fund not defined in law	Indonesia (see Box 7)

**Studies of the full range of regulatory obstacles of CDRI work is still to be done.** In other areas of inclusive insurance, like microinsurance, many country diagnostics have been implemented in the past decades by the A2ii, the World Bank and others, in collaboration with or driven by insurance supervisors. These studies have often revealed the challenges related to market-based microinsurance, including in the regulatory and supervisory areas. Even, templates for country diagnostics were developed.<sup>61</sup>

There seems to be no such diagnostics yet in CDRI, nor for its sub-category of agricultural insurance regulation and supervision. Recently, the ADB has developed a tool for diagnostics of the enabling environment of DRF.<sup>62</sup>

The example of Indonesia shows that such diagnostic plans are called for (see Box 7).

**Box 7 - The Indonesian regulatory analysis of 2020 and its proposals<sup>63</sup>**

Two Indonesian laws, N° 40/2014 on Insurance and N° 24/2007 on Disaster Management, regulate CDRI, and the insurance law allows the government to establish an insurance pool or consortium. However, both regulations have not clearly stated the existence of an insurance fund as an alternative for disaster management, as envisaged by the Disaster Risk Financing and Insurance Strategy of 2020.

The addition of the insurance fund clause is expected to have implications in reducing the utilization of the state budget for natural disaster management under the Indonesian Fiscal Policy Agency (BKF). A Bill proposal is underway to regulate Natural Disaster Insurance, and the Government involvement.

**A regulatory diagnostic of agricultural insurance is planned in Indonesia.** The insurance supervisory department in the OJK will receive support to assess the regulatory challenges for implementing CDRI and to strengthen its capacity regarding index insurance. There is a plan to conduct a regulatory assessment applicable to agricultural insurance as part of a Technical Assistance project supported by the Japanese Government.<sup>64</sup>

<sup>59</sup> Adapted from (A2ii, 2020) and from (A2ii (R. Simões), 2021) with questionnaires

<sup>60</sup> Based on contributions from IC Philippines, ISA Vietnam, and SECP Pakistan

<sup>61</sup> <https://a2ii.org/en/knowledge-center/toolkit-1-country-diagnostic-studies-analytical-framework-and-methodology>

<sup>62</sup> ADB, 2020

<sup>63</sup> OJK (Otoritas Jasa Keuangan), 2020-12

<sup>64</sup> <https://www.jica.go.jp/project/english/indonesia/024/outline/index.html>

**Apart from obstacles in insurance per se, there are aspects of marketing instruments affecting insurance, like in mobile banking, or in forex and reinsurance rules, as the following examples show:**

- **Mobile payment rules** are very important for inclusive CDRI, either for premium payments or claims payouts, as this payment mode can make insurance feasible, accessible, and more affordable.
- **Forex rules limiting the use of cross border reinsurance.** The Ethiopian government has restricted the use of foreign exchange to pay foreign reinsurers. This obstacle to international reinsurance is a barrier in agricultural insurance or any other type of insurance where the number and the number of claims originating from one event requires international diversification.<sup>65</sup>

**There is limited evidence so far on how CDRI schemes strengthen the resilience of the inclusive insurance target market.** Regarding agricultural insurance, stakeholders in many markets have initiated and also closed agricultural insurance pilots (indemnity- or index-based). There is however little information on these pilots and how they performed. It is not always clear if and how the insurance supervisor was involved. It may even be the case that in some markets, one pilot after the other is implemented, all of them donor financed.

On the other hand, there are examples where the insurance regulator has been involved from the outset, like with the Agricultural Insurance Corporation (AIC) running the Ugandan Agricultural Insurance scheme. This is a Public Private Partnership (PPP) arrangement with involvement of the Insurance Regulatory Authority (IRA) of Uganda.<sup>66</sup> Another example is the Micro-Agri Insurance Framework of the Philippines in which the Insurance Commission has been involved and as of 2021, one insurance company has been offering policies.<sup>67</sup> There is some clarity on the value of some agricultural and index insurance pilots; and recognition that the insurance supervisor needs to be involved.

On the topics of client value that makes pilots work, more research is needed as well as the dissemination of the lessons learnt (e.g., how affordability can be improved or what exactly makes a legal framework enabling for agricultural insurance). There are many studies about what works in agricultural insurance, and what the challenges are; pointing out that farmer education, bundling of products, and technologies and data solutions are essential.<sup>68</sup> However, what exactly the supervisor can do could still be worked out in more detail. For example, how to set-up a test-and-learn approach or a regulatory sandbox like in the Philippines or in South Africa, or how to be involved in a national process like in Uganda with the consortium and the UAIS.

**Pilots should be encouraged but supervised in an adequate form.** The IAIS has provided guidance on pilots (see Box 8). It recommends that pilot projects should be licensed, at least

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<sup>65</sup> WBG- DRF Training on 15.7.21, contribution of the WFP and Ethiopian Development Research Institute (Mihretu), 2015-5

<sup>66</sup> WBG, 2019

<sup>67</sup> Circular Letter 2015-53, October 2015 (and information of the IC Philippines) (MEFIN - GIZ, A2ii, IAIS, Toronto Centre (Bulos and Wiedmaier-Pfister), 2019)

<sup>68</sup> WBG, 2019 and GIZ (Hazell, Jaeger, Hausberger), 2021-forth-coming

at the level of registration. Another way is through a regulatory sandbox approach that provides legal certainty for the parties, while allowing the involvement of the supervisor and regular monitoring.

**Box 8 – Guidance on pilots of the IAIS Issues Paper on Index Insurances<sup>69</sup>**

“Supervisors are encouraged to facilitate innovation when seeking to expand the level of inclusiveness in the insurance market so as to avoid regulatory and supervisory approaches being a barrier to financial inclusion. Some index-based products may need to remain in a pilot phase for longer because of the nature of the risk or the complexity of the product. The timetable for agricultural product pilots that may have to run through several phases may be dictated by cropping seasons. Natural catastrophic exposures may need to be refined against a backdrop of limited data and seasonal risk factors. Proportionate solutions are likely to be needed.”

**The potential to learn from microinsurance regulation.** Some aspects of customer protection and client value, which were extensively researched in microinsurance over many years, have been regulated in numerous locations. The status of regulating microinsurance as a separate class – and other supportive regulation e.g., on technology regulation or distribution regulation – is documented in the A2ii World Map.<sup>70</sup>

Many aspects may also apply for inclusive CDRI. Among these are

- Effective disclosure for the client (see Annex 2)
- Free-look or cooling-off periods (see Annex 2)
- The challenge of affordability or grace periods, staggered payments, or pre-financing of premium payments
- Adequate policy contracts (e.g., quality standards)<sup>71</sup>
- Sales via platforms<sup>72</sup>

**Documented evidence of regulatory hurdles of CDRI is limited.** Many of the regulatory challenges and the existing rules on inclusive insurance are also applicable to CDRI. There are some studies looking into regulatory challenges of index insurance,<sup>73</sup> or agricultural insurance deployments. However, one can assume that there are still many other specific aspects to CDRI, and to date, there is little documented evidence what these particularities and challenges are.

### 3.3 Supervisory challenges

**There may be capacity gaps of insurance supervisors regarding agricultural insurance and index insurance generally.** Agricultural insurance is pilot-driven in many countries. However, not always are these pilots supervised by the insurance supervisor in the form of an approved and monitored exemption, test-and learn model, innovation lab, or thematic sandbox – which can be the case when index insurance market tests are research-driven.

<sup>69</sup> IAIS, 2019

<sup>70</sup> <https://www.a2ii.org/en/map>

<sup>71</sup> The Global Action Network (GAN) has supported the development of minimum quality standards (MQS) for index-insurance, considering the pricing and contract value. (USAID et al (ILO, IIF, IIII, GAN, UC Davis), 2020)

<sup>72</sup> A2ii (A. Camargo), 2019

<sup>73</sup> A2ii (R. Simões), 2021 and A2ii (R. Carpenter), 2018

The involvement of the supervisor with pilots under one of these models would allow the supervisor to let the industry innovate, while watching what is happening on the ground and being able to develop appropriate understanding and adequate regulation; or even to stop the pilot after a certain period.

Insurance supervisors may not yet know what the challenges of these insurances are, and how their internal capacity constraints may look like in detail. The challenges that supervisors may be facing related to agricultural insurance and CDRI can be related to their internal capacities regarding the following topics:

- approving products (striking a balance between sustainable and affordable tariff)
- setting valuable indices (which could require a long process, for example considering the various crops as to their need for too much or too little water, or considering other factors like soil)
- ensuring that customers and everyone along the value chain understands basis risks in index-insurance, which can be adverse or hard to anticipate;
- making sure that subsidies reach the intended target group and do not exclude some segments or primarily only benefit large commercial farmers;
- business models that work for rural and remote regions and new target groups (e.g., when aggregators like cooperatives are not supervised, service level agreements are needed between business partners that make roles clear).

The topic of CDRI is often new for supervisors and learning takes place alongside **implementation**. There many new topics that supervisors are faced with, like those related to the variety of stakeholders and technologies, the variety of crops, coverages for livestock and aquaculture insurance, the diverse segments of the target groups (that is, from smallholders or fisherfolk to agri-business). All these factors make agriculture insurance a complex new area for many insurance supervisors.

Box 9 presents insights from markets where a PPP has been implemented in agricultural insurance, with some important lessons of this pilot.

**Box 9 – The challenge of agricultural insurance for the insurance supervisor: Example of Uganda<sup>74</sup>**

**The example of the Ugandan Agricultural Insurance Scheme (UAIS) launched as a 5-year pilot in 2016.** The UAIS has been offering micro-level individual farmer crop, livestock and aquaculture insurance products and programs. This PPP and co-insurance pool of 11 (and in 2021, 12) local insurance companies have been supported by the Government in several forms including:

- The provision of agricultural insurance premium subsidies to make crop and livestock and aquaculture insurance more affordable to and adopted by commercial and smallholder farmers;
- Some financial assistance for farmer financial literacy and insurance awareness creation programs
- Regulatory oversight provided by the Insurance Regulatory Authority (IRA).

<sup>74</sup> AIC, 2020; IRA, 2017-5 and WBG, 2019

**There are several products being offered, among them**

- **Multiple-Peril Crop Insurance (MPCI)** as traditional indemnity-based product that offers individual farmers loss-of-crop yield protection on their own farms and fields against a wide range of naturally occurring, climatic and biological perils. MPCI acts as a yield shortfall guarantee policy. There is also a satellite Weather Index Insurance (WII) product which uses a Relative Evapotranspiration Index (REI) to provide rainfall deficit (drought) and excess rainfall cover for small-scale maize and bean producers in Uganda. There is also an Area Yield Index Insurance (AYII) of which one leading commercial bank sold 40,000 policies within the first 18 months.
- There is UAIS **livestock insurance** for cattle, pigs, and poultry against death of the individual animal (or flock of birds) due to named perils. The cover is a standard indemnity-based policy that offers accident and mortality protection against named perils including diseases, which is widely sold to commercial livestock producers in Europe and North America and parts of Asia.
- The UAIS **aquaculture policy** is also a standard indemnity-based policy that insures both offshore and onshore fish farms, fingerling grow-out operations, and hatcheries against loss of the fish stock and also loss or damage to the installations, cages, ponds, and equipment. This cover is intended solely for larger commercial fish farm enterprises in Uganda.

The following are some of the **challenges identified after three years of implementation:**

- **More accurate pricing.** The absence of risk-based pricing as the UAIS charges a single flat premium for each crop.
- **Refining subsidies to make the scheme more inclusive.** Policies written tend to be sold to large farmers and this group represents 65% of policies underwritten and 90% of the premium collected; there is a need to enhance outreach to smallholders, for whom government support is critical. It may also be necessary to refine eligibility criteria for subsidies ensuring that smallholder farmers are better targeted or to introduce or extend subsidies to products like AYII that are usually targeted to smallholders.
- **Claims settlement:** The plan of the UAIS is to settle claims within six weeks. Data to which extent this is possible has not been found.

