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Insurance Partnership

Turning intentions into resilient outcomes

Practical steps to developing integrated and holistic protection gap strategies

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POLICY PAPER

Acknowledgements

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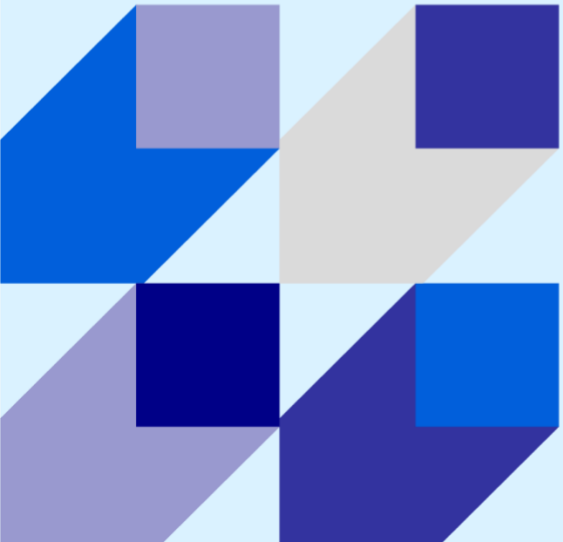

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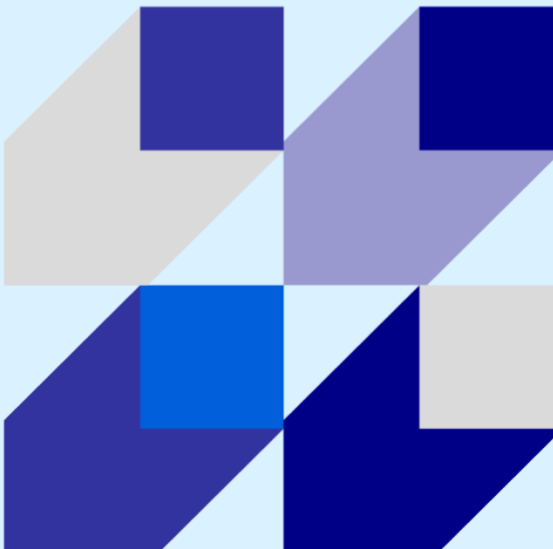

Foreword

When we introduced Catalysing Resilience & Well-being – An Integrated and Holistic Approach to Protection Gaps a few weeks ago, we provided stakeholders with a strategic blueprint for addressing Asia's expanding protection gaps through an integrated, holistic approach. That initial paper detailed the advantages of a holistic, coordinated strategy and outlined why such an approach generates far greater impact than isolated interventions.

In this companion publication, Turning Intentions into Resilient Outcomes – Practical steps to developing integrated and holistic protection gap strategies, we delve deeper into the practical aspects of developing and implementing such integrated strategies. This guide systematically walks readers through each phase of the strategic framework, equipping stakeholders with the tools needed to translate concepts into tangible, resilient results.

Publishing this practical guide is an essential first step, but we are already working towards the next phases. GAIP is collaborating with experts to develop a quantitative tool that will facilitate both the design and monitoring of integrated protection gaps strategies. Furthermore, we are embedding this framework within our Capacity Building for Risk Resilience programme, a structured, four-module curriculum designed to equip policymakers, regulators, and public-sector officials with the critical skills and insights necessary to effectively address protection gaps within their jurisdictions.

We warmly invite our regulatory and public-sector partners to collaborate with us in testing and refining this framework. Through collective iteration and adaptation, we can significantly shorten

the journey from innovative ideas to measurable impacts, transforming protection-gap statistics into meaningful risk resilience improvements. We look forward to collaborating with you in pilot countries and practical field engagements because true resilience requires collective action, and time remains our most pressing constraint.

Finally, I again extend my heartfelt gratitude to Craig Thorburn, author of the Protection Gap series, whose expertise and dedication have transformed complex theories into accessible and actionable guidance. I am equally grateful to our valued partners and stakeholders, whose insights and contributions have been instrumental in shaping this critical resource.

Min Hung Cheng

CEO, GAIP

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Introduction

Introduction

Reducing the protection gap is a significant challenge. Across Asia and the world, gaps are large on any measure. Risks are increasing in frequency and intensity. Economic development, climate risks and demographic changes are just a few of the drivers that have been increasing the exposure of households, communities and whole nations to significant risk. Protection is not keeping up, so the gaps are continuing to grow.

The companion paper, "***Catalysing resilience and well-being: An Integrated and Holistic approach to Protection Gaps***", examined the scale and persistence of protection gaps, their economic and social consequences, and the rationale for an integrated and holistic approach to addressing protection gaps. It also provided a high-level framework for this approach.

This paper builds upon that foundation by translating the high-level framework into a practical, operational guide. It offers **a structured, step-by-step framework that can be adapted to different national contexts**, helping decision-makers develop and implement protection gap strategies that are both effective and sustainable. Recognising the complexity of this challenge, the approach outlined here is iterative, consultative, and adaptive—ensuring strategies evolve based on continuous stakeholder engagement and empirical evidence.

Figure 1: The companion paper provides information and context but it is time to get down to practical steps!

Seeking to provide the **necessary tools to operationalise the proposed approach, supporting the development of an integrated and holistic strategy**, this paper focuses on practical implementation, including detailed discussions on each step of the framework needed to ensure long-term sustainability. The aim is to move from problem identification to tangible policy solutions that are well-integrated across financial, regulatory, and social protection systems.

The complexity of protection gaps demands an iterative and consultative process for strategy development and implementation. This ensures that initial assumptions are tested and refined as new insights emerge, and steps can be taken now, recognising that details will be refined throughout the process. Iteration also allows for barriers to be addressed early in the process, fostering greater alignment between proposed solutions and real-world conditions.

