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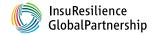
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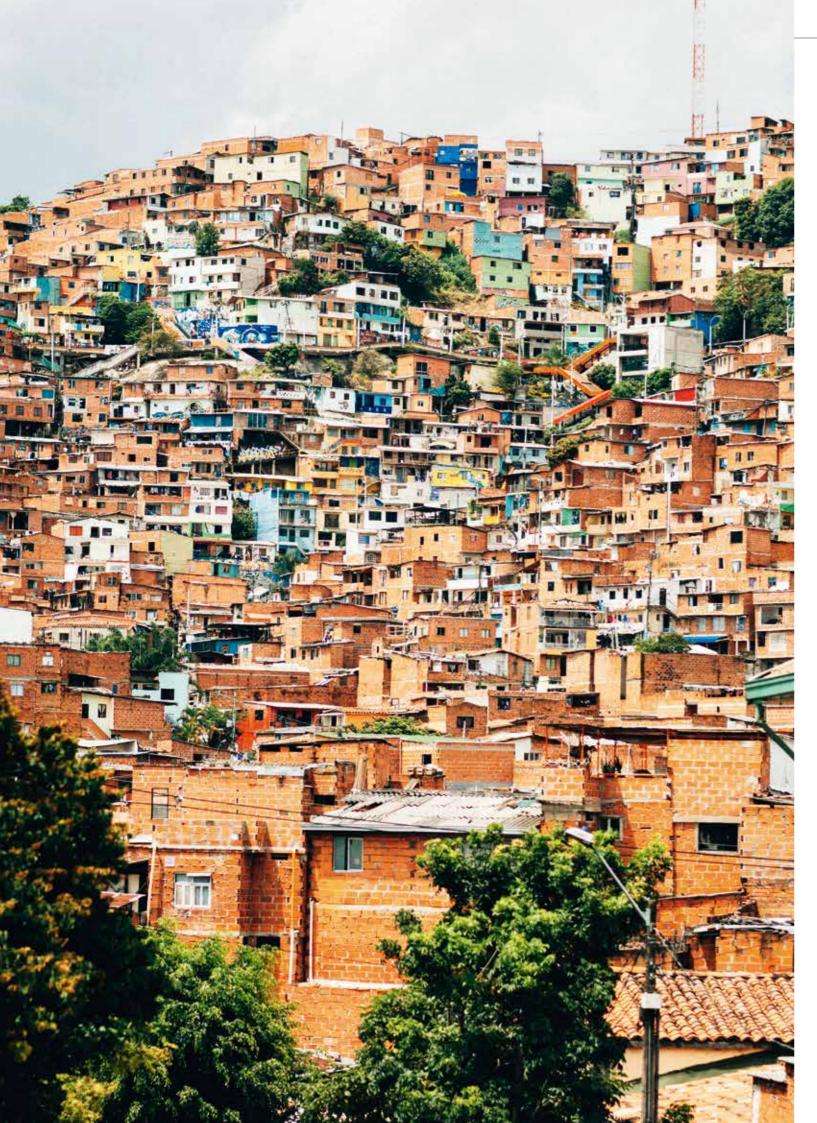
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## **Foreword**

Looking at the climate issue, the year 2022 generated mixed results. On the one hand the world saw disasters such as extreme floods in Pakistan and heat waves in India, with devastating effects for people and ecosystems. On the other hand, the year 2022 has been ground breaking with respect to averting, minimizing and addressing climate-related losses and damages. The decision by the United Nations Conference of the Parties (COP27) to create a specific fund for loss and damage marked an important point of progress. Yet, progress was not only made at the negotiation table, but also on concrete action. The G7 and the V20 ("The Vulnerable Twenty") committed themselves at COP27 to jointly work towards a Global Shield against Climate Risks ("Global Shield"). They combined that commitment with the clear objective to provide and facilitate more and better pre-arranged protection against climate and disaster related risks. The Global Shield will build on the substantial progress the V20/G20 InsuResilience Global Partnership (IGP) has already made in that direction and will thus be able to deliver timely, concrete actions.

As an important implementing programme of the IGP, we are proud of the InsuResilience Solution Fund's (ISF) contribution in the area of climate and disaster risk finance and in helping to establish the foundation of the Global Shield.

I would like to point to some of the ISF highlights in

- By launching calls for proposals for climate risk insurance products, ISF serves as a catalyst for the development of innovative products and needs-based solutions. With two such calls in 2022, we received 93 applications from partners for co-financing the development of a variety of products. They covered a wide spectrum of sectors and included for instance insurance solutions for agricultural production, disaster relief or public assets, and urban infrastructure.
- The ISF signed ten grant agreements in 2022, raising the level of support for the development of

insurance products to 25 ongoing projects. This gives us an in-depth understanding of the opportunities and challenges of innovative insurance solutions, be it for national governments, cities or individual households.

- By contributing to the Tripartite Agreement between the German Federal Ministry for Economic Cooperation and Development (BMZ), the Insurance Development Forum (IDF), and the United Nations Development Programme (UNDP), ISF is supporting an innovative public-private partnership. By structuring best-fit processes and procedures, the ISF helps to leverage expertise and capacities of the private sector to develop country specific climate and disaster risk insurance solutions. In 2022, another four projects under the Tripartite Agreement were developed and have received ISF approval for co-funding.
- Since the launch of the **Global Risk Modelling Alliance (GRMA)** programme in June 2022, the ISF supports vulnerable countries in enhancing their understanding of risks and in strengthening their own capacities in conducting climate and disaster risk assessments. Such an enhanced understanding is an important basis for countries to quantify their financial protection gaps and thus an essential prerequisite to identify the support they actually need. The GRMA thus constitutes a key resource for the Global Shield Initiative. By filing a request to join the GRMA as partner country in October 2022, Pakistan is the first pilot country under the Global Shield where ISF will engage in immediate action.
- The ISF will remain an important element of the V20/G20 support for vulnerable countries to address climate-related losses and damages. With the additional funding received for a new project phase from the German Government in 2022, the ISF will be able to continue to expand its support.

In this annual review, we reflect upon our achievements, our broadened scope of activities, and lessons learned over four years of implementation. We remain grateful to our partners around the world who have inspired us with many innovative ideas, concepts and creativity. New opportunities lie ahead with the launch of the Global Shield Initiative: under this umbrella, the ISF will share its experiences to help scale up Climate and Disaster Risk Finance and Insurance (CDRFI) efforts worldwide. We are working together to make a meaningful contribution to strengthening resilience of vulnerable communities through climate risk finance and insurance, even under the most challenging conditions. We look forward to an ambitious agenda in 2023.

I wish you an interesting and enjoyable read.

#### **Fatma Dirkes**

Frankfurt School of Finance & Management, Director and Vice President; ISF Technical Committee Member



"In 2022, our fourth year in operation, we made considerable progress in achieving our mission to close the protection gap for vulnerable populations, while contributing to strengthening CDRFI architecture globally."