**The consumer protection issues related to CDRI and agricultural insurance require a deeper look.** In the early years of microinsurance, when it reached scale, consumer protection challenges in microinsurance were researched.<sup>75</sup> There were even some tools developed to assess this at country level, for example in the regulatory impact study of the Philippines in 2015. Some of these questions and lessons could be applied to CDRI.

There are many important aspects, which have an implication on access and client value. For example, the fact that for index insurance coverage and premium are not linearly related, and half the premium does not lead to half the cover, is an aspect that is very difficult for clients and sometimes also for supervisors to understand.

Table 4 identifies some key aspects that need to be considered and those that are specific for CDRI (e.g., on the education of clients and intermediaries), or how to deal with basis risk while providing a meaningful coverage and ensuring client value.

<sup>75</sup> BMZ+MIN (Wiedmaier-Pfister and Voss), 2013

Table 4: Consumer Protection Assessment Framework in Microinsurance adapted to CDRI<sup>76</sup>

Topic	Key questions
Education of the public about climate risk management and CDRI	How can CDRI be integrated in broader financial inclusion education, or agricultural training work?
Training, education and information for intermediaries, delivery channels and other parties	Are sales staff and intermediaries well trained on these risks and products? Are they able to explain them well?
Disclosure of information to the consumers	How can one ensure that disclosure is effective? Are indexes and basis risk understood? <sup>77</sup>
Appropriate products	How can products be made more affordable? Are the products creating true value for the client? What are the challenges and solutions for basis risk?
Claims handling process	Are claims honoured within xx days? Can an industry standard, or even a legal obligation be developed? How can claims in the case of a disaster be honoured? <sup>78</sup>
When subsidies are involved	Are subsidies effectively allocated? Are the lessons from applying them transparent, and approaches adapted over time?
Approval processes of CDRI products and product bundles	Is the capacity of staff to analyse products adequate when they become increasingly complex?
Internal capacities in the authority	Which staff needs training or peer exchanges on this topic? Are systems for monitoring adequate (key performance indicators)?
Synergies, redundancy or conflict between roles of different parties	Are there gaps at the intersection of the diverse authorities involved (e.g., Central Bank or Ministry of Finance channelling subsidies for agriculture insurance)?

**Index-insurance is a key approach for CDRI and basis risk is one of the challenges impacting take-up.** A key aspect of consumer protection of index insurance is reducing basis risk or dealing with it. In index insurance, basis risk can be reduced or better managed. This can be done through product design, data use (e.g., by using a combination of satellite and weather station data), by grouping products across farmer types, or by developing hybrid products (e.g., combining weather index and yield index or validating index measures with on-the-ground loss assessment).

Basis risk challenges can also include pressures to make ex-gratia payments when the index did not trigger the insurance, thus exposing the insurer to operational risk.<sup>79</sup> Some donor programmes have started to help manage basis risks by supporting a savings programme or a special fund for it.<sup>80</sup>

<sup>76</sup> RFPI (Malagardis, McCord, Portula, Wiedmaier-Pfister), 2015-11, adapted from the Microinsurance Network Consumer Protection Framework and BMI (2013)

<sup>77</sup> Basis risk is the risk that the payment made to a policyholder under an index insurance contract is different to the policyholder's actual loss." (A2ii (R. Carpenter), 2018)

<sup>78</sup> The case of the Typhon Haiyan in the Philippines showed that insurers have set-up booths for claims handling in the aftermath of the disaster (Nov. 2013- early 2014)

<sup>79</sup> A2ii (R. Carpenter), 2018"

<sup>80</sup> WFP, Oxfam, et al, R4 Rural Resilience Initiative, 2015



These aspects deserve more attention as increased basis risk allows lower prices. Affordability is often cited as a key aspect in the take-up of agricultural insurance.

**Supervisory engagement in the case of an emergency may require ad-hoc solutions.** The IC Philippines has implemented several approaches, both internal and for the industry when a disaster hit the country in 2013 (see Box 10).

**Box 10 – The engagement of the Insurance Commission (IC) Philippines in a severe disaster.** <sup>81</sup>

In 2013/2014, the IC assumed a particular role in a striking disaster, the Typhoon Yolanda/Haiyan. This disaster hit the northern part of the country in November 2013.

- To help cope with claims, the IC established a **Claims Action Centre** in the region.
- Due to the extent of the damage, some companies used **mass onsite assessments** of areas rather than prepare individual claims, reducing the clients' documentation requirements. One insurer applied simplified claims form.
- The IC also **allowed to use satellite imaging and crisis mapping** for claims validation.

**Supervisors face new challenges.** Supervisors are faced with many challenges concerning business models and products of CDRI as well as challenges related to new technologies like index-insurance products. New approaches have features that may not be explicitly recognised by the existing regulation.<sup>82</sup> The capacities of supervisors can be challenged and will need to be strengthened, often at short notice, as innovative products or business partnerships come to their doorstep.

If technical capacity is stretched the consequence could be a delay in product approval. Some products are seasonal (hurricane, crops) so a delay in approval can set back the business plan by a full year.

Furthermore, anticipating and assessing capacity development needs of supervisors is a must, as budgets and training events or peer exchanges require time to be organised. For example, supervisors should be aware of and knowledgeable regarding the following success factors for CDRI such as:

- Innovative technology approaches like remote sensing (ISA Vietnam)
- Bundling opportunities with trusted providers as distribution channels (like the Microinsurance Mutual Benefit Associations in the Philippines)
- Bundling agricultural products with loans, agricultural inputs or the provision of valuable information to clients, such as weather and price information<sup>83</sup>
- Steering sector working groups and supporting policy processes

<sup>81</sup> MEFIN - GIZ, A2ii, IAIS, Toronto Centre (Bulos and Wiedmaier-Pfister), 2019

<sup>82</sup> A2ii (A. Camargo), 2019

<sup>83</sup> A2ii (A. Camargo), 2019

## 4.0 Solutions involving the insurance supervisor

### 4.1 Integration with policymaking and planning

**A national Disaster Risk Finance and Insurance (DRFI) strategy can provide space for market-led insurance.** DRFI strategies generally have the overarching goal of managing the financial impacts of disasters on public finances and public spending.<sup>84</sup> It is widely understood that the government's contingent liabilities can be reduced if low-income households, agricultural stakeholders and MSMEs can be encouraged to purchase insurance and pay at least part of the premium themselves. Another way is to let the aggregators to which they are linked pay for it (like cooperatives, agribusinesses, MFIs).

*“DRFI strategies generally have the overarching goal of managing the financial impacts of disasters on public finances and public spending” (OECD, 2017)*

A debate is emerging that CDRI should figure in any national DRFI Strategy as it can support community-resilience at the micro and meso level. The representation of the insurance supervisor in national DRFI dialogues and committees can, among others, lead to better integration of inclusive CDRI.

The Indonesian experience show that some classes of CDRI can explicitly be mentioned in a national DRFI Strategy, and that the role of the private sector can be highlighted. The Indonesian finance authority OJK, which includes the insurance supervision department, has been involved in the process of policy formulation and also implementation. In an increasing number of countries, a national DRFI strategy (sometimes called “policy”) is in place or is in the process of being developed. The Indonesian DRFI Policy/Strategy is briefly described in (Box 11).

#### Box 11 – Indonesia's DRFI Policy / Strategy

The DRFI Strategy of Indonesia includes the private sector, low-income households, and agriculture insurance.<sup>85</sup> Launched in 2018, the World Bank<sup>86</sup> supported the Indonesian DRFI policy framework which has an explicit focus on the domestic insurance market and private sector engagement. The DRFI strategy states that the government uses insurance to transfer risks for rare but severe events to financial markets. The following priorities were defined for the DRFI Policy:

- (1) Protect public assets (at central and sub-national level).
- (2) Protect all households and people affected by disasters, especially low-income household.
- (3) Restore the livelihood of people affected; cover social aspect of communities.
- (4) Strengthen the **role of the private sector, and in particular the development of the domestic insurance industry (especially for catastrophe risks)**

Indonesia intends to promote **residential insurance for low-income households** as well as **agricultural insurance**. The challenges reported include a **lack of technical support for regulation**.

<sup>84</sup> OECD, 2017-2

<sup>85</sup> MoF Indonesia (V. Krisna), 2019

<sup>86</sup> <https://www.financialprotectionforum.org/news/indonesia%E2%80%99s-national-drfi-strategy-announced-to-build-fiscal-resilience>

**CDRI could be integrated into financial inclusion strategies.** Another evident area where supervisors can seek integration of CDRI with national planning, strategy development, budgeting and implementation is in financial inclusion strategies, including financial education. ‘Climate-vulnerable’ groups can be explicitly defined and recognised as a target group of financial inclusion strategies.

**Supervisors may yet find their place at the table of the government and can be proactive.**

The Alliance for Financial Inclusion (AFI) states that “Financial regulators, particularly central banks, are not normally part of coordinating bodies on disaster risk reduction and disaster management. However, central banks coordinate with other economic managers, especially on macroeconomic and fiscal policy responses to disasters.”<sup>87</sup> This is considered a challenge, as supervisors have climate and risk data, and other data, and particularly know the industry. Development agencies could also play a role in inviting supervisors early to the DRFI table when a Disaster Risk Assessment is conducted to prepare the development of a DRFI strategy. Insurance supervisors could also initiate conversations with other policymakers.

**A policy debate on taxation may be needed.** The tax burden on non-life insurance products or on mobile insurance can reduce value and address affordability issues. Taxation of non-life insurance adds a considerable share to the cost of insurance premium and can therefore reduce affordability for people that count every cent and are not used to spending on preventive measures like insurance.

In the Philippines, non-life insurance is subject to VAT and documentary stamp taxes of 26% to 27% (see Annex 2). Another example is in Ghana, where payments via airtime/data credit are allowed for mobile insurance but they are subject to 26% of value added Tax (VAT) to be paid when premiums are paid by airtime or data. This is an issue that the Bank of Ghana, the National Telecommunication Regulatory Authority, and the National Insurance Commission (NIC) have jointly been looking at for some years already. In principle, mobile insurance is also being used mainly as a health microinsurance or a hospital cash product. Mobile insurance is an extensively provided product that could be used for disaster coverages.<sup>88</sup>

In Rwanda, foreign reinsurance premium is also subject to taxation, which makes the final insurance premium even more expensive.<sup>89</sup> A debate about a reduction or waiver of taxation of CDRI policies can be a way forward and improve premium cost, take-up, and client value. This issue has been resolved by Fiji recently, where non-life insurance is now exempt from VAT;<sup>90</sup> and in Kenya, tax waivers for certain classes have also been introduced.<sup>91</sup>

**Funding for premium subsidies is often expected by stakeholders and is a topic where the supervisor should be involved.** Funding for premium subsidies in CDRI (especially agricultural insurance) is often expected by providers and sometimes consumers. However, subsidies by artificially lowering prices for the consumer, can have a longer-term impact on

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<sup>87</sup> AFI, 2021

<sup>88</sup> The **definition of mobile insurance** used here refers to the one used by the A2ii: “insurance where the distribution and administration is through digital devices (primarily, mobile phones), utilizing digital technology, interfaces, platforms and processes to support the entire insurance process across the value chain.” (A2ii (Wiedmaier-Pfister, Ncube), 2018)

<sup>89</sup> FANPRAN (DFID et al), 2016-3

<sup>90</sup> [No VAT for Climate and Disaster Risk Micro-insurance products – FBC News \(17.7.21\)](#)

<sup>91</sup> FANPRAN (DFID et al), 2016-3

the commercial sustainability. Subsidies need to be well timed, structured, and communicated carefully. Hence it is important that the supervisor is involved in these discussions.