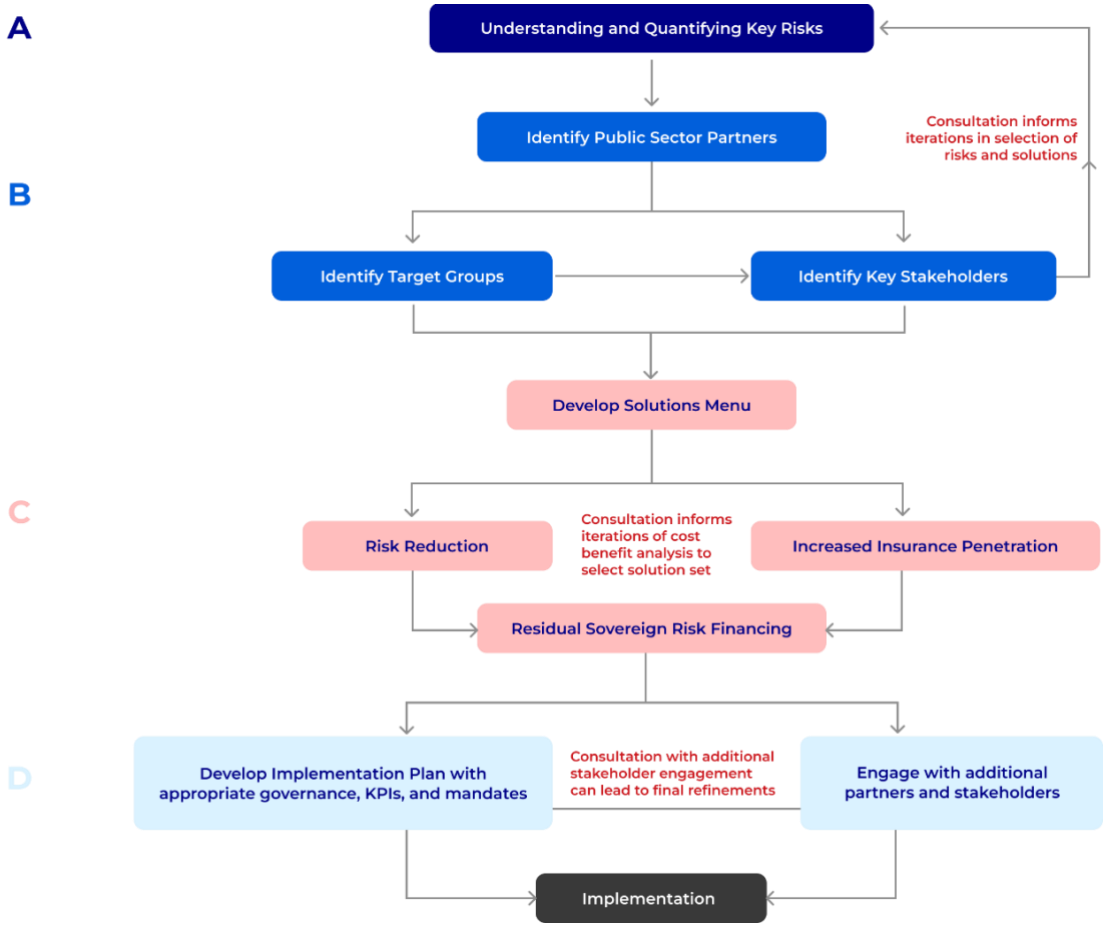
Engaging stakeholders as co-creators through the consultative process is vital to ensuring the strategy's success. Effective strategies and solutions are built on the insights and expertise of those who understand the problem best. Co-creation fosters political alignment, builds ownership, and ensures that policies are practical and feasible. This reinforces that the whole government needs to be engaged, but also that practicalities may mean that some focus is needed. However, this process is intended to avoid the unfortunate outcome where opportunities for leverage and cross-solution benefits are being excluded too early in the effort.

The material supports the development of an integrated strategy. It discusses elements that may need to be developed and emphasises a holistic but iterative approach so that steps can be taken, recognising that details will be refined throughout the process. Critical to this integrated approach to the work is to:

- Take a broad view of all perils so that solutions with benefits across these perils are recognised;
- Seek to leverage opportunities to secure all the benefits that the solutions can offer.
- Avoid eliminating options too early, understanding the magnitude of challenges and potential for solutions as completely as practically possible;
- Ensuring that the fullest opportunities for partnerships between all parts of government and the private sector is leveraged for impact.

To that end, this note includes guidance along with suggestions for data sourcing and approaches, templates, and methods. The high-level process is set out in Figure 2 and each of the steps is elaborated in the following sections of the paper.

Figure 2: High-Level Iterative Process



To support the development and implementation of integrated strategies, we provide considerable additional material in complementary notes. These notes provide even more detail in focused areas and will be useful, especially when needing more information that is in a form that may speak more directly to partners and stakeholders who are focused on one aspect of the overall approach.

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Problems, Problem Statements, Goals and Goal Statements

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Many projects succeed because of a clear statement of the problem and the intended goal. Protection gaps are very significant problems for individuals, households, communities, governments, and nations. But we need to go beyond a gap as the problem and reducing that gap as the goal. The many different motivations are outlined in the companion papers and should be a guide for these statements when discussing the project with others.

Connecting the goal of reduced protection gaps to the other goals of policymakers ensures the problem and goal speaks to the audience. "Reducing protection gaps" speaks to insurance experts. Vulnerability, fiscal exposure, social protection, efficiency, gender equity and resilience, for example, all speak to other policy makers who are important to engage.

Without wider engagement, protection gaps risk being seen as "an insurance problem" and solutions are limited to a suboptimal list. This is one reason progress has been problematic.

Key to the motivation of others is speaking in terms that are relevant to partners and stakeholders. As a result, the problem statement needs to be elaborated in terms that are relevant to them and may be different or expanded in different ways.

At its core, the problem of protection gaps lies in the fact that they are large, and greatly impact individuals, households, communities, governments and nations at all levels very negatively through an absence of security, stability and resilience. These negative consequences can be avoided through reduced gaps. Consequently, the goal of reducing those gaps is to improve security, stability and resilience.

The core problem and goal can then be elaborated. Figure 3 has some examples. Iteratively, as the work develops, additional elaborations can be added to the basis statements.

This motivation can be elaborated in terms of the additional consequences and benefits.