**Fatma Dirkes** 





### The Global Shield against Climate Risks

# THE INSURESILIENCE SOLUTIONS FUND, GLOBAL RISK MODELLING ALLIANCE AND THE GLOBAL SHIELD SOLUTIONS PLATFORM ARE ESSENTIAL ELEMENTS OF A NEW GLOBAL FINANCING ARCHITECTURE

The year 2022 represents a milestone for **Climate and Disaster Risk Finance and Insurance** (CDRFI). With the launch of the **Global Shield against Climate Risks**, the global architecture for pre-arranged finance will be built on more systematic, coherent and sustained mechanisms and funding. It will also bundle different activities in the field of climate risk insurance and prevention.

All three programmes, the InsuResilience Solutions Fund (ISF), the Global Risk Modelling Alliance Programme (GRMA) as well as the Global Shield Solutions Platform (GSSP) form an essential part of this new architecture. They are all managed by Frankfurt School of Finance & Management and contribute each in a different but complementary manner to the following overarching objective: to provide greater financial protection in order to avert, minimise and address losses and damages exacerbated by climate change.

# The ISF – catalysing new partnerships and innovative insurance solutions

The ISF contributes to the goal of closing the protection gap in vulnerable countries. It is cofunding consortia between the demand and supply side that develop innovative climate risk insurance solutions. The scope of the ISF is not limited to specific regions or sectors. Therefore, it can direct its support in areas with the highest demand and the best-fitting solutions.

#### THE GRMA – opening up private and public risk expertise to enhance local risk understanding

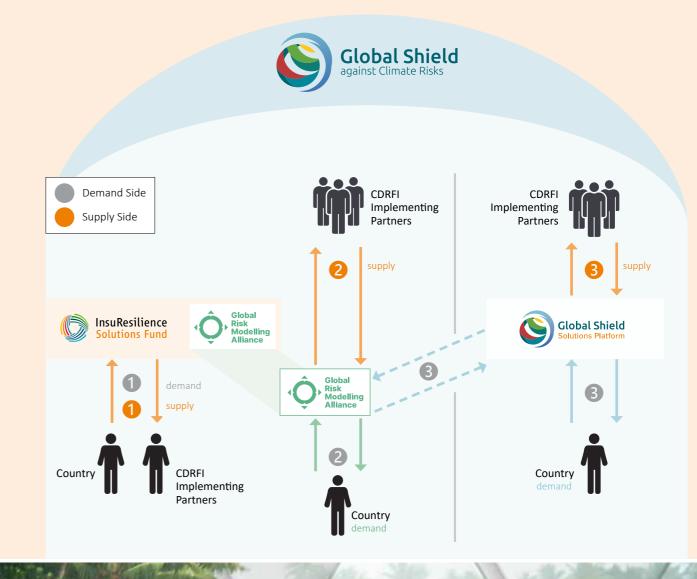
The ISF will contribute to the Global Shield through the GRMA as an integral part of ISF's research and education activities. GRMA is supporting countries to enhance their capabilities in analysing current and future risks resulting from climate change. It provides governments with the necessary insights on the topics which form the basis for developing comprehensive strategies relating to adaptation and climate risk finance. A unique public good partnership, GRMA leverages the experience and know-how of the private sector in risk modelling and risk analysis for the benefit of vulnerable countries.

#### The GSSP – structuring tailor-made programmes to enhance countries' access to best-fit CDRFI solutions

The **GSSP** is a multi-donor fund and represents a core element of the Global Shield. It will provide advice and grant funding to countries supported under the Global Shield in order to create tailor-made climate and disaster risk financing solutions, including a wide range of instruments. The **GSSP** will advise countries in structuring a needs-based programme and support the development of selected solutions side by side with country representatives under specific thematic windows.

For further information please contact the ISF Team (info@insuresilience-solutions-fund.org) or the Global Shield Secretariat (secretariat@globalshield.org)











# The Global Shield Against Climate Risks –

# Overview of the ISF, GRMA and GSSP

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	INSURESILIENCE SOLUTIONS FUND (ISF)		GRMA PROGRAMME (managed by ISF)	GLOBAL SHIELD SOLUTIONS PLATFOR (GSSP)	
Mandate	Catalysing consortia between demand and supply side for innovative climate risk insurance solutions		Empowering countries to develop an autonomous risk perspective and understanding	Offering a service platform advising countries to close their protection gap and providing access to a wide spectrum of CDRFI implementation partners and solutions	
Focus	Supporting development and improvement of climate risk insurance solutions		Strengthening local capacity to analyse and understand risk	Structuring and supporting country programmes to develop and implement a wider spectrum of CDRFI solutions*	
Supported Products	Climate risk insurance products on macro-, meso-, micro-level		Climate risk models, data and risk analysis tools	Risk retention mechanisms and risk transfer solutions against climate and disaster risks on macro-, meso-, micro-level	
Regional Scope	All ODA countries		All ODA countries	All ODA countries - during first phase, selected pathfinder countries	
Target Group	Poor and Vulnerable population		Poor and Vulnerable population	Poor and Vulnerable population	
Call for Proposals	Open Call for Proposals without regional or sectoral focus		Country specific Call for Proposals for modelling and data support	Country specific and thematic* Call for Proposals for specific CDRFI solutions	
Access for demand side	1 Submission to Call for Proposals by (sub-)sovereigns, public & private entities, NGOs, humanitarian organisations, representing demand side		2 Direct Application by (sub-) sovereigns or access via <b>GSSP</b> as implementing partner of <b>GSSP</b>	3 Country Application to Global Shield	
Access for supply side	1 Submission to Call for Proposals by academia, public & private entities, NGOs, humanitarian organisations, with at least one party willing to act as a risk taker		2 Submission to Call for Proposals by academia, risk models, public & private entities, NGOs, humanitarian organisations	3 Submission to Call for Proposals by academia, public & private entities, NGOs, humanitarian organisations	
Funding Volume	Max. co-funding 2,5 mEUR		Funding country specific	Funding country specific	
* Specific windows for global and regional thematic support will be offered based on respective needs					

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### **About InsuResilience Solutions Fund**

#### **WHO WE ARE**

The InsuResilience Solutions Fund (ISF) promotes the development of innovative and sustainable climate risk insurance products that improve the resilience of poor and vulnerable households in lowand middle-income countries against the impacts of climate change and extreme weather events.

ISF was established and is funded by KfW Development Bank on behalf of the German Ministry for Economic Cooperation and Development (BMZ). Frankfurt School of Finance & Management is responsible for implementing the programme since 2019.

ISF represents a pivotal implementing programme of the InsuResilience Global Partnership. This global partnership for climate and disaster risk financing was launched at the 2017 UN Climate Conference in Bonn. It is a joint initiative of G20 and V20 countries, bringing together more than 110 government institutions, insurers, NGOs and academia, to promote the development of climate- and disaster risk finance instruments, including insurance. The partnership's vision is, among others, to increase the share of climate and disaster losses to vulnerable populations covered by CDRFI solutions by 15% and to help protect an additional 500 million poor and vulnerable people in developing countries against extreme-weather events by 2025. Through our activities, we actively contribute to fulfilment of the goals of the Vision 2025 strategy.

With its support, ISF also constitutes an important implementing programme for the Tripartite Agreement between BMZ, the Insurance Development Forum (IDF) and UNDP, aiming to increase resilience in climate-vulnerable countries.

#### **OUR MISSION AND VISION**

**Our mission** is to support the development of innovative climate risk insurance products to mitigate the negative impacts of climate change such as floods, storms, droughts and cold spells, and help vulnerable and poor households access climate and disaster risk insurance.