For example, in agricultural insurance, cost of agricultural insurance premium can often range from 4 % to 18 % of the insured value and this price is perceived as very expensive by stakeholders (farmers, agribusinesses, and lenders), when compared to other classes of insurance.<sup>92</sup> Therefore, premium subsidies in agricultural insurance are very widespread, and generally expected by the farming community and other stakeholders such as banks or microfinance institutions (MFIs) that provide the loans. In Vietnam, the ISA under the Ministry of Finance has been involved in a working group with the Ministry of Agriculture to discuss the topic of premium subsidies, which has already been in place by various Decrees (e.g., 58/2018/ND-CP), and 02/2017/NP-CP.<sup>93</sup>

## 4.2 Improved climate risk data for better risk modelling

**Historical or current data sets are not always a suitable basis for risk modelling, but innovative risk analytics involving the climate community provide new solutions.**<sup>94</sup>

Insurers, reinsurers, and supervisors need to make correct assumptions about risks and this is difficult with the uncertainty of a changing climate, with a huge diversity and rising frequency of perils. The historical loss data that catastrophe models commonly rely upon may become increasingly challenged for future loss projections.

Some insurers and reinsurers are actively engaging with the climate science community to remain abreast of the latest data and loss control advances, striving to comprehend the limitations of the assumptions in the catastrophe (CAT) models they are using and how these uncertainties may be magnified by climate-related variables. Augmenting climate-change models with big data, social media information and predictive analytics also has the potential to significantly broaden risk assessment considerations. Advanced analytics<sup>95</sup> could help in assessing historical weather records, insured property data, and assumptions regarding future climate conditions to improve risk selection and pricing.

**New technologies and data models are being developed.** Regional, global, or national programs are being improved or set up, that rely on satellite data, or the open-source flood modelling framework OASIS in the Philippines, in Bangladesh, and in Pakistan (see Box 12), when countries cannot afford to develop such tools without external support. Some models are limited to one hazard (OASIS, others include several hazards like in Pakistan).

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<sup>92</sup> 5.11.2020, Inclusive Insurance Conference presentation of APA Insurance, Kenya

<sup>93</sup> MEFIN, GIZ, ISA, 2020 and MEFIN - GIZ, 2020

<sup>94</sup> Adapted from (Deloitte Center for Financial Services, 2019)

<sup>95</sup> “**Advanced analytics** is an umbrella term for a group of high-level methods and tools that can help you get more out of your data. The predictive capabilities of advanced analytics can be used to forecast trends, events, and behaviors. This gives organizations the ability to perform advanced statistical models such as “what-if” calculations, as well as to future-proof various aspects of their operations.” <https://www.sisense.com/glossary/advanced-analytics/>

**Box 12 - Improved weather analytics, drought metrics and climate data****Bangladesh and the Philippines**

**OASIS loss modelling framework for flood risk.** This not-for-profit platform for Asia provides a CAT Flood Model (2018) developing flood maps for the two countries.<sup>96</sup> It received German BMU<sup>97</sup> support from 2018 – 2020.

- It intends to link local scientific knowledge and data with the decision-making needs of the risk management industry, with the goal of understanding catastrophe risk and narrowing the insurance protection gap, when countries cannot afford to develop such tools.<sup>98</sup>
- The idea was that the CAT models were co-developed and owned by end-users, including country-wide hazard models for current conditions and future climate change conditions, vulnerability curves for different risk types, exposure database. The idea is to develop a model up-date toolkit.
- The industry is considering how they can use OASIS to come up with better and affordable products.

**Pakistan**

**The National Disaster Risk Management Fund (NDRMF)** is a not-for-profit company incorporated in 1984 under the Securities and Exchange Commission of Pakistan (SECP).<sup>99</sup>

The Fund is mandated to develop a national level NATCAT (Natural Catastrophe) Model. This model will be developed **for four different perils**, i.e. earthquake, flood, drought, and tropical cyclone.

The National DRR Policy identifies DRF as one of the policy Interventions.

**Supervisors can be involved in data and technology solutions.** There are many data initiatives around the globe related to CDRI, expecting that national stakeholders like insurance companies will be using the data for national level solutions. The supervisor can keep an eye out for new data solutions being developed, and initiate projects looking into how these new technologies being developed can be deployed in the national context.

Supervisors can ‘open the path’ to deploy technologies by initiating industry-wide projects or matchmaking them with insurers/insurance associations/government counterparts, e.g., through hackathons.<sup>100</sup> This can also happen through an innovation hub or thematic sandbox. However, the supervisor needs to have a mandate to do this, as otherwise they cannot take action and cannot allocate time when technology providers are not licensed insurers or intermediaries. Box 13 shows how the supervisor can take action.

**Box 13 – An underwriting tool in the Philippines**

In the Philippines, the GeoRiskPH provides natcat hazards assessment. In August 2020, the IC issued a circular [https://www.insurance.gov.ph/wp-content/uploads/2020/08/CL2020\\_83.pdf](https://www.insurance.gov.ph/wp-content/uploads/2020/08/CL2020_83.pdf) instructing non-life companies to use the GeoRiskPH as an underwriting tool.

<sup>96</sup> [https://www.international-climate-initiative.com/en/details/project/oasis-platform-for-climate-and-catastrophe-risk-assessment-asia-18\\_II\\_165-3018](https://www.international-climate-initiative.com/en/details/project/oasis-platform-for-climate-and-catastrophe-risk-assessment-asia-18_II_165-3018) and <https://oasislmf.org/news/factsheet-climate-and-catastrophe-risk-assessment-use-oasis-lmf-philippines-and-bangladesh>

<sup>97</sup> German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)

<sup>98</sup> BMU, PIK, et al, 2018-11

<sup>99</sup> <https://www.ndrmf.pk/> The NDRMF is a government owned not-for-profit company incorporated under Section 42 of the Companies Act, 2017 with the SECP (the corporate registry of the country). The Fund is run by a general body consisting of up to 40 members to be nominated by the Government of Pakistan.

<sup>100</sup> GIZ in Egypt in collaboration with many partners implemented an InsurTech Hackaton with over 200 applications that were submitted to the invitation. It was shared in October 2019, among them designers, coders, innovators in FinTech, entrepreneurs and established start-ups. The “Insur;Hack “took place from 28.11. to 1.12.2019 in Cairo with 24 teams starting and 12 teams making it to the last day. (GIZ, I2I, CENFRI, FMT, 2019) <https://egyptinnovate.com/en/%D9%81%D8%B9%D8%A7%D9%84%D9%8A%D8%A7%D8%AA-%D9%88-%D8%A7%D8%AC%D8%AA%D9%85%D8%A7%D8%B9%D8%A7%D8%AA/insurhack-egypts-first-insurtech-hackathon>

### 4.3 Adopting new legal provisions and supervisory approaches

**There are some recent changes that enable regulatory frameworks.** Recently, insurance supervisors in Asia and beyond have been preparing or adopting the following legal changes. Table 5 lists some insights in regulatory changes in Vietnam, the Philippines, and Pakistan:

Table 5: Legal and regulatory changes under way

Topic	Legal changes under way or envisaged
Scope and approach in the insurance law regarding index and agro-insurance	<b>Vietnam (2021):</b> “Agricultural risk pool” definition was added to the revised insurance law. The concept of “agricultural index insurance” will also be included.
	<b>The Pakistan</b> insurance law is being amended, to include index insurance among others
	<b>The Philippine</b> insurance law does not provide for a framework for or definition of parametric insurance. While there are existing Circular Letters, which deal with parametric insurance, especially on Micro Agricultural Insurance Products, the Insurance Code does not have any specific provision on the matter. IC is considering to provide a specific provision on parametric insurance, which would need to be presented to congress for approval.
Other relevant regulatory provisions	<b>Philippines:</b> Several circulars were adopted in the past decade (e.g. creating MI-MBAs in 2006, the Micro-Agri Framework in 2015) but also in the recent past <ul style="list-style-type: none"> <li>○ the circular <b>compelling insures</b> to participate in the PCIF</li> <li>○ the circulars issued by IC about <b>GeoRiskPH</b> and</li> <li>○ an envisaged circular on the <b>regulatory sandbox</b> for agriculture insurance<sup>101</sup></li> </ul>

**There are various supervisory areas which can be addressed by either stand-alone or wide-ranging activities.**

The following provide some inspirations:

- **Capacities for product approval** to ensure staff is able to understand these sometimes complex and tech-driven products;
- **Standard contracts** that are understandable e.g., when index insurance is concerned, and available in vernacular languages;
- **Performance indicators** and their monitoring (key performance indicators like the SEGURO indicators for microinsurance<sup>102</sup> in the Philippines) to check on sustainability, or client value to mention some areas;
- **Regulation of microinsurance**, and a proportionate regulatory framework that are not insurers, to involve non-traditional providers like MFIs, or farmer’s cooperatives.<sup>103</sup>
- A **thematic sandbox** can be a comprehensive way to approach CDRI for an innovative business model, where many new topics can be dealt with and monitored (see Box 14).

<sup>101</sup> <https://www.insurance.gov.ph/advisory-2021-09-26-may-2021>

<sup>102</sup> Circular Letter 2016-63 of the IC Philippines

<sup>103</sup> ADB, 2020

**Box 14 Creating a regulatory Sandbox for index insurance pilots****A monitored pilot in South Africa (SA)**<sup>104</sup>

In SA, index insurance is not provided for by the Insurance Act. It falls within the derivatives framework. This is why the Financial Sector Prudential Authority (FSPA) is considering index insurance registration in the regulatory sandbox set up by the South African Reserve Bank. This will allow the prudential insurance supervisor to become more familiar with the risks and transactions, learning from experience. The sand-box is expected to enable them to regulate it based on the experiences. There are various parties involved: the Ministry of Finance, the Ministry of Agriculture, the South African Reserve Bank, the FSPA and the Financial Sector Conduct Authority (FSCA).

**Insights on thematic sandboxes for piloting agriculture insurance**

The following questions could be clarified in a test-phase and with close monitoring by the supervisor in a thematic regulatory sandbox on agricultural insurance:

- How to teach consumers about **basis risk** and what they are purchasing
- How to avoid **pressures to pay out regardless** if the trigger was not met and hence, this could expose the insurer to operational risk<sup>105</sup>
- How to set **fair tariffs** to create a cost-covering and sustainable scheme
- **Roles of parties** to be defined in the service level agreement (SLA)

Notably, the Insurance Regulatory Authority Uganda adopted the **Index contract regulations (2020)** to regulate this product.

**The technical capacity of supervisors may need to be strengthened in CDRI and agriculture insurance regarding technological innovation.** Pilots as well as large scale provision of CDRI rely on technological innovation as it works towards multiple goals, for example cost reduction, and the speed of enrolment, claims assessment and processing amongst others. Supervisors should build their capacities to understand these and cope with the pace at which the industry is developing innovations.

For example, when new technologies generate data from air and space, like satellites, or NDVI technology (Normalized Difference Vegetation Index) are concerned (see Box 15). These innovations are often part of pilots and supervisors need to be involved in their application, which requires investments in their capacities.

**Box 15 – How the NDVI technology works for monitoring pasture conditions**<sup>106</sup>

Satellite imagery helps to assess the state of grazing conditions by measuring deviation in the colour of ground vegetation with a measure (NDVI), to observe whether there is live green vegetation.

When a certain NDVI threshold is reached, indicating drought conditions, insured farmers receive a lump sum payment – the majority via their mobile phones.

**Consumer protection issues need a closer look when CDRI aims to be inclusive.** When allowing and setting up innovative arrangements to provide inclusive CDRI to many emerging consumers (e.g., targeting the entire population including MSMEs, smallholders and other low-income groups), many new questions will arise that need to be resolved. Some pertinent questions have come up in the framework of this research. For example, the

<sup>104</sup> A2ii (R. Simões), 2021

<sup>105</sup> A2ii (R. Carpenter), 2018

<sup>106</sup> IDF, 2019

question of how the continuity of coverage can be ensured when a disaster event destroyed telecommunication lines, yet people are paying premiums with their mobile phone.