For example:

Figure 3: Illustration of core problem and goal elaborated in terms related to partner policy goals (and SDG links)

	Example of the Problem	Examples of Goals		
Health, Households, Gender	Health protection gaps mean too many households are unable to access health services sufficiently quickly, and without creating financial strains that impede access to health services particularly for women and girls.	Reducing the protection gaps so that rural low income women have greater access to and utilization of primary care. SDG Indicator 5.6.1.	Reduced protection gaps so that health crisis events do not lead to reduced primary and secondary educational participation for girls. SDG 4 and all relevant targets and indicators.	Reducing protection gaps so that pre and post natal care delivery is accessible and maternal and infant mortality is reduced. SDG 3 Target 3.1, and 3.2.
Natural Catastrophe, Governments, Economy	Significant protection gaps mean heightened demand for government response, and likely deeper and longer lasting negative impact on communities and the economy.	Immediate financial support is provided to impacted communities to facilitate rapid recovery initiatives.	Adverse GDP impacts are limited to one quarterly reading only. SDG Indicator 1.5.2.	All short-term government support is covered through ex-ante financing. SDG Target 17.1 and 17.3.
Mortality, Households, Education	Untimely death of a breadwinner without protection can endanger opportunities for children including continued education, nutrition and adequate housing, and increase child poverty	Increase completion rates in primary and secondary school levels especially for children who have lost a parent. SDG Target 4.1. and indicator 4.1.1.	The proportion of children achieving functional literacy and numeracy is increased, especially for children who have suffered the loss of a parent. SDG Indicator 4.6.1.	Reduced malnutrition SDG Target 2.2. and Indicator 2.2.1. for example.
	Smallholder farmers face difficulties in accessing credit due to high risk assessments by local bankers. Additionally, their efforts to reduce risk by diversifying crops has merit but also reduces productivity.	Increase small-holder farmer productivity and incomes through access to financial services SDG Target 2.3		

Political stability and resilience	Significant events that expose inadequate preparation and inadequate response have undermined the stability of governments and confidence in leaders.	Stronger resource mobilization. SDG Target 17.1.	Improved public, public-private and civil society partnerships. SDG Target 17.17	
Mortality Safety in Transport	Unsafe roads erode both economic and household security especially when road accidents create serious vulnerability for accident victims (whether they be vehicle users or pedestrians)	Road deaths are reduced. SDG target 3.6. and indicator 3.6.1. and Target 11.2.		

Connecting the goal of reducing protection gaps to the motivations of policymakers ensures the problem and goal speaks to the audience. Failing to engage a broader government audience, or feeling unable to do so, is one key reason progress has been difficult.

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A: Understanding and Quantifying Key Risks

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Conceptual statements of problems go only so far. When asked "how big is it?", moving forward often relies on having an answer. This section provides some guidance on how protection gaps are determined and what might be done to consider the protection gaps at a jurisdictional level.

In this section, we elaborate information to help understand, assess and discuss the nature of risks in terms relevant to policymakers.

The process will, of necessity, be iterative. This section provides guidance to assist in the first iteration. Later sections discuss how the initial assessments can be refined efficiently. At the first stage, a template along the lines of Figure 4 may be useful.

No data is no data. *But limited data is something. We should recognise that what we have does tell us something if we are prepared to listen - and make the most of it, even as we look for more and better information.*

Data paralysis should not be policy decision paralysis *of itself. The response to "some data" is not to defer or delay.*

Some data, no matter how limited, is not "no data". *We can move, in a measured way. In fact, "some data" that is vague may be significant enough to take the idea of "let's wait" off the table. If the data says "it's a problem and no matter how much we refine it then it will still be a problem" then we can move forward.*

The key risks that motivate action will differ from jurisdiction to jurisdiction, reflecting risk levels, risk awareness, experiences, economic structures, social norms and other issues. We advocate considering as broad a range of risks as possible, their interactions, and the synergies, because solutions interact with different risks just as those risks interact with each other. To that end, it is useful to add to the table a level of detail for risks that might be helpful, but not to delete high level risks in the first iteration.

Awareness of risks often increases and becomes a concern at the political level when:

- Significant events occur, especially when they highlight gaps in resilience.
- Insurance costs increase, and concerns about availability and affordability arise.
- New information highlighting the extent of gaps is publicised;
- Insurers fail; or
- Concerns are raised by informed stakeholders that capture a wider interest.

The template Figure 4 provides an opportunity to reflect the level of concern. Levels of concern and the magnitude of the actual impact may not match each other, so

eliminating items due to low relative level of concern at a preliminary stage could be suboptimal.

Initial estimates represent a useful start. “The perfect is the enemy of the good”. Some values can be estimated approximately to give a relative order of magnitude. Perceived concern may be identified qualitatively or using stakeholder ratings, focused stakeholder surveys, volumes of media coverage of issues, and actual donor support for projects. Other qualitative comments may be summarised. The aim is to gather broad guidance.