**Our vision** is to close the protection gap by focusing on solutions for those who are disproportionately exposed to climate risks and who currently have no access to adequate risk management and insurance solutions.

# OUR APPROACH: LEVERAGING PRIVATE SECTOR EXPERTISE

High development costs, lack of market knowledge, and uncertain demand discourage international insurance companies from investing in new insurance solutions in developing countries. Moreover, local companies are often in need of additional expertise and finance to develop innovative products. By providing partial grant funding for product development, ISF creates incentives for international and local companies to work together to develop insurance markets in low- and middle-income countries and reduce high market-entry barriers. At the same time, we also contribute to improved risk management by providing detailed information on climate risks helping to increase risk understanding and develop insurance markets for climate-related hazards.

We systematically leverage private sector expertise and risk capital through all stages of insurance product development. We bring together companies from the insurance sector and the demand side in our partner countries, thus fostering consistency between demand and supply in the long term.

#### **OUR INSTRUMENTS**

To achieve our mission we follow an integrative value-chain approach covering all stages of insurance

product development, from risk analysis through concept development, to product introduction and scale-up.

#### THE THREE PILLARS OF ISF

MAKING **DEVELOPING DEVELOPING** INSURANCE 5 **INFORMED COHERENT** PRODUCTS 5 **DECISIONS** CONCEPTS **Research & Education** Concept Product development support development support Climate risk analyses **Grant funding** Grant co-funding & advice Feasibility studies Climate adaptation Product design project development Consulting services • Start-up costs Policy support

#### 1 CLIMATE RISK ANALYSIS

We conduct comprehensive climate risk analyses that provide governments, businesses, and civil society with important data and information. This empowers partners to identify the full spectrum of adaptation strategies necessary to build resilience with an integrated approach.

#### **2** CONCEPT DEVELOPMENT SUPPORT

We fund studies and consulting services to identify innovative climate risk insurance solutions. We provide guidance and advise on the elements that are necessary to design and conceptualise effective insurance projects, taking into account the specific needs of poor and vulnerable population groups.

#### **3** PRODUCT DEVELOPMENT SUPPORT

We support and promote joint product development and scale-up, as well as the market introduction of innovative climate risk insurance products that add value for the people hit hardest.



# ISF grant-based co-funding for development of climate risk insurance products





#### **IMPACT AND KEY ACHIEVEMENTS SINCE 2019**

Completed **nine climate risk assessments** (consisting of three Economics of Climate Adaptation studies and six CLIMADA studies) providing decision-makers with more comprehensive risk information for a better, targeted response to climate risks.

Implemented one Country Workshop for the Global Risk Modelling Alliance (GRMA), laying the foundation to enhance sovereign risk understanding and develop targeted capabilities in risk modelling in a first pathfinder country, and currently planning further workshops in others.

Funded **13 feasibility and other studies** for the development of new approaches and capabilities in climate risk insurance<sup>1</sup>.

Launched eight Calls for Proposals for insurance product development that have attracted interest from around the world. Applicants included businesses and organisations from the private and public sectors, as well as civil society.

Received almost **340 Concept Notes** to co-finance the product development of innovative climate risk insurance solutions.

25 Currently co-funding the product development of 25 climate risk insurance projects.

34.5

Altogether, these insurance solutions are projected to protect more than **34 million poor and vulnerable** beneficiaries by 2025.

40%

Overall, over 40% of product development costs have been met by the private sector: a significant leveraging of private sector capital and expertise.

#### **LOOKING AHEAD**

Going forward, ISF will expand its support in the area of climate risk analysis particularly through the GRMA, and support the market introduction and scale-up of successful products. It will continue to work closely with key partners of (sub-)sovereign governments, communities, private and public representatives of the insurance sector, academia, and civil society. Furthermore, ISF will strongly focus on implementation and CDRFI instruments, thus enhancing its contribution to Vision 2025 and international efforts to strengthen CDRFI architecture.

1 In total, 25 advisory and feasibility studies have been initiated, however, 13 of these have produced at least one major deliverable.

**DEMAND SIDE LOCAL PARTNER SUPPLY SIDE** (of either demand or supply side) e.g. MFI, (subsovereign) e.g. risk taker, technical government, private company PROJECT PARTNERS (committing own contribution\* **Submisssion of Concept Note Assessment PROCESS** Invitation **Submisssion of Full Proposal APPLICATION Assessment** Award of co-financing\*\* **Grant Agreement** OBJECTIVE **Climate Risk Insurance Product PROJECT Covering natural disasters** To the benefit of Poor and vulnerable people in ODA countries\*\*\*

<sup>\*</sup> Own contribution must at least match the requested ISF funding amount. May include financial and/or in-kind contribution.

<sup>\*\*</sup> Grant-based co-financing may be awarded of up to 2.5 million EUR.

<sup>\*\*\*</sup> Official development assistance (ODA) as defined by the OECD Development Assistance Committee (<u>DAC</u>). Countries that are official candidates for accession to the European Union or beneficiaries of the European Neighbourhood Instrument East are considered to be non-eligible for ISF funding. These include: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kosovo, Moldova, Montenegro, North Macedonia, Serbia, Turkey and Ukraine



# A breakthrough: The new Global Shield will help the most vulnerable countries

We have interviewed our Strategic Committee<sup>1</sup> members - Dr. Heike Henn from BMZ and Barbara Schnell from KfW Entwicklungsbank - on global climate and disaster risk finance, and the insurance agenda.

#### Dr. Heike Henn



Dr. Heike Henn
Director Climate,
Energy &
Environment;
Commissioner for
Climate Policy and
Climate Financing,
German Federal
Ministry for Economic
Cooperation and
Development (BMZ)

What are your key takeaways from the latest UN climate conference in Sharm el Sheikh, specifically related to the agenda of global Climate and Disaster Risk Finance and Insurance (CDRFI)? How will it shape Germany's priorities for 2023?

Henn: The outcome of the COP27 on Loss and Damage Funding Arrangements for the most vulnerable was a breakthrough. We are very much looking forward to actively engaging in the operationalisation process in the run to COP28. Germany clearly demonstrated that we are standing side by side with the most vulnerable countries and that they are not left alone with climate-related losses and damages. In this regard, the launch of the Global Shield against Climate Risks, together with our close partners from the V20, was certainly a key highlight. With regards to the Global Shield, in 2023, we will put all our efforts into the implementation. This means establishing a Coordination Hub and Financing Structure at the global level, and most

importantly it involves processes in the pathfinder countries with a focus on closing the protection gap for the most vulnerable.

### The Global Shield against Climate Risks was launched at the COP27. What difference will it make?

**Henn:** The Global Shield is all about providing more coherent, sustained, country-owned and better coordinated financing and insurance against climate risks. The risks are real and need to be taken seriously. To make this happen in the most effective way, we need a strong political will to boost pre-arranged financing as the most effective and efficient way to confront risks.

# How will the Global Shield change the CDRFI architecture and how can the InsuResilience Solutions Fund (ISF) contribute?