**Is a legal definition of CDRI required?** Two supervisory authorities that were consulted for this study, namely the SECP Pakistan and the IC Philippines, both consider this to be a valid proposition, or even a necessary one:

- The **SECP Pakistan** considers that “CDRI products are not defined in Pakistan, however, we consider defining these products necessary” (see also Annex 3). The CDRI products may include life and non-life insurance products with standardized features suitable for the target groups’ needs with subsidized/ affordable premium
- The **IC Philippines** has also contributed to this debate (see Annex 2 for details) and shared the following considerations:
  - **To date, CDRI is a conceptual definition** driven by the global climate adaptation agenda.
  - **From a supervisory perspective**, different lines of insurance play into the concept of CDRI in the Philippines: casualty lines, liability insurance, property insurance, fire and other related risks insurance, and agricultural insurance

**In summary**, taking the perspective of insurance regulation, this question requires a deeper analysis as a legal definition for CDRI comes with advantages and challenges:

**(+) Advantages:** By making the definition of CRDI a legal/mandatory one will provide a more stable and steady understanding throughout the industry that the supervisor regulates. This will be more efficient and any subsequent regulations or other issuances pertaining to CRDI, if needed, will be clearer. Being a mere concept, it is always susceptible to changes as CRDI currently presents an abstract concept.

**(-) Challenges:** However, this will also create more uncertainties or inconsistencies with regard to the difference with other existing products it may cover or with an existing product that already covers the same risks.

In conclusion, the definition (as per the view of IC Philippines), if any, should be broad enough to include every conceivable CDRI but, at the same time, be clear regarding the parameters/principles which will address a given scenario.

#### 4.4 Coordination and collaboration in the sector

**Supervisors have been motivating collaboration within the sector towards a specific goal or scheme.** There are several examples from Asia, where the supervisor was involved into or even driving collaboration. In the Philippines, the IC has even compelled the entire non-life industry to contribute to a Technical Working Group (TWG) on the new PCIF Facility that they are setting up (see Table 6).



Table 6: Approaches reported by insurance supervisors to facilitate CDRI<sup>107</sup>

Topic	Country and objective of the committee /task force
Joint engagement in a fund	<b>Philippines:</b> The IC made collaboration in a Technical Working Group compulsory, compelling all non-life insurance companies to contribute to the design of the PCIF (Circular in 2021-27 dated 12 April 2021) <sup>108</sup>
Agricultural insurance subsidies	<b>Vietnam:</b> <b>Inter-ministerial</b> sector committee, the Agriculture Steering Committee. It is to discuss subsidies for agricultural insurance.
Sector task force on CDRI	<b>Philippines:</b> Supporting the CDRI National Task Force (NTF) which is chaired by the DOF through the National Treasurer. IC and PIRA are among the 14 institutional members of the NTF. The NTF provides strategic directions about inclusive CDRI.
Strategy formulation	<b>Pakistan:</b> The NDRMF has formed a synergy group for formulation of a national disaster risk financing strategy in accordance with which, the suitable disaster risk financing instruments will be developed.

**Capacity gaps need to be identified.** The industry often needs to develop its technical/risk capacity to underwrite CDRI. Supervisors can play a key role by developing the market and identify capacity development needs. Examples of capacity development needs are in the areas relating to actuarial and other talent development, or in upgrading risk-based solvency requirements. Through collaborative efforts like Technical Working Groups (TWGs) supervisors can work with the industry to identify capacity building required to enable underwriting of CDRI risks.

**Supervisors liaise with the different stakeholders to point out barriers and look at avenues and incentives regarding CDRI provision.** For this a TWG, like the one in the Philippines, can be a good start. Public-private TWG do involve the industry (insurers and distribution channels as well as actors like IT firms or InsurTech players) and can work on sector development generally (e.g., bundling strategies, business partnerships with aggregators, consumer education) or have a specific aim like setting up a co-insurance arrangement. Depending on their orientation, they may also involve other bodies like the disaster authority, and those involved in the NAPs. Stakeholders from the finance sector like Central Banks can be key allies in many ways, e.g., they may run a FinTech Sand Box that could be leveraged, and often drive financial inclusion initiatives.

#### 4.5 Coinsurance arrangements, insurance pools, and risk pools

**Co-insurance arrangements<sup>109</sup> enable insurers to cover risks that would otherwise be beyond the capacity, or risk appetite, of the participating insurers acting on an individual basis.** Co-insurance arrangements, which are usually made between insurers within one country, provide insurers with an alternative to reinsurance (see Box 16).<sup>110</sup>

<sup>107</sup> Contributions from the IC Philippines, SECP Pakistan and ISA Vietnam

<sup>108</sup> IC Philippines, 2021-4

<sup>109</sup> This preliminary discussion on the terms “coinsurance arrangement” and “insurance pool” draws in part on a report prepared by (EY for the EC (Ernst & Young for the European Commission), 2014-7)[https://ec.europa.eu/competition/sectors/financial\\_services/KD0414707ENN.pdf](https://ec.europa.eu/competition/sectors/financial_services/KD0414707ENN.pdf)

<sup>110</sup> Although there is nothing to prevent insurers from reinsuring risks that they have written on a coinsurance basis.

**Box 16 – Terminology and concepts**

The term **co-insurance** is usually used to describe any contractual arrangement between insurers to write specific insurance contracts jointly, each participating insurer taking a pre-agreed portion of the risk. Insurance pools, on the other hand, are usually more structured forms of arrangement, often involving a leading insurer which writes the risk on behalf of the participating insurers, the other participating insurers contributing in accordance with the pool agreement.

**Insurance pools** often go beyond the sharing of risk, the leading insurer or an intermediary undertaking management or administration of the insurance written through the pool. Insurance pools may be operated through a separate entity established by the participating insurers.

Although insurance pools are specific to insurers, the term **risk pool** usually describes a broader arrangement that may be established to enable the pooling of risk. For example, sovereign risk pools can be regional facilities (not subject to this paper) established by groups of countries to share risks across a region (such as hurricane or earthquake risk), the beneficiaries being governments. Risk pools may cover the risk through traditional insurance products or through more innovative risk transfer instruments.

**Insurance pools can take many forms, including statutory pools, which are established by separate legislation, and contractual pools.** Statutory pools are often operated through a separate entity or company established by the legislation that provides for the pool. Contractual insurance pools operate through agreements entered into by the participating insurers. An example of a statutory insurance pool is the Turkish Agricultural Insurance Pool, which was set-up by law.<sup>111</sup>

**Pools are becoming more common in times of climate-included disasters.** Historically, insurance pools were established to cover catastrophic risk, such as nuclear, terrorism, or environmental risks. However, the nature of climate and disaster risk could expose a single insurance company to severe losses. Insurance pools or risk pools are then increasingly used to cover CDRI.

More often than not, insurance pools are used to diversify the risk within the country. However, given the nature of climate and disaster risk, this may result in an over concentration of risk within a single country. Insurance supervisors may therefore consider it prudent to require or encourage insurance pools to transfer a proportion of CDRI to the international reinsurance market. Stakeholders in the Philippines have been setting up a new Fund for CAT risk as risk pool (or “pool like facility”<sup>112</sup>), the Philippine Catastrophe Insurance Facility (PCIF).

**Insurance pools can provide a way to diversify risks, improve knowledge sharing, work towards one goal and motivate the industry to engage.** Agricultural insurance schemes also exist in Mongolia (now transferred to a reinsurance company), Uganda and Indonesia (see Table 7), to mention a few. In some cases, participation in CAT risk pools has been made compulsory for all property insurers, like in Indonesia (see MAIPARK example in table below). Yet another way to achieve the desired policy outcome is to mandate all licensed insurers in a country to capitalize a new public-private insurance company dedicated for example to agriculture, as in the example of the Compagnie Nationale d’Assurance Agricole du Sénégal.

<sup>111</sup> <https://web.tarsim.gov.tr/havuz/homePageEng>

<sup>112</sup> MoU on the PCIF of 2020

Table 7: Examples of pools, funds and consortia for agricultural and CAT insurance

Country, type	Scheme	Status
<b>Mongolia (pool)</b>	Livestock	The <b>livestock insurance indemnity insurance pool</b> (LIIP) is one of the oldest and most prominent schemes in operation since 2006. <sup>113</sup> At that time, the objectives of the pool were: <sup>114</sup> <ul style="list-style-type: none"> <li>○ Herders must receive in full the indemnity payments that are due – no default risk;</li> <li>○ A simple and stable structure for implementation in the short run that allows for flexibility in the future;</li> <li>○ Incentives for companies to sell the Index-based livestock insurance (IBLI) product;</li> <li>○ The insurance industry is insulated from catastrophic livestock losses;</li> <li>○ Incentives for companies to collaborate on the integrity of the system;</li> <li>○ The foundation is consistent with a new regulatory environment.</li> </ul> However, the pool changed its organizational and legal set-up, when in 2014, Mongolian Re was established. <sup>115</sup>
<b>Philippines (facility)</b>	PIFC	This new <b>Fund or facility</b> is under way, and intended to start in 2022 offering CDRI for MSMEs and others. <ul style="list-style-type: none"> <li>○ The concept does not include subsidies.</li> <li>○ The IC compelled the industry to contribute to the Fund per circular (see Annex 2)</li> </ul>
<b>Uganda<sup>116</sup> (scheme)</b>	Agriculture	<b>Ugandan Agricultural Insurance Scheme</b> (UAIS) relies on the Agricultural Insurance Consortium (a form of association) who manages the scheme. Twelve insurance companies have been participating in the first phase between 2016 and 2021. They are offering three different products (weather-index insurance; AYII and MCPI) and have enrolled more than 250,000 farmers. AIC has been receiving considerable support and collaboration from technology providers, international reinsurers and industry and government as well as international development agencies. The pilot phase has ended now and will later continue as a full scheme.
<b>Indonesia (pool)</b>	Earthquake	MAIPARK <sup>117</sup> The government required all licensed general insurance and reinsurance companies operating in Indonesia to cooperate in insuring through a joint undertaking of all companies. The vehicle for this undertaking was the Indonesia <b>Earthquake Reinsurance Pool</b> ; or Pool Reasuransi Gempa Mubi Indonesia (PRGBI). Participating in the Earthquake Reinsurance Pool was made <b>compulsory</b> for all general insurance and reinsurance companies.
<b>Indonesia (consortium)</b>	Aquaculture	The Ministry of Maritime Affairs and Fisheries (KKP), the OJK and the insurance industry (through <b>two consortia or co-insurance pools</b> on aquaculture insurance) are jointly providing insurance solutions to fish farmers against NATCAT risks. The first consortium provides a KKP fully-subsidized aquaculture insurance to traditional small farmers. The commercial consortium still provides a limited outreach of market-based insurance to the semi-intensive and intensive fish farms. Both consortia are being led by Asuransi Jasindo state-owned insurer with private insurers as participants <sup>118</sup>

<sup>113</sup> [https://www.munichre-foundation.org/en/Inclusive\\_insurance/Learning\\_Sessions/2019\\_Public\\_Private\\_Dialogue\\_on\\_Climate\\_Risk\\_Insurance.html](https://www.munichre-foundation.org/en/Inclusive_insurance/Learning_Sessions/2019_Public_Private_Dialogue_on_Climate_Risk_Insurance.html)

<sup>114</sup> (WBG (Mahul, Skees), 2007)

<sup>115</sup> <http://bcmongolia.org/mn/members-2/organizations/item/mongolian-re.html>

<sup>116</sup> <https://aic.ug/about-us/> and Interview with AIC on 29.7.21

<sup>117</sup> Maskapai Asuransi Indonesia (MAI) and Perusahaan Asuransi Risiko Khusus (PARK). <https://www.maipark.com/index.php/en/corporate/background>

<sup>118</sup> GIZ RFPI Asia is currently supporting through Capacity Development the sectoral collaboration.