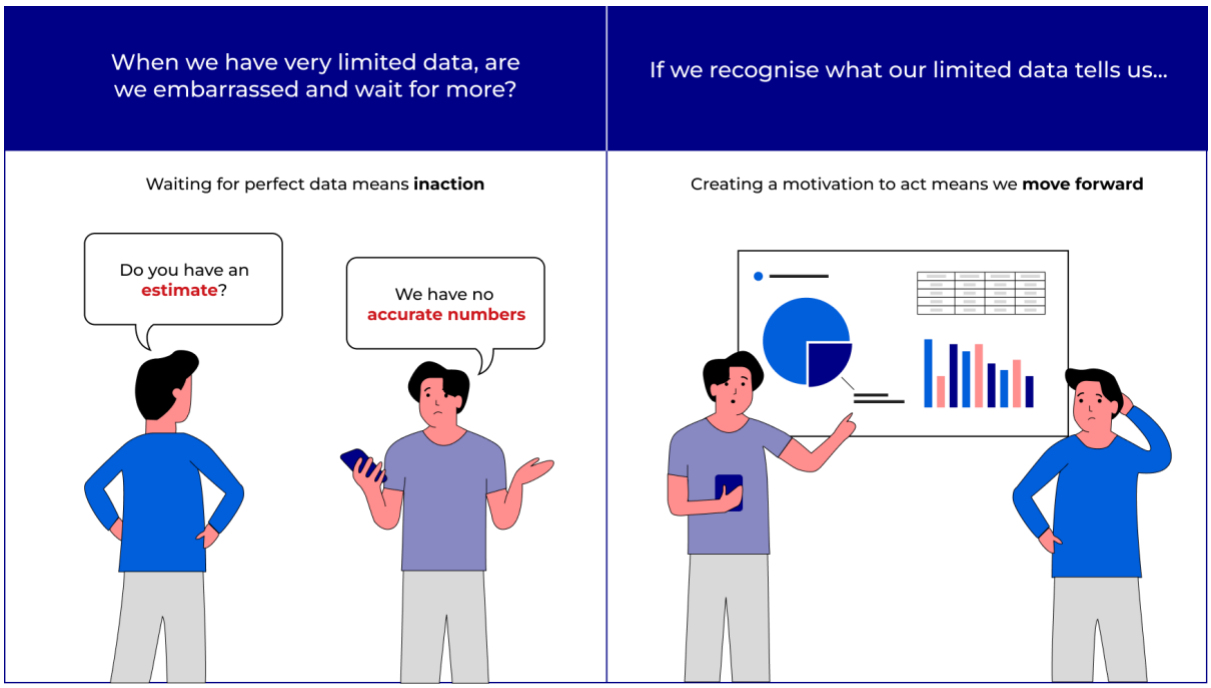
Figure 4: Template for Quantified Risk Concerns

Risk	Protection Gap Estimates			Impact on welfare, deaths, injuries, displacements, impact on key metrics	Levels of concern generated	Other relevant indicators and commentary
	Amount (Bn)	Percent of GDP (%)	Percent of total exposure			
Natural Catastrophe						
– Flood						
– Seismic / Earthquake						
– Tropical Storms						
– Wildfires						
– Drought						
Health						
Mortality						
– Overall						
– By specific risks and causes (for example, road accidents, workplace accidents, infant and maternal mortality)						
– Epidemics and pandemics						
Retirement Security						
Other						
– Other risks that may be relevant. e.g., Cyber risk						

Prioritisation should avoid eliminating risks and perils too early, but be an iterative process. At the first stage, it may not be necessary to make any decisions. The second and third steps in the process will provide additional opportunities to refine the information. Partners and stakeholders will, for example, be able to provide information on risks and target groups. Together with partners and stakeholders, solutions can suggest which key gaps offer the best opportunities for action.

If needed at an early stage, prioritisation can be applied to eliminate the least significant rather than select the most significant. Prioritisation can be applied based on gaps and other elements in the table. Only the smallest gaps that coincide with limited levels of concern should be de-prioritised at this stage. Larger gaps, aside from their absolute significance, may present more opportunities for action including some with shorter term benefits.

Figure 5: No accurate numbers? Or very broad but big estimates?



Catastrophic Natural Hazard Events

In many jurisdictions, natural catastrophe risks are in clear view. Weather and seismic risks are most common across Asia. Between 2000 and mid-2024, the deadliest peril category was seismic events (58 percent of all deaths), followed by storms (20 percent) and flooding (10 percent)[1]. The distribution of total economic losses, although different, was most concentrated in the same perils (seismic 39 percent, storms 23 percent, and flooding 31 percent).

As a general guide, in the absence of any country specific information, it is commonly cited that the economic cost of natural catastrophes around the world tends to be around 0.33% of GDP per annum[2]. Regional data on economic losses and protection gaps is also provided as shown in Table 1 and Table 2. The levels can be seen to vary across regions as well as over time and this is because the actual distribution of the most costly events changes from year to year.

Table 1: Regional Natural Catastrophe Losses and Protection Gaps 2024

Region	Economic Losses			Insured Losses		Protection Gap
	USD (Bn)	Share of total	% of GDP	USD (Bn)	Share of Total	% of Economic Losses
North America	212.4	64.7	0.69	117.1	80.0	44.9
Europe	33.5	10.2	0.12	14.7	10.0	56.1
Asia	66.5	20.3	0.17	11.1	7.6	83.3
Latin America & Caribbean	11.6	3.5	0.17	1.5	1.0	87.1
Africa	2.0	0.6	0.07	0.3	0.2	85.0
Oceania / Australia	2.3	0.7	0.11	1.7	1.2	26.1
World	328.3	100.0	0.30	146.5	100.0	55.4

Source: Swiss Re Sigma various issues, and author's calculations

[1] Source: EM-DAT and Author's Calculations
[2] Swiss Re (2025) cites losses at 0.3% in 2024 and 0.26% on average over the last 10 years. von Peter, G., von Dahlen, S., and Saxena, S., (2024) of the BIS cite median values between 0.33 and 0.34% for a range of risks. IMF (2021) also has a good discussion based on a range of risks.

Table 2: Regional Data on Economic Losses as a Percentage of GDP and for Protection Gaps

Region	Annual Economic Losses as a % of GDP						Protection Gap as % of economic losses					
	2024	2023	2022	2021	2020	2019	2024	2023	2022	2021	2020	2019
North America	0.69	0.33	0.64	0.59	0.46	0.19	44.9	25.8	41.6	45.3	33.3	39.1
Europe	0.12	0.41	0.09	0.24	0.08	0.06	56.1	75.4	41.9	62.6	66.5	60.3
Asia	**0.17**	**0.11**	**0.13**	**0.16**	**0.22**	**0.21**	**83.3**	**84.3**	**83.6**	**83.6**	**87.8**	**72.2**
Latin America & Caribbean	0.17	0.21	0.31	0.11	0.05	0.23	87.1	67.9	89.1	83.9	81.8	56.3
Africa	0.07	0.35	0.27	0.14	0.06	0.22	85.0	94.0	80.0	37.8	100.0	84.9
Oceania / Australia	0.11	0.41	0.50	0.24	0.31	0.25	26.1	48.8	45.4	48.9	26.5	39.0
World	**0.30**	**0.26**	**0.27**	**0.29**	**0.24**	**0.17**	**55.4**	**59.7**	**53.3**	**57.7**	**56.1**	**58.9**

Source: Swiss Re Sigma various issues, and author's calculations

Regional aggregates hide the variation across Asia, even in these three categories as shown in Table 3. In some jurisdictions, additional perils such as wildfires, heatwaves, drought and extreme cold weather will be relevant. Table 4 also provides some jurisdiction level insights for economic loss experiences per event.