Henn: The Global Shield Solutions Platform (GSSP) is one of the three financing vehicles under the Global Shield. It is building upon the experience of the ISF and the Frankfurt School of Finance & Management (FFM), a not-for-profit academic institution managing both the ISF and GSSP. As a multi-donor grant facility, GSSP will be crucial in ensuring that the Global Shield is pursuing a needs-driven, inclusive approach through a governance system in which vulnerable countries are also represented. FFM's wide network will benefit the Global Shield, for example by leveraging close working relations with the private sector. GSSP can source suitable supply-side partners to address country requests for support and deliver the financial protection solutions requested. It can then provide funding for product development, technical assistance and premium support.

Your ministry is a first mover not only with regard to CDRFI in general. It is also the first development partner to contribute financially to the Global Risk Modelling Alliance (GRMA). What was Germany's motivation for joining the GRMA and investing in building capacities and infrastructure of climate risk analysis and modelling in partner countries?

Henn: Germany has recognised early on that risk analytics are essential to understanding how countries are affected by climate risks, today and in the future. Therefore, we highly value the GRMA as a public-private partnership between the V20 and the Insurance Development Forum and we are proud to financially support this important endeavour. The GRMA is designed to help vulnerable countries improve local capacity in risk quantification so that governments and local stakeholders can understand their exposure and vulnerability to climate risks. This enables them to determine how to prepare for future events using prearranged CDRFI products.

# How could the GRMA support the implementation of the Global Shield? What should be its main focus in 2023?

Henn: The GRMA will focus on two main objectives in 2023: First, it will assist authorities from Global Shield pathfinder countries to apply for GRMA support. A practical risk analysis programme will be designed, which is tailored to the countries' risk management needs. This involves developing a risk profile to guide a climate and disaster risk finance strategy, identify data and risk model gaps, define requirements for commissioned work to fill gaps, and develop operational models covering the partner's priority risks. Secondly, it will support countries in developing a sustainable, locally owned risk analytics function, which should be cross-departmental and cross-sectoral.

How could climate and disaster risk analysis be integrated more systematically into development cooperation to ensure that countries have comprehensive and sustainable strategies on climate risk management? This could ultimately contribute to achieving the Sustainable Development Goals

Henn: The first step is to establish reliable data sources – exactly what we seek to do with the GRMA. We need to strengthen local structures and long-term capacities to ensure a continuous data-driven approach towards climate risk management. This should also lay the foundation for an increased ownership of governments to become their own risk managers. All relevant government institutions need to be involved to enable a shared risk understanding that is incorporated into all dimensions of development planning and climate risk management strategies. Development projects and initiatives should not be derailed by climate disasters but instead be prepared for them – a proactive way of managing risks.

"With the Global Shield (GS), Germany has demonstrated that we are standing side by side with the most vulnerable countries and that they are not left alone with climate related losses and damages. In 2023, we will put all our efforts into implementation. The Global Shield is all about providing more coherent, sustained, country-owned and better coordinated financing and insurance against climate risks."

Dr. Heike Henn

1 The Strategic Committee is key to the governance of ISF, consisting of representatives of BMZ as donor and KfW as implementing organisation of ISF. Together with the Technical Committee, it is part of the Steering Unit, which is responsible for the strategic and technical oversight of all ISF operations.



# The Global Shield will enhance development finance

Barbara Schnell on the benefits of country risk analyses for the work of KfW.

#### Barbara Schnell



Barbara Schnell
Director Sector Policy,
KfW Development
Bank

The Global Shield against Climate Risks aims for better financial protection. It will use evidence-based, systematic, and inclusive analyses of countries' protection gaps, taking into account existing disaster risk reduction, adaptation, and Climate and Disaster Risk Finance and Insurance (CDRFI) efforts. Does this foster synergies with KfW's approach in development finance?

**Schnell:** In my view there are synergies in three different ways: First of all, I see them with our efforts to mainstream climate aspects within our portfolio. We analyse climate risks for all the projects financed by KfW and aim to find ways to reduce them. We also look at the remaining risks and possibilities to protect our partners against them, for instance by finding insurance cover. This is why we could benefit a lot from the risk analysis, the gap analysis and potential CDRFI solutions provided by the Global Shield, which complement our own analytical activities and might provide risk cover to our partners. Secondly, KfW is very active in supporting its partners to adapt to climate change. We could hence benefit from the risk analysis done by the Global Shield as input for the design of adaptation programmes. Thirdly, within the context of the InsuResilience Global Partnership, KfW is one of the largest financiers of providers of CDRFI solutions in developing and emerging markets, including the InsuResilience Solutions Fund,

the InsuResilience Investment Fund, and the Natural Disaster Fund or the African Risk Capacity. Now we are looking forward to also contributing to the CDRFI solutions provided by the Global Shield.

#### Besides the expected outputs – do you also see benefits in the process of the in-country coordination of the Global Shield itself?

**Schnell:** Definitely, I see a strong advantage in the envisaged transparent and inclusive process which will allow sharing results broadly, including with all development partners. This will help to align and direct support to where it is most needed and avoid the duplication of efforts. The analysis done by the Global Shield, in conjunction with the ownership of partner countries, can potentially become the common basis for risk-informed decisions in a respective country and for the design of new development projects and initiatives.

KfW spearheaded climate risk analysis already in the years 2013/2014, piloting it by using the Economics of Adaptation framework in Bangladesh and El Salvador. To which extent does climate risk analysis add to KfW's strategy and project designs today?

Schnell: It is now more than ten years ago that KfW started to climate-proof its project design. Honestly, it has been a long and rocky road to come to the full-fledged so-called climate mainstreaming process which we use today. There was a lot of trial and error of what works for our projects and what works in our institutional ecosystem. One of the most exciting journeys was piloting the Economics of Climate Adaptation (ECA) methodology in developing countries for the first time. ECA is much more than a climate risk analysis. It also takes projected economic and demographic development into consideration and weighs adaptation options identified jointly with local stakeholders according to their cost-benefit profile. Thus, policy makers can take informed decisions on

where to implement what kind of risk mitigation measures. Both in El Salvador and Bangladesh we have supported partners to design urban adaptation programmes including relying on traditional infrastructure but also a number of nature-based solutions. We still use ECA studies in cases where project locations and/or measures are yet to be defined.

# What exactly is the present practice of KfW in terms of assessing climate risks?

**Schnell:** Nowadays, every project at KfW Development Bank has to undergo a climate risk assessment very early on. This ensures that we identify the full potential in our portfolio to promote adaptation to climate change and resilience. We cannot afford to miss anything. For the vast majority of projects this potential exists and through a more comprehensive climate risk assessment, we specify relevant measures. Frankly, everything we do has to be sustainable in the long run, meaning it has to be resilient against climate change. For instance, in the transport sector we have seen projects in which the initial route planning was moved to a new place less exposed to climate risks. In the urban context it is of crucial importance not only to think of the infrastructure as a stand-alone asset but taking the broader climate risk management concept of a city into account. Hence, the adaptation measures will not only focus on construction standards but might include activities such as reversing surface sealing and creating water retention areas, e.g. parks, to prevent urban flooding.

But climate risk analysis not only plays a role when it comes to project design. It is also important for other parts of the bank. The risk department of KfW Banking Group for example will include climate risks as a separate risk category in the credit risk screening process in the course of 2023.

Pakistan is the first country to join the GRMA. First activities to support the country in strengthening its climate risk understanding have

started. They will help Pakistan to assess not only potential CDRFI solutions but also different adaptation investments. How could GRMA best support KfW's engagement in Pakistan to strengthen the resilience against climate risks?