**Lessons from insurance pools and the role they can play for inclusive CDRI should be disseminated.** Lessons from pooling risk have been there for some time. For example, in the case of one of the oldest schemes like in Mongolia<sup>119</sup> that emphasizes the following:

- a strong institutional and legal framework.
- the crucial role of government plays in the public private partnership.
- an efficient data management system is important to the development of insurance products.
- a historic database is needed to implement index-based insurance mechanisms.
- education and outreach which is essential.

**In the framework of climate change, and on inclusive CDRI, this topic requires more attention.** For example, questions like the following have been emerging:

- What works to motivate the industry to join in insurance pools to make markets more inclusive, but also
- How can consumers be motivated to take-up such insurance, or
- How can scaling-up be achieved to bring the price down.

One additional advantage of risk pools and consortia is that emerging insights translate into lessons learnt for all participants, which can be a cost-effective way of capacity building.

#### 4.6 Supporting consumer awareness, products and consumer protection

**Supervisors have experiences in supporting financial and insurance education for inclusive insurance.** Recently, some agencies have started to promote financial education regarding climate risk and CDRI. Among them is the MEFIN Network with its Capacity Development Module 4 on CDRI and Financial Literacy.<sup>120</sup> Other new modes of teaching consumers have been emerging like the app in the Philippines (see Box 17).

##### Box 17 – An application to teach

In the Philippines, the Department of Trade and Industry, DTI (supported by GIZ RFPI) has launched an app called 'Payong' (means umbrella), a Multi-Peril Resistance Management and Learning Platform for MSMEs.

The app contains 4 modules:

- 1) risk profiling of MSMEs, through the geolocation data of GeoRiskPH,
- 2) business continuity planning,
- 3) e-Learning modules, and
- 4) insurance products' hub.

The app is already available in 'Play store' for Android mobile users and in 'App Store' for IOS/Apple mobile users. Private sector collaborators in the project include the PDRF (Philippine Disaster Resiliency Foundation) and the Cebuana Lhuillier Foundation.

**Another example of a national financial and insurance education campaign** that includes CDRI is provided in Morocco, where disaster and climate risk was integrated into the national financial education strategy and implementation work.<sup>121</sup> Law 114-10 of 2016. This came into effect in January 2020. It requires that most property and some liability insurance

<sup>119</sup> WBG-GFDRR, 2011

<sup>120</sup> MEFIN+GIZ, 2020-7

<sup>121</sup> [Morocco: Regulator issues info guide on catastrophic event insurance \(meinsurancereview.com\)](https://www.meinsurancereview.com)

policies must include cover for catastrophic events (including terrorism)<sup>122</sup>. This motivated the insurance supervisor ACAPS to help inform clients about disasters and about insurance as an option for DRM.

**Consumer awareness campaigns need to be coupled with products on the market.**

Teaching people about CDRI does not advance inclusive insurance provision if there are no suitable products that are being delivered by trusted distribution channels. There are some encouraging models in the Philippines, Kenya, and Uganda. Providers emphasize that they needed management support and constant innovation, and that building the business takes time (see Box 18):

<b>Box 18 - Microinsurance providers offering disaster coverage<sup>123</sup></b>	
<b>Philippines: Pioneer Insurance</b>	<p><b>Building scale takes time</b></p> <ul style="list-style-type: none"> <li>○ Micro and inclusive insurance since 2007.</li> <li>○ 2013 – major typhoons and strong earthquakes, with loss ratios of 144 %</li> <li>○ 2015 enrolment from 1 million to 7.8 million</li> <li>○ 2019: sold 29 million policies</li> <li>○ Sell in a market of 69 million people and now reached 29 million policies</li> <li>○ Claims settlement is done within 24 hours to 5 days</li> </ul>
<b>Kenya and Uganda: Apollo group</b>	<p><b>Management support is key</b></p> <ul style="list-style-type: none"> <li>○ Agricultural/pastoralist sector where a million farmers/pastoralists are covered</li> <li>○ They have effective aggregators like agricultural cooperatives</li> <li>○ They also offer hospital cash with income coverage, and also life cover (sell it for 2 USD a month for a coverage of 1,000 USD) with a 50 % cash back if there is no claim</li> <li>○ Have now created a division of inclusive insurance to make young people interested in selling a different class of insurance.</li> </ul>

In respect of consumer protection, in the Philippines Circular 2020/190 provides that insurers shall establish post-selling quality control mechanisms to ensure that sales conducted through Remote Selling Initiatives were conducted in accordance with the company's standards and that the policyholder understood the features, terms and conditions, and benefits provided by the products sold.

## 5.0. The way forward

### 5.1 The roles of insurance supervisors and insurance companies

**It is recommended that insurance supervisors are involved in relevant national strategy and planning processes in DRF and DRR.** Being involved in the various policy agendas in DRF enables the insurance supervisor to become effective and efficient. In this scenario, the relevant ministries and agencies, including that of the insurance supervisors, work in concerted efforts, and thus avoid acting in silos.

<sup>122</sup> <https://www.fmsar.org.ma/wp-content/uploads/2018/01/Loi-Cat-Nat-FR.pdf>

The requirement applies to all property insurances except aviation and agriculture, as well as to motor and third party liability insurance policies

<sup>123</sup> IDF Webinar on 7.6.2021, Break out group 3

Inter-ministerial committees to implement financial inclusion strategies could be one avenue, or alternatively technical committees in agricultural development or agricultural insurance. National Adaptation and Disaster Risk Finance Strategy processes are concrete entry points, where the insurance sector needs to be involved. The insurance supervisor can in fact assume a broad function (e.g., engaging in the support of mutually reinforcing roles that also benefit inclusion in the country), and be a driving force to enable the business of CDRI, as well as the take-up by emerging consumers, both households and businesses.

Generally, insurance supervisors have no natural role in DRR bodies and climate change adaptation institutions.<sup>124</sup> But insurance supervisors can be an important party to the disaster risk management and finance agenda in any country. They bring unique capacities, relations and data to the climate adaptation and DRM agendas of their countries, and they can help in the effort to make CDRI inclusive. Insurance supervisors have a series of potential roles as presented in Chapter 4 (e.g., collaboration, negotiating taxation, coordinating the set-up of co-insurance arrangements, consumer information) thereby helping to advance financial inclusion. However, these new tasks require adequate funding for adapting systems and for capacity building of supervisory staff. Insurance supervisors' wider role also relates to allowing them to test CDRI approaches, and they could also have a market development role similar to those taken in developing the microinsurance market.<sup>125</sup>

In any case, supervisors need to strike a careful balance in defining the boundaries of their roles, as their position as prudent regulator requires that foremost.

### **The role of insurance companies in national strategies and for closing the protection gap.**

It is recommended that policymakers recognize the role of market-based and retail approaches, and what insurance companies can do for community resilience. This is generally considered a key tool to achieve public policies such as DRR, climate change adaptation, rural development, financial inclusion, poverty alleviation, and sustainable development in general. These approaches and the role of the private sector for closing the insurance protection gap can be discussed in the context of developing national disaster risk finance strategies, and the preceding DRR diagnostics that are generally conducted.

## **5.2 Capacity development for supervisors and funding**

### **Assessment of areas for capacity development support of supervisors and their funding**<sup>126</sup>

To play an effective role in facilitating CDRI, supervisors need capacity development support and flexible funding in diverse areas. For example, to set up and steer sector dialogues and national working groups in this new area. This task includes building supervisory capacities in particular in terms of digitally supported insurance approaches that work for CDRI. This also includes learning about what other countries have done regarding smart subsidies and policy dialogues e.g., on taxation, data, and risk modelling approaches.

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<sup>124</sup> AFI, 2021

<sup>125</sup> Despite recognised by the IAIS in their Strategic Plan 2020-2024, not all insurance supervisors have a mandate for market development. (A2ii (Beyers, Chiew, Gray and Hougaard), 2020-9)

<sup>126</sup> Are supervisors adequately equipped to face the challenge of index-insurance? There is a reported capacity gap among some of the insurance supervisors, for example regarding index-insurance. Of the 27 supervisors surveyed, 12 stated that they do not have the necessary resources and training to supervise index-based insurance properly; while 11 supervisors stated that they are qualified to do so, and five did not answer. (Access to Insurance Initiative, A2ii) (A2ii (R. Simões), 2021)

### 5.3 External support and exchanges

**It is recommended that international development agencies support CDRI regulation and supervision, helping with innovative themes.** International organizations like the A2ii, ADB, IAIS, IGP, IFAD, UNCDF, WFP, WBG, and GIZ can continue to play a key role in promoting the topic generally, supporting emerging lessons, developing tools and cross-border dialogues, and capacity building for supervisors. International development agencies may assist in finding answers to the following:

- **How to improve CDRI take-up and affordability for the unserved.** For MSMEs, small farm holders, and low-income property owners CDRI is in the build-up stage. Insurance premia are more often than not perceived unaffordable, while some business partnerships exist that promise lessons or can even serve as a model.<sup>127</sup> With distribution costs often being higher than the cost of paying claims, bundling of CDRI becomes imperative. Governments and industry are both called upon to develop innovative solutions for supporting take-up in the first years, while for some groups or risks, continued premium support may be required. Development agencies play an important role in identifying, documenting, and disseminating good practices that have proven to work elsewhere, while also being prudent about what may not work.
- **How to improve CDRI M&E tools.** Strong M&E tools can ensure that products are achieving both impact and sustainability. The M&E tools should cover not only consumer aspects, but also the stakeholders along the value chains, for instance, microfinance institutions and agribusinesses, as they might be interested in subsidizing the premiums or finance them fully.
- **How to provide support for the industry.** Underwriting disaster risk requires strong insurance companies that are motivated to offer CDRI. Offering insurance to new segments that are unfamiliar with insurance is challenging in many ways. Insurers may rather invest in other lines (that require lesser capital resources) or be motivated to stick to higher income segments when selling CDRI. The support and incentives the industry may need can range from educational work to tax breaks such as in Pakistan and Fiji.

### 5.4 Specific ideas for the way forward

#### (1) Implement further CDRI industry studies

- **Affordability by consumers.** This aspect has been mentioned by supervisors contributing to this study as a key barrier. This is calling for innovative approaches to be explored and developed by the industry, and also when international development cooperation supports CDRI. Finding avenues to enable and support premium payments of lower-income households or other priority groups is key. Information on good practices that work (e.g., allowing poorer segments to work for premium payments) including the limitation of these models is required.

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<sup>127</sup> <https://www.axa.com/en/about-us/axa-ngo-care>

- **Demand-side research.** Understanding consumer preferences and needs is key. Obtaining these sets of information requires investments in research like focus groups discussions and consumer surveys, or financial diaries about how households and MSME are dealing with climate risk and insurance, as well as their common options to manage climate risks within their limitation. Lessons can be gathered from mystery shopping, and from focus groups and demand-side monitoring in pilots.
- **Meso-level insurance.** Portfolio insurance for a MFI, or insurance coverage which an agribusiness or a cooperative can purchase for their clients or members, are often mentioned in literature, or as a concept. However meso-level insurance remains a scantily explored topic in terms of live examples, people covered, and emerging lessons. The wide range of potential meso-level solutions is making an overall analysis more challenging but explains also the high potential of these approaches.
- **Pools, consortia, and funds.** Although there are various examples, the advantages, disadvantages and incentives for the industry to join such structures to provide valuable products, motivate consumers, channel subsidies, and scale up promising pilots could be documented and assessed more thoroughly.
- **Avoiding crowding out.** While recognizing that low-income populations should enjoy social protection or support in obtaining insurance coverage, insurance solutions for people and businesses who can afford the premium should not be crowded out, and there is a need to explore the degree to which social protection complements or crowds out market-based solutions.<sup>128</sup>

## **(2) Develop information material and tools for regulatory diagnostics and knowledge generation on CDRI for supervisors**

- Develop a diagnostic tool for supervisors when supporting agro-insurance pilots, and for other index insurance pilots.
- Identify the topics related to digitally-supported CDRI provision (challenges and solutions).
- Considering how insurance supervisors have defined the key performance indicators for microinsurance or inclusive insurance more broadly can also include indicators for CDRI.
- Identify and disseminate information on existing tools that have the potential to be used for CDRI provision, for example like the tool on client value assessments;<sup>129</sup> or a new toolkit for rapid prototyping for inclusive insurance.<sup>130</sup>

## **(3) Develop capacity building modules and organize events for insurance supervisors on CDRI market development strategies, regulation, and for specific aspects of CDRI**

- Index insurance and inclusive CDRI more broadly, including classical topics from microinsurance like innovative distribution models, bundling, client value and

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<sup>128</sup> ADB, 2020

<sup>129</sup> USAID et al (ILO, IIF, IIII, GAN, UC Davis), 2020. For example, the 3D assessment of agricultural index insurance is a tool that can be used for more clarity on client value

<sup>130</sup> IFAD, 2021



motivating clients, and consumer protection aspects in an increasingly digital environment, with a focus on disaster risk.