Table 3: Proportion of total deaths and economic losses from catastrophe events arising from three main regional causes (percent of reported total)

Jurisdiction	Deaths			Economic Losses		
	Seismic	Storms	Floods	Seismic	Storms	Floods
Australia	0.0	4.3	9.1	0.0	36.1	47.3
Cambodia	0.0	4.5	56.1	0.0	6.0	90.7
China	69.1	3.7	9.8	22.5	24.7	41.4
Chinese Taipei	10.2	53.9	1.3	31.4	63.7	4.1
India	36.8	4.1	34.1	5.0	26.0	62.9
Indonesia	92.1	0.1	2.3	60.6	2.7	30.3
Japan	85.3	4.6	2.5	75.0	18.4	6.6
Laos	0.0	3.5	53.6	0.0	69.7	30.3
Malaysia	8.2	0.2	19.9	18.1	0.0	81.9
Myanmar	0.1	98.3	0.4	9.2	89.0	1.8

Philippines	1.6	69.7	4.4	1.2	86.4	11.6
South Korea	0.0	21.7	15.9	0.1	90.8	8.2
Sri Lanka	92.5	0.2	3.6	38.0	9.1	51.9
Thailand	68.4	0.6	20.2	2.6	0.1	89.9
Vietnam	0.0	34.6	46.5	0.0	48.7	18.4

Source: EM-Dat for events from 2000 to 2024 and author's calculations. Economic Loss values are aggregated based on current prices rather than historical values. There is no data in the EM-Dat dataset for Brunei or Singapore.

Table 4: Total deaths per 100,000 average population and total economic losses reported as a percentage of GDP for EM-Dat reported catastrophe events

Jurisdiction[3]	Death Rate per 100,000 Population			Economic Losses as a % of GDP			
		Number of data points	Average		Number of data points	Largest event	Average
Australia	5.84	70	0.83	4.08	83	0.59	0.05
Cambodia	11.87	28	4.24	4.61	10	1.67	0.46
China	10.01	1183	0.08	3.80	420	0.68	0.01
India	8.28	774	0.11	4.45	113	0.58	0.04
Indonesia	79.01	457	1.72	2.40	85	0.52	0.03
Japan	18.93	162	1.17	14.32	92	6.77	0.16
Laos	8.25	24	3.44	3.76	9	1.72	0.42
Malaysia	4.35	61	0.71	1.12	13	0.41	0.09
Myanmar	285.13	75	38.02	13.44	13	8.48	1.03
- Ex Nargis	6.80	74	0.92	4.96	12	3.36	0.41
Philippines	31.38	366	0.86	7.16	219	2.99	0.03
South Korea	5.20	85	0.61	1.30	33	0.44	0.04
Sri Lanka	185.26	77	24.06	6.62	17	2.52	0.39
- Ex Tsunami	13.97	76	1.84	4.10	16	1.81	0.26
Thailand	18.26	131	1.39	12.84	43	10.52	0.30
- Ex Tsunami	5.87	130	0.45	12.52	42	10.52[4]	0.30
Vietnam	7.55	214	0.35	6.43	106	2.02	0.06

Source: EM-Dat for events from 2000 to 2024 and author's calculations. Economic Loss values are aggregated based on current prices rather than historic values and expressed as a percentage of current GDP.

[3] There is no data in the EM-Dat data set for Brunei or Singapore and calculations for Chinese Taipei were not able to be readily completed. The results for death rates for Sri Lanka and Thailand are impacted by the Tsunami. The results for Myanmar are impacted by Cyclone Nargis in 2008.
[4] A 2011 flood event is recorded with much larger economic impact than the Tsunami, although the Tsunami caused more deaths.

Calculating protection gaps is more problematic at the local level. The EM-Dat data set has very limited data regarding insured losses so this leaves the number of events where protection gaps can be calculated quite sparse. Instead, most estimates involve one of two methods:

Projections and models: These efforts rely on both granular data and models of risks that tend to be proprietary. Currently, results can be secured when governments engage with the entities that have such models and are prepared to share results, although this usually is in the context of commercial transactions. Some exceptions exist that can be useful in part, particularly through universities and other scientific institutions[5]. To the extent that countries can facilitate the development of models that have results for their specific jurisdiction and that are available in the public domain, this would help to support policy commitments.

Historic observations: Many quoted protection gaps are based on recent historical observations. For example, if total economic losses can be estimated at a high level and insurance losses are also similarly estimated then the result may be sufficiently accurate to make the policy point that action is needed, and the gap is far too large. These estimates show some variation from year to year depending on the location of the larger events each year, but there is little difference in the call to action when a gap is above 50 percent, no matter which year is selected.

The publicly available EM-DAT data set provides some guidance but is incomplete, especially when it comes to observations with both economic losses and insured losses. Table 5 includes jurisdiction level data publicly available from EM-DAT by type of event covering the percentage that is uninsured.

[5] In Asia, the ADRFI-2 platform is an example (see https://www.adrfi2.org/index.html) and, globally, the Global Risk Modelling Alliance (GRMA)/IDF initiative (see https://grma.global/) may be useful.

Table 5: Estimates relevant for Catastrophe Event Gaps

Jurisdiction	EM-Dat percentage gap = (economic losses – insured losses) as a percentage of the economic losses							
	Wildfires	Extreme Temperature	Storms	Earthquake	Flood	Landslip	Drought	ALL CAUSES
Australia	38		41		54			48
Cambodia								
China		92	93	99			79	97
China, Hong Kong SAR								
Chinese Taipei			55	74				64
India			91	97	92		87	92
Indonesia			63	96	79			90
Japan			37	83	80	18		75
Laos								
Malaysia								
Myanmar								
Philippines			92	61	95			93
South Korea			87					87
Sri Lanka					91			91
Thailand				75	75			75
Vietnam					36			36

Source: EM-Dat and author's calculations.