Schnell: Tragically enough, in 2022 we have all seen how important it is to strengthen Pakistan's climate risk understanding and to support the country in assessing potential CDRFI solutions. Furthermore, investments in adaptation would help. This is the starting point of our activities as KfW. An appropriate data base, a proper risk assessment and improved in-country capacity/ expertise are crucial for identifying and successfully implementing projects that really help. For this reason, the envisaged GRMA approach, including 1) technical assistance, 2) the elaboration of publicly available models and data, and 3) the development of an open risk modelling platform provide very valuable inputs. We are therefore looking forward to continued regular exchange between our Pakistani partners, the GRMA experts, our local KfW office and the colleagues from the Pakistan-German Climate and Energy Partnership. We also hope to see synergies between the GRMA and the Global Shield processes which will be launched in Pakistan in the near future due to its status as pathfinder

"An appropriate data base, a proper risk assessment and improved in-country capacity and expertise are crucial for identifying and successfully implementing projects that really help. For this reason, the envisaged GRMA approach provides very valuable inputs."

Barbara Schnell



# We address the global imbalance in understanding risk

Ekhosuehi Iyahen on the special approach of the Insurance Development Forum (IDF).

#### Ekhosuehi Iyahen



Ekhosuehi Iyahen
Secretary General
of the Insurance
Development Forum

# What are the core principles of the IDF/V20 agreement on risk and resilience analytics?

**lyahen:** The V20/IDF agreement is for public-private partnership in risk and resilience analytics. There are three main principles behind it:

- Global imbalance in access to risk understanding:

  It's important to address this because climate and disaster risk finance can only move if the risk is understood. V20 member states are on the front line in terms of their vulnerability and the requirement to build climate resilience; working with them to strengthen and own the risk analysis is a huge step towards managing the risk.
- Public-private partnership: The private sector brings unique value and stands ready to share it. No sector understands how to measure physical climate risk for finance better than the re/insurance sector does, as echoed by UN Special Envoy for Climate Action and Finance, Mark Carney. Under the right conditions, this skill is eminently transferable and can help governments and cities build an efficient, layered fiscal strategy; to assess the costs and benefits of resilience measures, to inform their investments and to transfer residual risk to markets.

• A demand-driven approach: Nobody is "selling" anything here. A core principle is that the experts in a country's risk experience are the people of that country. However the GRMA offers what we hope is a helpful menu of resources on which countries can draw to strengthen their approach to risk decision-making. As described in the V20/IDF agreement, countries applying for the programme do so because they believe in building long term capability. This gives the greatest chance of combining the best of global risk science with local research and experience, on a sustainable basis.

Another principle for discussion is that of morality and climate justice. Historically the least resourced countries have been told what their risk is by well-meaning wealthy countries, without sharing of assumptions or lasting transfer of knowledge. If this was ever acceptable, voices such as those of the V20 are telling us it certainly isn't now.

# What makes the GRMA special and additive? Why is it not just another initiative on climate risk analysis?

**lyahen:** There are indeed plenty programmes out there offering climate risk analysis – although many of them fall well short of the standards which are necessary for critical decision support. In my view the following features of the GRMA make it additive:

- The use of private sector operational methodologies, which have been tested and honed in the context of extreme events for decades.
- A strict adherence to the principles of open risk modelling. This is not about open technology or data standards for their own sake – it is to enable governments to own, share and further develop models. This encourages debate, comparison and validation, which can only improve the quality of decision making under uncertainty.



 An emphasis on the value of local experience and research. Wherever possible, the GRMA funds the translation and adoption of local work for use on open platforms. Because local research creates the greatest trust.

#### What is the main motivation for the private sector?

**Iyahen:** The economist Milton Friedman once wrote: "The business of business is business". With this sentence he suggested that – within legal limits – the profit motive should come first. However, we now are seeing businesses concerned with much wider sets of motivations, often clustered under the headings of ESG (Environmental, Social, and Governance). But even that is not the primary reason for action. In the case of the IDF's work, and particularly the GRMA, it is also about operational realities. These realities include:

 Realising that it is important to build relationships and share understanding with the public sector to encourage new markets as existing markets mature.

- Acknowledging that it is necessary to understand risk across the planet, not just in our back yards. Everything is connected, and as rising temperatures change our assumptions, nobody can afford to be parochial. This is becoming particularly clear with regards to impacts on global supply chains.
- As we have seen in the debate on loss and damage at COP27, there is not enough money in the public sector alone to address the climate resilience challenge. It is the job of the private sector to bring capital to risk. The motivation is already there – they just need the right conditions. Building a shared understanding of risk alongside the private sector, speaking the same language, can only help create the conditions to unlock private sector capital and grow emerging markets.

These elements underscore the importance of the GRMA and the work of the IDF.





# We help to build financial protection markets by enhancing risk analysis

Sara Ahmed on the benefits of the Global Risk Modelling Alliance (GRMA).

#### Sara Ahmed



Sara Ahmed
Advisor to the
Vulnerable 20 Group
of Finance Ministers
(V20) of the Climate
Vulnerable Forum
(CVF)

What was the motivation for the partnership with the private sector and the joint launch of GRMA at COP26?

Ahmed: The unequal distribution of risk understanding worldwide is a barrier to development and macroeconomic stability especially in developing countries that are vulnerable to climate change. The physical impacts of rising temperatures and the glacial pace of a transition to low carbon economies not only threaten vulnerable people, but they are also likely to encompass significant supply and demand side shocks. Sudden and slow onset climate impacts may damage capital stock, input factors, infrastructure and labour supply essential for national production and domestic and international trade. Similarly, uncertainty from extreme weather events may reduce investment, while consumption and savings may be hampered as communities rebuild housing and livelihoods after natural hazards.

Governments and their central banks, while responsible for a coherent macro-economic and financial strategy that reduces risk and builds resilient growth, often have the least access to risk analysis. That makes it more difficult for them to reduce uncertainty, plan for risk and mainstream climate change into national investment, sectoral policies and disclosure

requirements and risk finance solutions. Climate-proofed investments are a big part of the V20's Climate Prosperity Plans, but countries must be able to quantify risk in financially meaningful terms if this critical resource is to be truly unlocked.

The GRMA partnership was led by the V20 Presidency of Bangladesh in 2021 where there was an opportunity to set a new precedent for partnership. It has the objective to build financial protection markets by leveraging the analytics within the private sector. That can be utilised to crowd-in long-term investments in adaptation and pre-arranged and trigger-based financing that is required to build resilience for business continuity and critical functionality of the economy. Pre-arranged and trigger-based financing can include, to name a few, shock resilient social protection, parametric and forecast-based financing for anticipatory action, risk transfer for regional or municipal risk sharing, climate-resilient debt structuring, debt payment suspension, and business liquidity protection. All of them get delivered in a fast and effective manner to communities, on the sovereign level, and to micro, small and medium-sized enterprises. In short, the GRMAs can create and offer access to climate data by enabling timely cost-benefit analysis towards better risk reduction, risk management, and resilience investments.

# What should donors take into account when supporting vulnerable countries in the area of climate risk analysis and risk understanding?