- Agricultural insurance capacity development for insurance supervisors, e.g., to build their capacities in actuarial techniques, setting tariffs and indexes; or for establishing a regulatory sandbox or test-and-learn approach.

## Attachments

### Abbreviations

A2ii	Access to Insurance Initiative
ACAPS	Autorité de contrôle d'Assurance (Morocco)
ADB	Asian Development Bank
AIC	Agricultural Insurance Consortium (Uganda)
APEC	Asia-Pacific Economic Cooperation
AFI	Alliance for Financial Inclusion
AYII	Area Yield Index Insurance
BMZ	Bundesministerium für Entwicklung und Zusammenarbeit
CAT	Catastrophe
CDRI	Climate and Disaster Risk Insurance
CRI	Climate Risk Insurance
DOF	Department of Finance (Philippines)
DRF	Disaster Risk Financing
DRFI	Disaster Risk Financing Insurance
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DTI	Department of Trade and Industry (Philippines)
EO	Earth Observation
FANPRAN	Food, Agriculture & Natural Resources Policy Analysis Network
FSCA	Financial Sector Conduct Authority
FSPA	Financial Sector Prudential Authority
GAN	Global Action Network
GFDRR	Global Facility for Disaster Reduction and Recovery
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GSMA	Groupe Speciale Mobile Association
IAIS	International Association of Insurance Supervisors
IBLI	Index-based Livestock Insurance
IC	Insurance Commission (Philippines)
IDF	Insurance Development Fund
IFAD	International Fund for Agricultural Development
IGP	InsuResilience Global Partnership
IIF	Institute of International Finance
IIII	Inclusive Insurance Forum
IIWG	Inclusive Insurance Working Group
ILO	International Labour Organization
IRA	Insurance Regulatory Authority (Uganda)
ISA	Insurance Supervisory Authority (Vietnam)
JICA	Japan International Cooperation Agency
KPIs	Key Performance Indicators
LIIP	Livestock Indemnity Insurance Pool
MAI	Maskapai Asuransi Indonesia
MEFIN	Mutual Exchange Forum in Inclusive Insurance
MFI	Microfinance Institution
Mi-MBA	Microinsurance Mutual Benefit Association
MIN	Microinsurance Network
MoF	Ministry of Finance
MPCI	Multi-Peril Crop Insurance

MQS	Minimum Quality Standards
MSC	MicroSave Consulting
MSME	Micro, Small and Medium-sized Enterprise
NAP	National Adaptation Plans
NAPA	National Adaptation Programmes of Actions
NatCat	Natural catastrophes
NCPI	Named Peril Crop Insurance
NDC	National Determined Contributions
NDRMF	National Disaster Risk Management Fund
NGFS	Network for Greening in the Financial System
NIC	National Insurance Commission
NTF	National Task Force
NVID	Normalized Difference Vegetation Index
OECD	Organisation of Economic Cooperation and Development
OJK	Otoritas Jasa Keuangan (Indonesia, Supervisory Authority)
PARK	Perusahaan Asuransi Risiko Khusus
PIRA	Philippine Insurer and Reinsurer Association
PCIF	Philippine Catastrophe Insurance Facility
PRGBI	Pool Reasuransi Gempa Mubi Indonesia
PPP	Public- Private Partnership
REI	Relative Evapotranspiration Index
RFPI	Regulatory Promotion of Pro-poor Insurance Markets in Asia
SA	South Africa
SDC	Swiss Development Cooperation
SDGs	Social Development Goals
SECP	Securities and Exchange Commission of Pakistan
SIF	Sustainable Insurance Forum
SLA	Service Level Agreement
SME	Small and Medium Enterprise
TWG	Technical Working Group
UAIS	Uganda Agricultural Insurance Scheme
UCONN	University of Connecticut
UKAid	United Kingdom Department of International Development
UN	United Nations
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNSGSA	UN Secretary-General's Special Advocate for Inclusive Finance for Development
USAID	United States Agency for International Development
USD	United States Dollar
WBG	World Bank Group
WFP	World Food Programme
WII	Weather Index Insurance

## Annex 1 - Literature and Websites used

- A2ii (A. Camargo). (2019). *The role of insurance supervisors in climate risk insurance*.
- A2ii (Beyers, Chiew, Gray and Hougaard). (2020-9). *Evolving supervisory mandates in Sub-Saharan Africa, implications for data practices*.
- A2ii (R. Carpenter). (2018). *Index Insurance - Status and Regulatory Challenges*.
- A2ii (R. Simões). (2021). *Index-insurance: 2020 Status and Regulatory Challenges*.
- A2ii (Wiedmaier-Pfister, Chiew, Grant). (2016). *Proportionate Regulatory Frameworks in Inclusive Insurance: Lessons from a Decade of Microinsurance Regulation*.
- A2ii (Wiedmaier-Pfister, Ncube). (2018). *Mobile Insurance Regulation*.
- A2ii. (2018). *Inclusive insurance - A missing piece in many National Financial Inclusion Strategies*.
- A2ii. (2020). *Climate risk insurance for the underserved and vulnerable: What is the role of insurance supervisors to foster its responsible development?*
- ADB. (2020). *Assessing the enabling environment for disaster risk financing, a country diagnostic toolkit*.
- ADB. (2020b). *The integrated disaster risk management fund, sharing lessons and achievements*.
- AFI. (2018). *National Financial Inclusion Strategies and Inclusive Insurance*.
- AFI. (2021). *Disaster resilience through financial inclusion - The role of financial regulators in disaster risk reduction*.
- AIC. (2020). *Uganda Agricultural Insurance Scheme (UAIS): Progress Report in the UAIS as at 31st December 2019*.
- AXA. (2018). *Guide to Government Pools*.
- BMU, PIK, et al. (2018-11). *Climate and Catastrophe Risk Assessment*.
- BMZ+MIN (Wiedmaier-Pfister and Voss). (2013). *Discussion Paper Consumer Protection in Microinsurance*.
- Cenfri. (2018). *Regulating for Innovation*.
- Cenfri. (2018). *The role of insurance in inclusive growth: Ghana Diagnostic*.
- Deloitte Center for Financial Services. (2019). *Climate risk: Regulators sharpen their focus. Helping insurers navigate their climate risk landscape*.
- Ethiopian Development Research Institute (Mihretu). (2015-5). *The Ethiopian Insurance Industry and the Reinsurance Business' Legal Environment*.
- EU. (2018). *Using insurance in adaptation to climate change*.
- EY for the EC (Ernst & Young for the European Commission). (2014-7). *Study on co(re)insurance pools and on ad-hoc co(re)insurance agreements on the subscription market*.

- FANPRAN (DFID et al). (2016-3). *Policy Brief: Taxation for Weather Based Index Insurance in Kenya, Malawi, Rwanda, Tanzania, Uganda and Zambia.*
- Geneva Association. (2021). *Regulatory Considerations for Digital Insurance Business Models .*
- Germanwatch. (2020). *Global Climate Risk Index 2020: Who Suffers Most from Extreme Weather Events?*
- GFDRR. (2018). *Advancing Disaster Risk Finance in Saint Lucia.*
- GFDRR, WBG, JAICA, UKAid. (2020). *Albania - Disaster Risk Finance Diagnostic.*
- GIZ (Hazell, Jaeger, Hausberger). (2021-forth-coming). *Innovations and Emerging Trends in Agricultural Insurance - an Update (forth-coming).*
- GIZ. (2016). *Innovations and emerging trends in agricultural insurance.*
- GIZ. (2019). *India: NAPCC Process Country Case Study.*
- GIZ and NAP Global Network. (2019). *Engaging the Private Sector in National Adaptation Planning Processes.*
- GIZ, I2I, CENFRI, FMT. (2019). *Insur;Hack Egypt's first insurtech hackaton.*
- GRIF. (2021). *Global Risk and Insurance Facility, Annual Report.*
- GSMA. (2020). *The mobile economy 2020.*
- GSMA. (2021, February 1). *GSMA Intelligence Data .* Retrieved February 1, 2020, from <https://www.gsmainelligence.com/data/>
- IAIS. (2015). *Issues paper on conduct of business in inclusive insurance .* IAIS .
- IAIS. (2019). *Issues Paper on index-based insurances, particularly in inclusive insurance markets.*
- IAIS. (2019). *Strategic Plan 2020-2024.*
- IAIS. (2020). *Application Paper on the Supervision of Climate-related Risks in the Insurance Sector, for public consultation.*
- IAIS and SIF. (2018). *Issues Paper on Climate Change Risks to the Insurance Sector.*
- IAIS and SIF. (2021-5). *Application Paper on the Supervision of Climate-related Risks in the Insurance Sector .*
- IC Philippines. (2020 (26.11.2020)). *Guidelines on institutionalization of "remote selling initiatives" as a permanent mode of selling insurance products.*
- IC Philippines. (2021-4). *Circular Letter No 2021-27 On the Strict implementation of sustainable catastrophe insurance premium rates and establishment of the Philippine Catastrophe Insurance Facility (PCIF).*
- IDF (Law, Regulation and Resilience Policies Working Group). (2021). *Insuring Resilience, Critical Legal, Regulatory and Policy Architecture.*
- IDF. (2019). *How technology can help bridge the protection gap.*

- IDF. (2020). *The Development Impact of Risk Analytics*.
- IDF. (2021, June 7th). Breakout Group 3: Scaling up Resilience with Inclusive Insurance. WEB.
- IFAD. (2017). *Remote Sensing for Index Insurance, Findings and Lessons Learned for Smallholder Agriculture*.
- IFAD. (2021). *INSURED - Insurance Toolkit Rapid prototyping for inclusive insurance*.
- IFAD-Zion. (2020). Thematic Study on Insurance Programme in PTSLP -Fishermen. India.
- IGP and NDC Partnership. (n.d.). *Policy Note: Integrating Risk Finance into National Resilience and Adaptation Efforts*.
- IIF. (2021-1). *Prudential pathways: Industry Perspectives on Supervisory and Regulatory Approaches to Climate-related and Environmental Risks*.
- InsuResilience. (2021). *Integrating Risk Finance into National Resilience and Adaptation Efforts - Policy Note*.
- InsuResilience Global Partnership. (2021). *Live Talk III Gender and Climate Risk Finance*.
- IRA. (2017-5). *The UAIS*.
- MEFIN - GIZ. (2020). *Climate Risk Insurance in Vietnam - Concept Paper*.
- MEFIN - GIZ, A2ii, IAIS, Toronto Centre (Bulos and Wiedmaier-Pfister). (2019). *Climate risk and disaster risk insurance. The case of the Philippines- Making climate risk insurance inclusive*.
- MEFIN, GIZ, ISA. (2020). *Fact Sheet Agricultural Insurance in Vietnam, Decree 58 on agriculture insurance and its support policy*.
- MEFIN, MSC, GIZ, IGP. (2020). *First insights: Landscape of Climate and Disaster Risk Insurance in Asia and the Pacific*.
- MEFIN+GIZ. (2020-7). *Capacity Development Module 4: Climate and Disaster Risk Insurance as a Risk Financing Option: Advocating through Financial Literacy*.
- Milliman White Paper South Africa. (2021-4). *Climate change. The insurance industry and the South African environment*.
- MoF Indonesia (V. Krisna). (2019). *Indonesia - Disaster Risk Financing and Insurance - National Strategy to build fiscal resilience*.
- NGFS. (2019). *A call for action*.
- OECD. (2017-2). *OECD Recommendations on Disaster Risk Financial Strategies*.
- OECD. (2019). *Common Ground between the Paris Agreement and the Sendai Framework: Climate Change Adaptation and Disaster Risk Reduction, A brief for Policy Makers*.
- OJK (Otoritas Jasa Keuangan). (2020-12). *Formulating Natural Disaster Insurance Scheme for Micro, Small and Medium Enterprises in Indonesia*.
- Oxfam. (2020 Oct. ). *Climate Finance Shadow Report*.