The values in Table 5 are in line with those published by others where country level data is made available, but they are shown here as they are more granular for each country than those published elsewhere. Estimates for some countries are available through the industry (see, for example, Swiss Re Online Tool Estimates[6], Sigma[7], MunichRe[8], Aon[9] and others)

Reference can be made to local data on recent events. Where country data is not available or credible from the sources mentioned, then it may be that a recent event or more does provide some observations.

[6] See https://www.swissre.com/risk-knowledge/mitigating-climate-risk/natcat-protection-gap-infographic.html#/
[7] Swiss Re, sigma Resilience Index 2024: encouraging resilience gains amid growing focus on insurance
[8] See https://www.munichre.com/en/company/media-relations/media-information-and-corporate-news/media-information/2025/natural-disaster-figures-2024.html for 2024 information and links to more detail.
[9] See https://assets.aon.com/-/media/files/aon/reports/2025/2025-climate-catastrophe-insight.pdf for example.

If local observations are not able to be identified, then it could be informative to consider global averages, albeit that they probably represent an optimistic estimate for emerging markets where insurance penetration and published estimates are not yet so well established. That is, the local market gap may be “at least” the global average but probably far more. The EM-DAT calculated values for these averages is shown in Table 6.

Table 6: Global Average Gaps by Peril

Peril	Global average uninsured gap (percent)
Drought	51
Wildfires	36
Extreme temperatures	83
Storms	48
Earthquake	83
Landslides	81
Flood	81
Industrial disasters	95
All Causes	63

Source: EM-DAT and Author’s analysis.

Natural perils may include floods, cyclones, heatwaves, earthquakes, volcanic explosions, tsunamis, excessive rainfall, drought, or wildfires. The most relevant events will be fairly obvious to each country’s policymakers. At the same time, it is useful to consider second and third causes, at least if there needs to be a prioritised list, as solutions can be relevant to more than one source of adversity.

Health

Health gaps represent a potential exposure to events that cause the need to finance health interventions, particularly those that are "catastrophic" for those who experience these events. Catastrophic events will vary depending on the health financing costs and implications of not being able to pay for those costs and services in a timely manner for different groups of the population. This can include both events impacting individuals, all the way to those that demand unusual national responses, such as was seen in the case of epidemics and pandemics. The experience of many countries is exacerbated by constraints in public health financing and access to healthcare at the same time as demand for health services is increasing both through expectations of utilisation and because of aging populations.

Health gaps by jurisdiction are measured in a range of ways in an attempt, albeit not perfectly, to capture the uninsured exposures. Figure 6 illustrates the components of health protection gaps, as seen through this funding paradigm. Out-of-pocket costs are a typical source of data as they represent costs paid by households and individuals, contrasted with those covered by other sources such as public provision or insurance coverage. To consider protection gaps further, there are efforts to capture situations where action is taken by households where they do not actually make such out-of-pocket expenditure, opting instead to forgo treatment and bear the consequences as it is simply unaffordable – so producing a health protection gap not represented by out-of-pocket costs. Publicly available data of out-of-pocket costs (A+B in Figure 6) can support calculations at a jurisdictional level. Forgone costs are more problematic, but some survey data does exist that may be useful[10].

After the elements of costs paid and those that were not paid, it is useful to consider the impact of the expenditure. Out-of-pocket costs can be a normal cost sharing and risk management tool, so they create a relatively minor impact on health service access, whereas, in other situations, the impact can be high and involve considerable reallocation of household resources. The significance of the impact of expenditure and potential reallocation of consumption from family priorities is much higher for low-income households for the same nominal cost. As a result, the "stress filter" approach may be used to normalise the results. This usually means that the same values for A+B as out of

[10] Where jurisdictions have had "financial diaries" studies then there will be data that illustrates the decisions made in the face of health adversity and the source of finance as well as the potential shortfalls where health services were not taken up due to a lack of available funds.

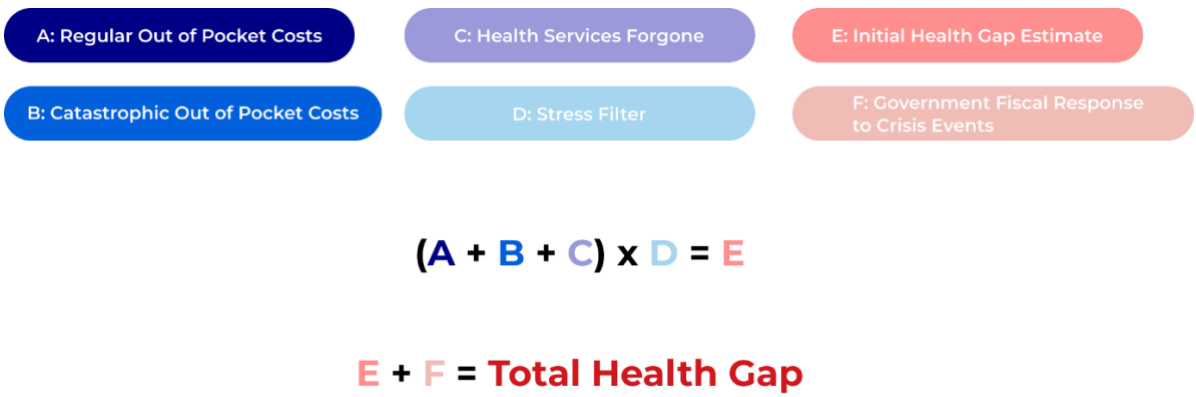
pocket costs are then scaled up or down depending on the income distribution of households in each jurisdiction.

Most estimates of health protection gaps stop at "A+B" or, after the stress filter, at "E". Here, the potential fiscal impact of government responses to health emergencies, such as what was seen in the recent pandemic examples, is not included in these conventional estimates. Although governments commit to an ongoing health financing budget in line with their own local systems, the pandemic experience brought unusual and significant fiscal exposures that would be consistent with our definition of fiscal exposure gaps.