Ahmed: Resources are not correlating to where science and practice indicate vulnerability is located – which is a great opportunity for donors to become more effective with their support. It is important to recognise that building local and regional risk markets across climate vulnerable economies and enhancing local and regional institutional resilience are key parts of sustainable solutions. Donors should take into account that risk science and models are mostly centered in the



Global North. Moreover, usually only ad hoc single-hazard, single-transaction metrics are made available to risk owners, with no lasting transfer of knowledge or capability. The current system of proprietary model and data formats prevents knowledge exchange across sectors such as ministries, research agencies, finance institutions and academia. It is thus a barrier to integrating local research into the analysis. Yet, analysis that is imported from elsewhere not only wastes valuable local knowledge and data, but also reduces the likelihood of success, ownership, and acceptability by sovereign risk owners and populations.

# Given the vast need to enhance and strengthen local capacities in risk understanding, what should GRMA focus on over the next years?

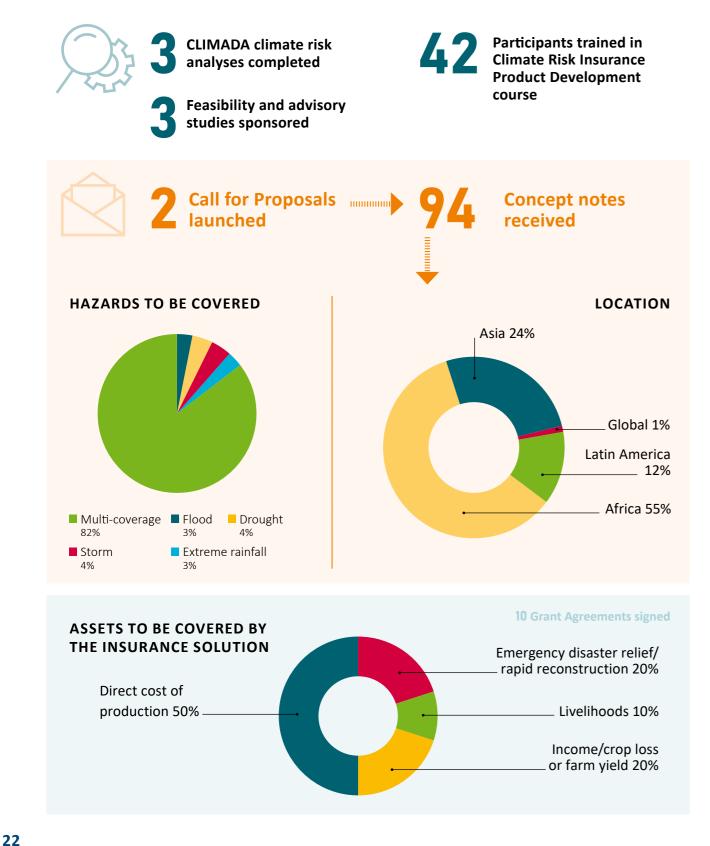
Ahmed: We are facing complex challenges and gaps are legion; everyone has something distinct to contribute. For GRMA, it must focus on standardizing analytics. And it can help to get a shared view on risk between multilateral institutions, governments, local insurance companies and insurance associations as well as global reinsurers. In that it helps to promote joint planning and risk sharing, thus building and driving investment in domestic and regional financial protection markets, adaptation and the low-carbon transformation.

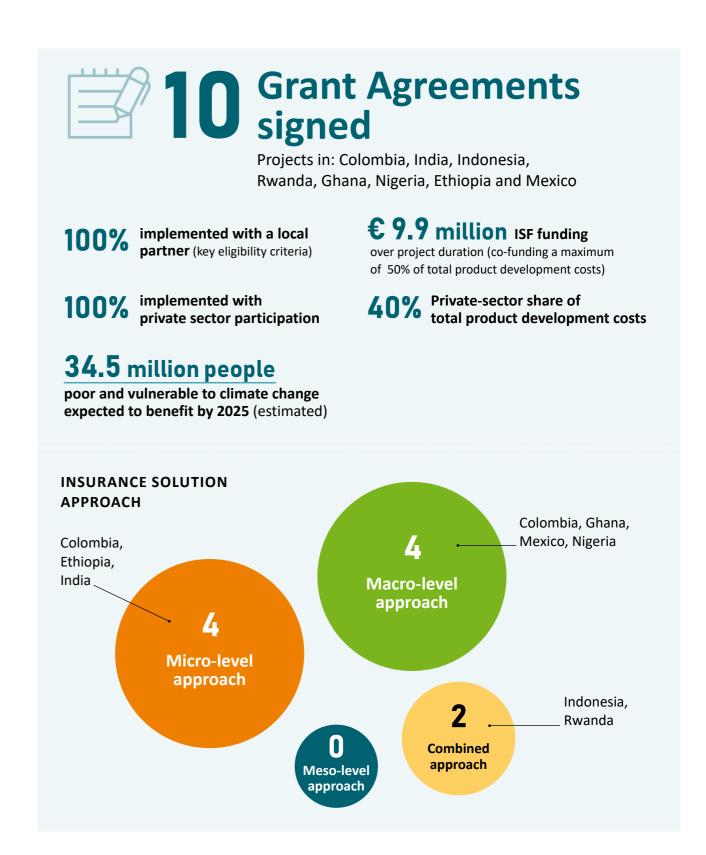






# 2022 - A year in numbers





Serbia (1)

Nigeria (2)

Togo (2)

Ghana (3)

North Macedonia (1)









- Climate Risk Analysis / GRMA\*
- 2 Concept Development\*
- 3 Product Development\*

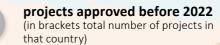
Bangladesh (1)

Indonesia (1)

Nepal (1)

Sri Lanka (3)

Maldives (1)



Vietnam (3)

Philippines (1)





Uzbekistan (1)

India (4)

Ethiopia (2)

Uganda (2)

Kenya (1)

Rwanda (1) Tanzania (2)

\*see three pillars of ISF / page 11

# Climate risk analysis in public private partnerships

With the Global Risk Modelling Alliance Programme (GRMA) a unique new partnership was created. It combines public and private expertise to enhance capacities of climate risk analysis through a joint learning process.

Climate risk assessments (CRAs) provide an evidencebased foundation to manage climate impacts along the entire risk continuum, from short-term extreme weather events to long-term gradual changes. They assess the magnitude of impacts on people, assets, value chains, (critical) infrastructure, settlements and ecosystems, and identify the possible options for action. Thus, they enable decision makers to design adaptation strategies and take investment decisions based on comprehensive risk data. At the InsuResilience Solution Fund (ISF) we are very actively involved in conducting country specific CRAs to increase the capacity and know-how of the developing countries in the field of climate and disaster risk financing and insurance. This empowers partners to identify the full spectrum of adaptation strategies necessary to build resilience. We use quantitative methods and tools that are openly available and can be used to assess climate risks as well as potential risk reduction measures and

risk transfer solutions. To further this and to enhance ISF's support to the countries we launched the Global Risk Modelling Alliance Programme (GRMA) that draws on the expertise from the private sector. It is a unique partnership unlocking risk expertise, helping to build empowered, resourceful, climate and disaster-resilient communities, with teams consisting of private risk financing experts and public climate risk experts.