- Phil-IC ( Interview with different departments, l. l. (11.6.2020).
- RFPI (Malagardis, McCord, Portula, Wiedmaier-Pfister). (2015-11). *Regulatory Impact Assessment Microinsurance Philippines*.
- RFPI. (2015). *Regulatory Impact Assessment of Micorinsurance Philippines*.
- Swiss Re. (2021). *Natural Catastrophes in 2020: secondary perils in the spotlight, but don't forget the primary-peril risks*.
- UCONN. (2018). *Regulation by catastrophe insurance: a comparative study*.
- UNFCCC. (2019). *25 years of Adaptation under the UNFCCC, Report by the Adaptation Committee*.
- USAID et al (ILO, IIF, IIII, GAN, UC Davis). (2020). *Feed the Future: G8 Enabling Action on Risk: Advancing Index Insurance by Closing the Gap between Knowledge and Implementation, 2014-1029 Report*.
- WBG (M. Hafemann). (2020). *Developing Insurance Markets, Use of Financial Health and Stability Indicators in Insurance Supervision*.
- WBG (Mahul, Skees). (2007). *Managing Agricultural Risk at the Country Level: the Case of Index-based Livestock Insurance in Mongolia*.
- WBG. (2018). *Disaster Risk Finance: A Primer: Core Principles and Operational Framework*.
- WBG. (2019). *Toward Scaled-up and Sustainable Agriculture Finance and Insurance in Uganda: Technical Report*.
- WBG. (2019b). *Uganda Policy Note, Unlocking Agriculture Finance and Insurance in Uganda: The Financial Sector's Role in Agricultural Transformation*.
- WBG. (2020). *Digital Financial Services*.
- WBG-GFDRR. (2011). *Index-based Livestock Insurance in Mongolia*.
- WFP. (Sept 2020). *R4 Rural Resilience Initiative Quarterly Report 2 (April - June 2020)*.
- WFP, Oxfam, et al, R4 Rural Resilience Initiative. (2015). *Annual Report 2014*.
- WFP, Oxfam, Green Delta Insurance. (2020). *Casual Labourers in Bangladesh to benefit from newly launched flood insurance scheme*.

## Websites consulted

### [About – InsuResilience](#)

<http://bcmongolia.org/mn/members-2/organizations/item/mongolian-re.html>

[https://climateinitiativesplatform.org/index.php/R4\\_Rural\\_Resilience\\_Initiative](https://climateinitiativesplatform.org/index.php/R4_Rural_Resilience_Initiative)

<https://egyptinnovate.com/en/%D9%81%D8%B9%D8%A7%D9%84%D9%8A%D8%A7%D8%AA-%D9%88->

<https://egyptinnovate.com/en/%D9%81%D8%B9%D8%A7%D9%84%D9%8A%D8%A7%D8%AA-%D9%88-%D8%A7%D8%AC%D8%AA%D9%85%D8%A7%D8%B9%D8%A7%D8%AA/insurhack-egypts-first-insurtech-hackathon>

[Morocco: Regulator issues info guide on catastrophic event insurance \(meinsurancereview.com\)](#)

[World Bank Doubles Philippines Natural Disaster Risk Insurance with US\\$390 Million in Coverage \(PCIF\)](#)

[World Bank Doubles Philippines Natural Disaster Risk Insurance with US\\$390 Million in Coverage \(of January 16, 2019\)](#)

<https://www.nat-re.com/>

<https://web.tarsim.gov.tr/havuz/homePageEng>

[No VAT for Climate and Disaster Risk Micro-insurance products – FBC News](#)

<https://www.willistowerswatson.com/en-BE/News/2021/05/lack-of-data-is-single-greatest->

<https://www.insurance.gov.ph/advisory-2021-09-26-may-2021>



## Annex 2 - The case of the Philippines

The Insurance Commission (IC) of the Philippines has been working on the following questions and new ventures to enable CDRI provision, and has agreed to share the following views (see boxes, which are the responses of the IC of 13.7.21).

### **1 - Is a legal definition of CDRI required from a supervisory perspective?**

**CDRI is a conceptual definition.** To date, the definition of CDRI is a conceptual one, driven by the global climate adaptation agenda and its stakeholders, such as the InsuResilience Global Partnership and its members (see chapters 1.1 and 3.3).<sup>131</sup>

**From a supervisory perspective, different lines of insurance pay into the concept of CDRI.** Taking the perspective of insurance regulation, the question if a definition is required from a legal perspective and this question requires a deeper analysis. The following thoughts were shared:

**1a - What is CDRI referring to?** Is it a certain type of products? Or a class of insurance policies? The law provides certain clarifications, and it may fall under various. The IC considers the following lines to belong to the CDRI concept:

- Casualty lines
- Liability
- Property
- Fire and other allied risks
- Agricultural insurance

*IC: Experience wise, making the definition of CRDI a legal/mandatory one will provide a more stable and steady understanding throughout the industry that the IC regulates.*

*This will be more efficient and any subsequent regulations or other issuances that will be issued by IC pertaining to CRDI, if needed, will be clearer. Being a mere concept, it is always susceptible to changes and instability as CRDI currently presents an abstract concept.*

*This will also create more uncertainties or inconsistencies with regard to the difference with other existing products it may cover or with an existing product that already covers the same risk(s).*

### **1b - Is a definition required? And why? To make CDRI a separate class of insurance?**

Representatives of the IC expressed that they may consider to adopt a legal definition for CDRI if there are clear reasons why.

*IC: Be that as it may, the definition, if any, should be broad enough to include every conceivable CDRI event but, at the same time, clear as regards the parameters/principles which will address a given scenario.*

**1c - It is a general approach, rather than a specific line? Is it index-insurance or can indemnity insurance also be included?** In the Philippines, parametric insurance is currently

<sup>131</sup> [Members & Partners – InsuResilience](#)

not regulated. NIC is considering to regulate it, which would need to be presented to congress for approval.

*IC: Yes, it can be both. Philippine insurance law does not provide for a framework for or definition of parametric insurance. While there are existing Circular Letters which deal on parametric insurance, especially on Micro Agricultural Insurance Products, the Insurance Code does not have any specific provision on the matter. NIC is considering to provide a specific provision on a parametric insurance which would need to be presented to congress for approval.*

## **2 - Establishing a disaster risk insurance pool for MSMEs and other groups**

**There will be a new co-insurance pool, the Philippine Catastrophe Insurance Fund (PCIF).** The Insurance Commission of the Philippines together with the industry is preparing a new facility, namely to establish a catastrophe insurance risk pool. The World Bank has been supporting this venture.<sup>132</sup>

**Circular Letter 2021-27** is asking the non-life industry to implement the sustainable catastrophe insurance premium rates and formally establish the Philippine Catastrophe Insurance Facility (PCIF). Risks covered are lightening, earthquake and flooding.

**Stakeholders** from the sector are involved in its design and dialogue around it and regularly reunite in a Technical Working Group (TWG). The NIC is chairing the TWG. Participants are the NIC and their expert staff from various departments, the entire non-life insurance industry and the WBG providing technical support. The IC made participation of a representative of each of the non-life insurance companies compulsory by way of Circular in 2021-27 dated 12 April 2021.<sup>133</sup>

The TWG is currently working on a series of topics and dealing with questions like:

- Discussions are ongoing with three large global brokers how to make the Facility viable.
- How much is to be ceded to the facility and what to reinsurance, what are the incentives.
- Other open questions are how to grow the fund, for example in terms of tax exemption, which could be used to capitalize it.
- What is a correct tariff? Premiums might have to be raised, as insurers should not subsidize this product from other lines.
- How to convince the market to take-up this insurance?

### **The key features of the new Facility:**

- **The Facility** will not count on government funding. Institutionally, it will be managed by the National Reinsurance Corporation of the Philippines (NatRe<sup>134</sup>). This is set-up as a pool, as creating an entity would have been quite cumbersome.

<sup>132</sup> [World Bank Doubles Philippines Natural Disaster Risk Insurance with US\\$390 Million in Coverage](#)

<sup>133</sup> IC Philippines, 2021-4

<sup>134</sup> The only local professional reinsurance company in the Philippines, see <https://www.nat-re.com/>

- **Data for risk modeling** comes from the Department of Science, they have data from their disaster mapping, and there is more data to tap into, like geo hazard data.
- A **Memorandum of Understanding** between the non-life industry associations Philippine Insurers and Reinsurers Association (PIRA),<sup>135</sup> NatRe and the IC.
- The multi-hazard insurance policies will be sold as **yearly contracts**.
- The launch is envisaged for **April 2022**.
- It is a unique facility in the Philippines that a **multi-hazard insurance program**.
- The **target group MSMEs** and anyone who can afford the rate, as the product is not subsidized.

**The IC is to provide the regulatory environment. The following regulatory / policy challenges have been identified around the Facility under development:**

- 1) **Exemption from taxation is being sought.** The current levels of tax on non-life insurance is high with 26-27%.<sup>136</sup> IC cannot regulate tax exemptions, and for this area, specific legislation is needed to exempt the facility. This will require a law, a situation a tax expert is currently looking at. IC is supporting the policy dialogue on this topic.
- 2) **The volume of reserves for the Facility is under discussion.** As with other insurance, the NIC is tasked to define the volume of reserves. It needs to be clarified if contributions could be considered part of the reserves.
- 3) **Selecting the correct tariffs to strike a balance between incentives/affordable rates for the consumers and long-term viability.** Finding the correct tariff is challenging. It might be necessary to start, and then premiums might be raised as insurers should not subsidize from other lines. While MSME should buy into it, and the public needs to be convinced to buy it. It should be viable and a low price should not jeopardize viability!
- 4) **Others regulatory or supervisory topics are expected to arise.** When implementation starts, like regarding consumer protection.

### **3 - Consumer protection issues in the Philippines**

To date, one non-life company is providing a micro-agricultural product to cover rice and corn. IC is concerned about broadening the scope of micro agriculture insurance and also, about consumer protection.

#### **Seeking the right disclosure of the terms and conditions of the product in remote selling.**<sup>137</sup>

A challenge the IC sees here is the relationship between the insured and insurance company and / or intermediary. As usually, in insurance, the relationship is largely personal, and misunderstanding can occur when the agent does not fulfil the obligation to explain the

<sup>135</sup> Philippine insurer & reinsurers association, see <https://www.pirainc.com/>

<sup>136</sup> <https://www.asiainsurancereview.com/News/View-NewsLetter-Article/id/76206/type/eDaily/Philippines-Govt-urged-to-reduce-tax-on-non-life-insurance> (of 9.4.21)

<sup>137</sup> Phil-IC ( Interview with different departments, 11.6.2020)

policy very well. This can be improved, when sales and explanation – they have a new framework, born out of the necessity during the pandemic. With the remote selling initiative during COVID-19, agents and employees are now allowed to sell by way of video conference and other remote selling options, like Facebook, or Webex meetings. IC has adopted a circular on remote selling (CL 2020-109).<sup>138</sup> However, the purchase process is still its largely personal, since the insured relies on words of the agents to explain the product to them. The IC confirms that they do not collect separate data on this product.