To that end, policymakers may consider the health protection gaps in four key areas. Figure 6 represents these elements as follows:

- funding for out-of-pocket costs so it is able to be maintained at acceptable levels across income and socioeconomic groups on an ongoing basis (Item A);
- the potential for more catastrophic cost impacts when such costs can increase to unacceptable levels compared to income (Item B);
- risks that some necessary and relevant healthcare may be minimised or not taken up at all because of financial constraints (Item C); and
- the fiscal impact of significant health crisis events that lead to increases in government financing of healthcare and delivery in response to those events (Item F).

Figure 6: Our Health Protection Gap



Currently, some estimates are produced with more granular modelling and assumptions. They calculate estimated costs for different population income groups, reflecting population and household compositions. They use this more granular analysis and additional data on behaviour to ascribe different levels of "stress" associated with these expenditures, as well as the potential for decisions to forgo medical services. This creates a

data heavy calculation that is usually not available for every jurisdiction and includes proprietary analysis. No published estimates currently include all elements (Item D or F in Figure 6) at the country level on an annual basis.

It is also notable that some countries do produce estimates of mortality gaps and add additional estimates for some disability and critical illness coverages. To some extent, it could be argued that those insurances would pay for both costs of care and for other consumption and, to the extent that they provide for costs of care then there is an overlap with items A and B in our diagram.

However, it is possible to gather indicators on each of these elements. Table 7 shows some indicators, including “out of pocket” expenditure in USD billions (Item A + B in our Figure 6) and as a percentage of GDP. The global average for this expenditure across all countries is 1.75 percent of GDP. The Geneva Association has observed that the levels of health protection gaps based on out-of-pocket costs only is well in excess of natural catastrophe costs of around 0.30% to 0.33% of GDP.

Published estimates from Swiss Re are shown for comparison highlighting the impact of their modelling of financial stress (Item D) and underutilized services (Item C). On average, this increases the observed values significantly in the table but, notably on a worldwide basis, reduces values as the total estimated health gap by Swiss Re is less than total out-of-pocket costs.

Data on the fiscal intervention costs of the COVID-19 pandemic (Item F) is sourced from the International Monetary Fund, and in this table, we include “above the line” measures only where additional spending or foregone revenues are included. Although every pandemic event can be different in terms of impact on countries, it is at least, illustrative to be aware that this event led to an average fiscal cost of 9.7 percent and a median cost of 3.8 percent of GDP.

Table 7: Indicators for health gap estimates by jurisdiction for Items A + B, and E

	Total Out-of-pocket Expenditure as a % of GDP	Percentage of population with Health Expenditure in excess of		OOP Gap in USD Billions	Swiss Re Published estimates 2017 (USD Billions) of Item E	Our Estimate for Item E
		10 % of income	25% of income			
Australia	1.52	2.47	0.40	26.22		5.53
Brunei	0.14	n/a	n/a	0.02		0.01
Cambodia	2.88	17.86	4.92	1.22		1.70
China	1.80	24.33	6.94	320.98	805	277.42
India	1.52	17.46	6.67	54.30	369	62.58
Indonesia	0.89	4.74	0.91	12.16	82	9.54
Japan	1.25	11.1	2.00	52.67	218	13.63
Laos	0.58	6.75	3.01	0.09		0.09
Malaysia	1.48	1.52	0.13	5.92	47	4.60
Myanmar	3.39	12.71	3.47	2.26		3.39
Philippines	2.30	6.31	1.41	10.07	32	10.79
South Korea	2.71	11.96	2.87	46.50	144	30.72
Singapore	1.21	9.01	1.47	6.08	23	3.43
Sri Lanka	1.75	5.44	0.90	1.48		1.49
Thailand	0.49	2.05	0.33	2.54	6	1.07
Vietnam	1.82	8.46	1.73	7.80	36	8.03

Sources: WHO, World Bank, IMF, Swiss Re, and Author's Calculations, in all cases for the latest year reported by the WHO at the time of writing, usually 2022 and World Bank 2023.

In Table 8, estimates of health protection gaps as a percentage of GDP by jurisdiction. These estimates have been developed using actual data for out of pocket expenses and then allowances for services foregone[11] and a scaling factor to reflect the "stress" of health costs. Finally, we have added a cost reflecting pandemic experiences. Values are shown as a range given the uncertainty of a range of parameters. The global total before the pandemic cost is comparable to the latest Swiss Re estimate.

[11] Our broad assessment uses the proportion of total health expenditure that is provided by the public sector, insurance penetration for health, and per capita income as indicators of the propensity to be unable to afford health services to the degree that they would be more beyond affordability. For all three indicators, lower values would be consistent with higher propensity for forgone services. The factor is applied to the value of out-of-pocket costs.

Table 8: Estimates for health protection gaps by jurisdiction (percent of GDP)

	Total Out-of-pocket Expense	Services foregone	Stress factor (Multiply by)	Pandemic Response	Estimated Health Protection Gap
Australia	1.52	0.20	27%	18.37	0.44 – 0.69
Brunei	0.14	0.04	75%	1.21	0.08 – 0.11
Cambodia	2.88	0.79	161%	4.10	3.26 – 4.10
China	1.80	0.41	104%	4.78	1.30 – 1.65
India	1.52	0.41	134%	3.51	1.44 – 1.82
Indonesia	0.89	0.24	91%	4.53	0.60 – 0.79
Japan	1.25	0.14	34%	16.47	0.42 – 0.65
Laos	0.58	0.17	107%	n/a	0.43 - 0.54
Malaysia	1.48	0.38	91%	5.23	0.97 – 1.26
Myanmar	3.39	0.98	172%	0.72	4.07 – 5.10
Philippines	2.30	0.58	126%	2.71	2.00 – 2.52
South Korea	2.71	0.49	83%	4.48	1.48 – 1.88
Singapore	1.21	0.28	68%	18.40	0.73 – 1.05
Sri Lanka	1.75	0.46	117%	0.80	1.42 – 1.78
Thailand	0.49	0.10	51%	11.40	0.28 – 0.44
Vietnam	1.82	0.47	120%	1.68	1.51 – 1.90

Sources: WHO, World Bank, IMF, AXCO and Author's Calculations, in all cases for the latest year reported.