**GRMA** results from a strategic agreement between the V20 and the Insurance Development Forum (IDF). GRMA is an international public-good service to promote awareness and knowledge of climate risk, launched in June 2022 under Pillar 1 of ISF (detailed information at www.grma.global). Funded by the German government and supported by IDF, GRMA offers countries open data, technology, and practical learning through co-development of risk management strategies and applied risk finance projects. It aims to strengthen local capacities in risk understanding and to support the establishment of open-source risk modelling platforms. GRMA is a significant contribution to the Vision 2025 of the InsuResilience Global Partnership as well as to the Global Shield against climate risks.

The **Global Risk Modelling Alliance** (**GRMA**) is a public-private technical assistance programme to address persistent challenges of risk understanding in the most climate vulnerable countries. GRMA will assist countries in building, sharing and developing local capability in climate and disaster risk understanding, using open modelling principles and private sector knowledge to increase access to risk finance. GRMA comprises three key elements:



- ▶ An open-source risk modelling platform and open data standards to promote accessibility, to enable choice, and sharing across departments and sectors.
- A model and data component providing a funded mechanism to fill critical gaps with data and models produced as digital public goods, with a particular emphasis on co-developing these with local knowledge and information.
- ▶ The GRMA technical assistance team, which provides personal contacts and connects private sector experience to development needs.

# Case Study



# Pakistan: Joins the Global Risk Modelling Alliance Programme (GRMA) – from risk understanding to solutions

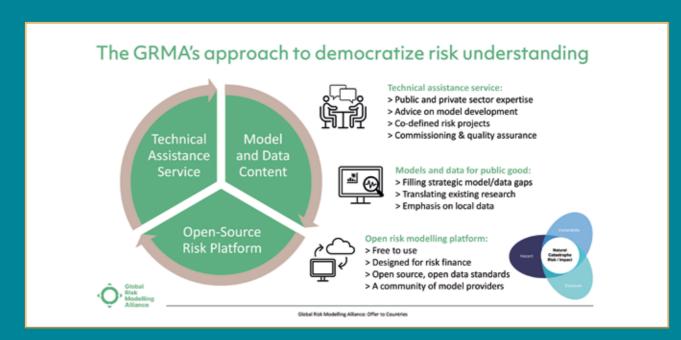
Since its launch in June 2022 there was great traction from the international community and Pakistan decided to join GRMA as the first implementation partner of the programme. The partnership with GRMA and the Ministry of Climate Change of Pakistan was announced at the COP27 <sup>1</sup>. The GRMA team soon thereafter started the programme in Pakistan with a kick-off workshop in Islamabad in December 2022.

In the application for GRMA support was requested to understand the risk of drought, heat, landslides, flood and earthquakes on agriculture, construction, disaster relief, fiscal budget, education (physical assets: schools, universities), healthcare (physical assets: hospitals), public infrastructure (including roads), and on the population. GRMA intends to build technical competency in conducting risk assessments, and enhance capacities on climate risk management. Consequently, information needs to be made available easily to all development planners on sub-national and

national level as well as to the private sector. This is necessary to mainstream climate risk adaptation, risk reduction and risk financing solutions in all sectors. GRMA will enable relevant stakeholders to apply and further develop risk models and tools themselves and gain autonomy in risk analysis. Thus the programme will strengthen long term local capacities in risk understanding as an essential input for climate and disaster risk finance strategies as well as investments in disaster risk reduction and adaptation.

A kick-off workshop was organized in Islamabad in December 2022. The goal was to identify the gaps in risk understanding and co-develop a resilience strategy for the country as a whole. This will be done by engaging key officials and experts on the subject in Pakistan and ask them to develop the work programme proposed by Pakistan's Ministry of Climate Change in its request. The purpose of the workshop was to detail the GRMA programme for the local stakeholders with the objective:

1 https://www.insdevforum.org/press-release-cop27-global-risk-modelling-alliance-selected-as-key-resource-for-the-global-shield-initiative/





- of drafting a roadmap, including the final scope for the GRMA project. This will be co-developed with key stakeholders to meet the needs stated in the request and design the GRMA support accordingly.
- of informing key stakeholders about the request for support, about the GRMA programme and the proposed project. Those stakeholders will have the opportunity to contribute not only by helping to define the GRMA project but also through their own activities.
- of gaining a better understanding on the side of the GRMA team of existing risk information, technical capacity, and analytical activities in Pakistan. This will support co-development of the project plan, including identifying the roles of project partners.



Kick-Off Workshop in Islamabad in December

The workshop was attended by more than 60 people from the government (regional and national), research institutions, public authorities, NGOs and the private sector. During the hybrid workshop a three-fold support for the country was identified:

- The development of locally adjusted models for hazards is necessary.
- It needs more granular risk data of good quality to help targeting the response for disaster risk and to help planning appropriate prevention measures.
- It is essential to give assistance to better understand projected climate impacts as well as to possible benefits of adaptation and risk-transfer solutions. Both is needed to guide, incentivise, and accelerate investments from the public and private sectors for a climate-resilient transformation.

Through this workshop and bilateral meetings we identified the key sectors and hazards that are crucial for building resilience against climate-related damages in Pakistan. We also worked on identifying technical needs and suitable tools, a framework or roadmap for GRMA activities in the country, and the needs of the local and national stakeholders and experts. We also looked at programmes already in place in the country and carved a way forward to find synergies in order to leverage existing research and earlier work.

The next steps include detailing the outcomes of the workshop and bilateral meetings in a report and requesting a virtual meeting with stakeholders to present the findings and sketch out the way ahead. We are also conducting a stock take of existing models and data in the country and would suggest up to two operational projects within GRMA. These projects would identify existing risk analysis and models, activities by other international development partners such as World Bank, Asian Development Bank, and the UN Development Programme (UNDP) as well as local research from the National Disaster Management Agency (NDMA), the National Disaster Risk Management Fund (NDRMF), Global Change Impact Studies Center (GCISC), the National University of Sciences and Technology (NUST) that are already established or are being established, e.g. models for floods, droughts or earthquakes. In cooperation with a team of local experts GRMA will then undertake a quantitative risk assessment on provincial level for certain hazards so that technical experts in Pakistan can use and apply the tools to:

- decide on priorities of adaptation investments to reduce risk, like identifying areas for additional retention ponds.
- to structure potential solutions for climate risk finance in order to provide funding for remaining climate-related damages.





# Case Study



# 2

# **Support for climate risk insurance concepts**

ISF offers funding for feasibility studies and advisory services to develop innovative climate risk insurance concepts, taking into account the specific needs of poor and vulnerable populations.

The lack of data and uncertainty about the regulatory and legal framework are some of the major market barriers for the development of innovative climate risk insurance products in developing countries. With our support, these barriers can be identified and assessed so as to develop appropriate insurance concepts. By

providing advice on the elements necessary to design and conceptualise effective insurance projects, our guidance constitutes the basis for new climate risk insurance approaches.

In 2022, we funded three feasibility studies in Uzbekistan, Sri Lanka, and Vietnam, and additionally provided advisory services in concept development in Vietnam and the Philippines. The latter seeks to support the application of partnerships for co-funding under a subsequent call for proposal.