**Ensuring a free-look period is also applicable to micro-agricultural products.** The clause that the consumer can terminate the policy, the so-called “free-look period” of 15 days is not applicable to most insurance policies. Usually, this clause is applied for personal accident and health coverages. This would mean a full refund or premiums paid is triggered, when the client steps back within 15 days.

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<sup>138</sup> IC Philippines, 2020 (26.11.2020)

## Annex 3 - The case of Vietnam

**Two CDRI lines are in the focus.** The insurance supervisor of Vietnam, Insurance Supervisory Authority (ISA) focuses on two lines of CDRI products, namely, property insurance for broad population segments, and agricultural insurance.<sup>139</sup>

**Legal changes under way.** To enable CDRI provision, there are some legal changes under way: The new insurance law that will be adopted in 2021 includes the following changes:

- **A definition of “risk pool”** will be included
- **Index-insurance** was not allowed, and this concept will be included.

**Other work to secure an enabling environment.** ISA has been engaged in supporting a series of other topics, or considering such an engagement, as follows:

- 1) **Support data provision.** Data availability is a huge challenge. ISA has been engaged in fostering the use of satellite images for agricultural insurance.
- 2) **Revisit agricultural subsidies to make them smart.** ISA has been involved in a policy discussion on subsidies for agricultural insurance. The Agriculture Working Group and ISA are both active in the steering committee on government subsidies
- 3) **Support awareness raising.** Recognition that ISA should help to raise communities’ and groups’ awareness on climate risk and insurance. This includes raising awareness (and requiring) other measures that first of all protect the asset, e.g., flood protection for housing.
- 4) **Assess if contracts are consumer friendly.** Once CDRI policies are available for low-income people, the issue of terms and conditions and disclosures to the consumer should be reconsidered. These consumer groups are new to insurance, and they may not understand traditional policies’ wordings.
- 5) **Engage with other authorities.** ISA has been striving to collaborate with other authorities in Vietnam, such as the Ministry of Agriculture.
- 6) **Public-private cooperation** and dialogue should be on-going.
- 7) **Demand studies.** ISA recognizes that research to understand the target group better is needed.
- 8) **Use of technology,** for example to facilitate the claims payment process, and generate data (via satellites).

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<sup>139</sup> MEFIN - GIZ, 2020

## Annex 4 - The case of Pakistan

### 1. Definition of CDR

*Questions: Have you defined CDRI in your jurisdiction? If not, do you think that is necessary? Which lines and products or schemes would you consider here?*

CDRI products are not defined in Pakistan, however, we consider defining these products necessary.

The CDRI products may include life and non-life insurance products with standardized features suitable for the target groups' needs with subsidized/ affordable premium.

**2. Disaster risk management** is primarily the mandate of NDMA and a dedicated body is formed by the Government of Pakistan with international assistance (US\$200 million by the Asian Development Bank, grants of US\$3.4 million by the Government of Australia and US\$1.5 million by the Swiss Agency for Development and Cooperation (SDC)) named as National Disaster Risk Management Fund (NDRMF), which is responsible for the implementation of a national disaster management plan (NDMP), a National Flood Protection Plan, among other government policies.

The NDMP comprises of disaster risk reduction (reducing vulnerabilities) and disaster risk financing (fiscal management of natural disaster risks).

The NDRMF has formed a synergy group for formulation of a national disaster risk financing strategy in accordance with which, the suitable DR financing instruments will be developed.

### 3. Existing coverages, subsidies and other details

The coverage for disaster risk is currently present under the existing life and non-life insurance products such as property insurance, term life insurance etc. but specific CDRI products are not developed or marketed as such.

The **crop loan insurance scheme (CLIS)** in Pakistan provides protection to farmers against disaster risk as the claim becomes payable on declaration of disaster by the local government authority, and reduction in crop yield by 50%. This scheme is fully subsidized by the Government of Pakistan for farmers with landholding of up to 25 acres.

The **agriculture insurance subsidies** are present, as mentioned above i.e. Crop loan insurance scheme, Punjab area yield index insurance.

There are other **crop and livestock insurance schemes at small scale** e.g. by PPAF and Punjab Area yield index insurance, and now health insurance scheme by the Government of Pakistan covers the population for in-patient services involving all medical and surgical expenses (40 million individuals in Khyber Pakhtunkhwa only) wherein risk is covered by the largest public sector life insurer.

#### 4. Specific topics and questions

Topic	Question	Response
<p>1. <b>Awareness and trust.</b></p> <p>Consumers are not aware, familiar with and don't trust insurance.</p>	<p>How can people be educated about CDRI? What can help to improve trust?</p>	<p>Mass-media campaigns can help improve financial literacy in general and significance of insurance protection in particular, especially in context of disasters.</p> <p>Such campaigns as part of disaster risk reduction (DRR) activities are being conducted by the NDRMF, so elements of financial literacy can be clubbed into it, however, <b>affordability</b> remains the primary issue in the context of Pakistan.</p>
<p>2. <b>Low affordability of these target groups.</b></p> <p>Consumers cannot afford regular premium payments</p>	<p>Do you know alternative approaches, like in the Horn of Africa, where people can work for their insurance premium (Horn of Africa Transfer for Adaptation, HARITA)? 140</p>	<p>SECP has proposed development of nation-wide <b>Crop Insurance Scheme</b> (NCIS) to the Ministry of Finance wherein premium is partially and totally subsidized for farmers based on landholding.</p> <p>NDRMF is working on formulation of the <b>DRF strategy</b> which includes development of suitable financing instruments for disasters, such as insurance, or catastrophe bonds, etc.</p> <p>The funding options for these instruments will be determined while taking into account the affordability aspect and readiness of the general public to take these products.</p>
<p>3. <b>Data is not available/limited/weak.</b></p> <p>Insurers don't avail reliable CAT risk data</p>	<p>Develop a NatCat model (like in Pakistan, NDRMF)</p> <p>Some risks are seasonal (hurricane season)</p>	<p>NDRMF is in the process of development of NATCAT model.</p> <p>However, data is a challenge here as well.</p>
<p>4. <b>Basis risk for index insurance</b></p>	<p>As ordinary people cannot absorb basis risks, what can be done to lower that?</p>	<p>Basis risk can be minimised by careful product/scheme design, for example in case of <b>area yield index insurance</b>, the unit area of insurance should be as small as practically measurable and area should be adequately homogenous, this can make the experience of majority of insured persons similar.</p> <p>Lessons from previously implemented schemes can be taken to improve the scheme design.</p>
<p>5. <b>Insurance policies</b> are not easy to understand</p>		<p>Simple and vernacular language is recommended while insurers may be required to comply with principle of fair treatment of customers (FTC).</p>

<sup>140</sup> [https://climateinitiativesplatform.org/index.php/R4\\_Rural\\_Resilience\\_Initiative](https://climateinitiativesplatform.org/index.php/R4_Rural_Resilience_Initiative)

Topic	Question	Response
6. <b>Subsidies are not smart</b> (livestock insurance, sometimes they are not smart but flat)	How can subsidies made transparent to avoid washing them away?	Such provisions need to be built in scheme design, for example, smart subsidies can be built as community development initiatives which create resilience against disasters and reduce losses.
7. <b>Product range is not adequate</b>	What can be done to incentivise industry to develop adequate products?	Consultation and liaison with the industry and building partial/ total subsidies on suitable products for the target groups can contribute towards adequate product development.
8. <b>Policy coherence not given; weak integrating of insurance with other government agendas</b>		Public-private partnership, the local disaster risk management authorities can launch such products.
9. <b>What risk management measures can be linked to insurance/ complementary?</b>	e.g. to require hurricane proof windows (for house insurance) or hail nets (for agricultural insurance)	The Disaster Risk Reduction (DRR) measures can be linked to insurance as these measures which reduce frequency or magnitude of losses should incentivize insurers in reasonable pricing.
10. <b>Other obstacles, e.g., land titles</b>	The structure of low-income families' houses is very weak, and they often have no land title. Can these houses be insured? What are other ways of loss assessment and basis for compensations? Index?)	Land records is an issue in Pakistan as many farmers are sharecroppers i.e. work as tenants for the land owners.  Also, land records are not digitalized therefore, accessing the records is administratively cumbersome process.  Rainfall can be used as an index where area/ land records cannot be determined.
11. <b>Pilots and sustainability</b>	How to avoid that the market jumps from pilot to pilot and ensure sound pilots?	Independent monitoring and evaluation and prudent project management is the key.  Also, the funded pilots should have independent and professional management.



Topic	Question	Response
12. <b>Regulatory hurdles and plans</b>	<p>a. Have you encountered any regulatory hurdles in your jurisdiction, which need to be overcome? If yes, which are these?</p> <p>b. Are there any regulatory changes under way to date?</p>	<p>SECP is in the process of formulating regulatory framework for registration of <b>dedicated micro insurance companies</b>. The draft legislation is issued for public input and will be finalised after public consultation process completes.</p> <p>The SECP is also in the process of introducing significant regulatory reforms in the primary insurance law i.e., Insurance Ordinance, 2000.</p> <p>One of the reforms is the introduction of <b>definition of “index insurance”</b> and enabling powers for regulating the index-based insurance products, as this product may evolve in the future through integration of technology and innovative payment platforms.</p> <p>The regulatory challenges may include <b>capacity constraints</b> in terms of number for engaging with relevant regulated areas/ projects.</p>

## 5. Ideas for the entry points for insurance supervisors

*In your market for the industry, which engagement areas to you see in principle to broaden inclusive CDRI? And what do you already do?*

**These are some ideas from what we have seen in some markets:**

1. Engage in policy dialogues with other agendas like disaster risk, climate change, finance	<ul style="list-style-type: none"> <li>○ Working with other authorities</li> <li>○ Private sector joining</li> </ul>
2. Ensure your mandate includes CDRI for the vulnerable, poor, and MSMEs	<ul style="list-style-type: none"> <li>○ This should be done, <b>currently climate and disaster risk insurance products are not defined distinctly.</b></li> </ul>
3. Understanding the target group	<ul style="list-style-type: none"> <li>○ Research, demand studies</li> </ul>
4. Improve assessment of climate risk	<ul style="list-style-type: none"> <li>○ Should be done</li> </ul>
5. Fostering pilots	<ul style="list-style-type: none"> <li>○ Should be done</li> </ul>
6. Public private partnerships	<ul style="list-style-type: none"> <li>○ Should be done</li> </ul>

7. Support technology and innovation	<ul style="list-style-type: none"> <li>○ This should be done. We have allowed rainfall-linked index-based insurance product in our regulatory sandbox second cohort. The testing will start within two months.</li> </ul>
8. Ensure quality standards of contracts and distribution arrangements	<ul style="list-style-type: none"> <li>○ This should be done.</li> </ul>
9. Incentives for stakeholders	<p>Brainstorming session on the following points may be done</p> <ul style="list-style-type: none"> <li>○ What can incentivize insurers?</li> <li>○ Which other stakeholders need to be incentivized, and how can that best be done?</li> </ul> <p>Tax benefits for policyholders and insurers</p>
10. Stakeholders' knowledge	<ul style="list-style-type: none"> <li>○ Interaction between different parties to exchange knowledge and build knowledge bank on this area</li> </ul>
11. Any other ideas	<ul style="list-style-type: none"> <li>○ Consistency, alignment and strategic management of this issue.</li> </ul>

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