# Uzbekistan: A feasibility study for insurance of fruits and vegetables

The agricultural sector plays a vital role in Uzbekistan's economy, employing over 49% of the population and ensuring food security. However, climate change puts poor and vulnerable farmers, particularly **dehqan**¹ farmers and private households engaged largely in horticulture, at great risk of recurring yield loss or deficiency. With the aim to insure these farmers against common perils such as spring frost, strong wind, hail, heavy rain, high temperature and water deficiency (under drip irrigation), the ISF funded a feasibility study for a potential indemnity-based insurance product as the basis for a national agricultural scheme.

Agricultural insurance is expected to facilitate both the investments and access to finance required to boost smallholder farmers' resilience. Since 2021, a project consortium consisting of Swiss Re, Axis Capital and UNDP Uzbekistan has been developing a concept note along these lines and is promoting the proposed solution as part of this effort, in close cooperation with the Uzbek Ministry of Agriculture.

The study identified apricots, cherries, and grapes as some of the priority crops, and recommended three oblasts within Fergana Valley - Fergana, Namangan, Andijan – as the pilot regions to test the product. Up to 470,000 dehgan and 21,000 commercial farmers could potentially benefit from such a horticulture insurance program, through stabilisation of income fluctuation caused by climate change. Of the identified target group, at least 50% are categorised as living on less than USD 15 per day. Alongside credit institutions, other farm aggregators, such as cooperatives and the Council of Farmers could be considered as a channel for agricultural insurance distribution. The supportive role of insurance companies will be to provide insurance policies, organise trainings, sales, loss adjustments, and reinsurance.

The study revealed that in order to develop such a program, several milestones need to be targeted to ensure a strong enabling environment. The government of Uzbekistan is willing to support such an agricultural insurance programme. In addition, comprehensive governmental support (including premium subsidies) will be crucial to the program's success. The Ministry of Finance, through the Insurance Market Development Agency (IMDA), should further ensure that the range of measures it has currently planned are implemented to optimise agricultural insurance regulation. A consortium of national stakeholders and international experts from the private insurance sector should further develop the terms of proposed insurance product, including underwriting and loss adjustment guidelines as well as training for staff, experts, and farmers during the early roll out phase. Finally, the transfer of knowledge from countries such as Turkey and Georgia, which have similar risk and agriculture profiles and serve as role models for public-private collaboration in agricultural insurance, will likely enable the establishment of all key insurance program components within a two-year period. Following that further crops and oblasts may be considered to upscale

"In April 2021...the air temperature dropped to -5°C ...we lost 25% of stone fruits yield... 60% of young fruit seedlings and around 15% of grape seedlings. The [surviving] trees were weakened, and they will produce a reduced yield also the next year."

Rahmonali Nazarov, owner of a dehgan farm in Tashkent oblast

<sup>1</sup> According to the current project farm survey, **dehqan** households have 0.77 hectares of land and earn USD 12.87 PPP of income per capita on average



# Case Study



#### 3

### **Support for climate risk insurance products**

At the heart of our operations, we support and promote joint product development, including the introduction and scale-up of innovative climate risk insurance products that add value for affected people.

**Partnerships** Partnerships are invited to apply for co-funding by submitting proposals for the development of new or improved climate risk insurance solutions focused on coverage for climate change-related hazards. Joined partnerships with representatives from the demand side (e.g. national governments, cities, local insurance sector or civil society) and from the supply side (e.g. insurance sector, insurtech, data provider) can apply in Call for Proposals.

We provide grant-based co-funding of up to 2.5 millon EUR to partnerships where at least:

- one partner is representing the demand and needs of end beneficiaries AND
- one partner is willing to act as risk taker AND
- one partner is located in the target country.

Iln 2022, we launched two calls for proposals that generated high interest. We received and evaluated over 94 applications for co-financing development costs for insurance products. In the same year, we signed eight grant agreements with partners for projects on the macro, meso, and micro levels.

# Increased understanding and awareness of flood risk is a first step to building resilience in a wetter world

To strengthen resilience against flood increased understanding and awareness of the peril is required. In its many manifestations, flood is a complex peril to model. The influence and interplay of the anthropogenic environment on the physical processes creates additional modelling challenges when compared to other natural catastrophes. In the last decade, the insurance industry has progressed modelling of the multiple drivers of flood risk, capitalizing on advances in academic research, computing capabilities and a growing ecosystem of modelling companies.

#### Flood risk is complex to assess, with many types of its manifestation and varied factors shaping the physical and financial loss outcomes

The fact that floods manifest themselves in a variety of ways make them a very complex natural hazard. Fluvial floods can affect large areas close to rivers and in floodplains for long periods of time. Pluvial floods result from extreme rainfall in a short amount of time. They can happen virtually anywhere, including in urban areas. Storm surges are caused by storm-force onshore winds pushing water against a coast over hours, threatening coastal areas.

### Insurance industry is continuously improving flood risk assessment

Flood Models need to move away from using past loss experience as a proxy for present-day risks. Optimizing the granularity of data sets available today, the models the insurance industry is developing actively simulate today's dynamic risk scenarios, and continually update inputs as conditions change. Technology and the basic elements are available.

An important first step has been the evolution of sophisticated flood risk maps providing granular detail for all major flood types, with high resolution and accuracy. Recent examples show that >90% of the entire flood footprint is captured by flood risk zones, displaying their capabilities for risk selection and landuse decisions.

# Ghana: Strengthening financial resilience against urban flooding

Ghana is highly exposed to both riverine and flash floods and has been experiencing several major flood events in recent decades. The severe flood of 2015 was reported as being among the ten deadliest disasters worldwide in that year, causing severe damage to (critical) infrastructure. The reason was a rapid expansion of sealed-off surface, unplanned urbanisation, weak infrastructure, inefficient waste collection and disposal systems together with a changing climate. They were causing more and more intense rainfall events that put especially the poor and vulnerable urban population at even greater risk. With the aim to provide financial protection to the urban population of the greater metropolitan area of Accra in the case of flash floods and excessive rainfall, the InsuResilience Solutions Fund (ISF) is co-funding the development and implementation of a (sub-)sovereign parametric insurance solution. A project consortium that is formed by members of the Insurance Development Forum (IDF) in close cooperation with the Ghanaian Government is promoting it. In addition to playing a coordination, project management and stakeholder convening role, UNDP, through its Insurance and Risk Finance Facility, will work closely with the government.



Kick-off workshop in Ghana

The Ministry of Finance in Ghana strongly supports the insurance scheme through the National Disaster Management Organisation (NADMO) where emergency relief measures as well as contingency plans will be implemented timely to mitigate the impact of floods. The new national insurance programme will be jointly designed by the re/insurance companies Allianz SE, Allianz Ghana and Swiss Re, the satellite data provider ICEYE, the consultancy firm HKV providing knowledge on flood risk and water resource management, as well as Food Tags providing weather monitoring via social media.

"We welcome the cross-sector collaboration in the Tripartite Insurance Programme as one of the financing mechanisms for climate adaptation. Through the industry-led insurance project to develop an innovative risk transfer scheme for urban floods, with its knowledge-sharing element, we aim to improve and develop greater local ownership of risk analysis and provide a faster response and recovery, especially to our most vulnerable citizens."

#### Alhassan Iddrisu

Director of the Economic Strategy and Research Division at Ghana's Ministry of Finance



#### CONTACT

For further questions, please contact: info@insuresilience-solutions-fund.org

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#### **ABOUT INSURESILIENCE SOLUTIONS FUND**

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