Mortality

Mortality protection gaps focus on the impact of the untimely death of a family member, where the economic consequences are significant for their dependents. Estimates of protection gaps for mortality consider the potential mortality coverage needs compared to those in place. Needs tend to consider the impact of the death of a family income earner in terms of replacing their income, adjusted for the potential reduction in consumption, i.e., that the family unit can maintain their core consumption needs, security, well-being and lifestyle. They would also need to continue to meet their liability obligations and any final expenses for the deceased. In some instances, calculations look to pay out debts, and in others, they seek to secure income at levels including any debt repayments. Similar studies for morbidity consider additional costs associated with both lost income and additional care needs, and to that extent, they can duplicate health protection gaps.

In addition, estimates of mortality protection gaps usually assume that retirement savings are “in balance” and would be maintained by the ongoing family resources including mortality payouts such that the level of savings is maintained, i.e., the family does not have a retirement protection gap to be made up from the mortality gap. This implies that the obligation on the ideal level of mortality coverage is only up to retirement age.

There are very few studies of mortality gaps available. Usually, these have been done by deep analysis of the above projected needs and the current insurance levels at a granular level, using data provided by the insurance sector[12]. They may also be extended to consider gaps for other insurance risk products such as, for example, crisis cover and permanent disability. Insurance associations have often sponsored such studies, and they have been useful to educate the population and various sub-groups on the relevance and need for insurance coverage. These studies may be updated every five years or so.

Swiss Re also produce mortality gap numbers. Their approach is similar to others but notably seeks to extinguish household debt rather than continue servicing it when a key earner in the household dies. They also project the gap into the future.

The granular level detail is useful, but it is unfortunate that the effort required means that aggregate results are not usually calculated for many countries. Aggregate level calculations can be done using data that would largely be held and published by the demographic and economic departments of national statistical agencies, as well as the insurance supervisory authority. The key data elements needed are:

- Data concerning households including data on household composition, age structures, income and expenditure, assets and liabilities.
- Data on mortality levels and trends, usually in the form of a series of population mortality tables.
- Existing total insurance sums insured, or an estimate based on total premiums by product type.

With this in mind, even a high-level estimate can be useful to compare the mortality gap size with other gaps. To this end, we have prepared the following information. Conservatively, using the information in this table, and assuming a gap as low as twice

[12] These studies have been published, in varying forms, for Australia, Singapore, South Africa, and Malaysia. (See references)

average earnings, then the annualised premium equivalent gap would range between 0.50 to 0.95 percent of GDP, depending on the average premium rate assumed. Where it is assumed that the gap is four times earnings, for example, then the annualised premium equivalent gap would be twice this level.

Table 9: Indicators for Mortality gap estimates by jurisdiction

	Swiss Re Gap Estimates			Other Cover Estimates USD Tn	Multiple of average wage per household
	Premium USD Bn	Cover USD Tn	Percentage Gap		
Australia	9.1	2.8	54%		
Brunei					
Cambodia					
China	160.4	40.6	70%	46.0	
Chinese Taipei		0.2			
China, Hong Kong SAR	1.6	0.4	41%	0.76 - 0.90	5.7
India	78.2	16.5	83%	12.0	
Indonesia	8.5	2.0	76%		
Japan	17.2	8.4	61%		
Laos					
Malaysia	3.1	0.7	74%	0.78	9.0
Myanmar					
Philippines				0.48 – 0.53	
South Korea	9.7	3.9	55%		
Singapore	1.5	0.6	55%	0.30 – 0.57	1.9
Sri Lanka					
Thailand	2.9	0.9	71%		
Vietnam					

Sources: Swiss Re (2020), AIA and Allianz, local associations.

Retirement security

Retirement security tends to be assessed separately from all other protection gaps. It could be described as a “separate industry” with many social and political policy issues. It has been noted that this is unfortunate as the retirement income adequacy risks are not independent of other risks and solving all other risks without addressing any shortfalls in retirement incomes security makes little logical sense to those that face all of these risks.

Given the nature of social policy, the role of state-provided benefits and private provision is important. This policy tends to differ between jurisdictions reflecting differences in the “social contract”. Traditionally, involving individuals, employers and governments, the social contract is often implicit but represents expectations for an adequate level of income and consumption in retirement, the extent that redistributive support is expected, and therefore the implied level of government expenditure through social security support. These expectations may vary when considering different consumption expenditures and by age as well as income level. As a result, the social contract informs expectations for government support and private savings to support the desired retirement income security needs.

Estimates of gaps or shortfalls in retirement income security depend on a number of assumptions. The most fundamental assumption is the determination of what level of income is adequate. Many cross-country studies settle on a level of 70 percent of pre-retirement income to allow for the fact that expenditure usually falls in retirement, known as the “replacement rate”. But, as noted, this is a very broad assumption that does provide a numerically comparable result, but probably not comparable in terms of real income needs or living standards in each country. In addition, decisions are needed regarding the indexation of salaries before retirement and for income drawings after retirement.

Comparisons tend to calculate the actual replacement rate at the “normal retirement age” for each country based on eligibility in local rules. The OECD considers that full eligibility without penalty should define the normal retirement age for all sources of retirement income, assuming a person commences work at age 22. The replacement rate in OECD countries averages 61.4 percent for men and 60.6 percent for women (net) varying from under 35 percent to more than 90 percent. Replacement rates will vary by wage levels during accumulation phases due to the redistributive effects, the form of retirement income products that are applied, and whether they are calculated based on gross (before tax) or net (after tax) incomes.

	OECD Estimate of Replacement Rate generated by Current System				Attitudes about … (% of respondents)			
	Average wage worker		Worker with twice average wages		Employed full time for an employer		Over age 50	
	Gross	Net	Gross	Net	Current income level (difficult or very difficult)	Have enough money (disagree or strongly disagree)	Current income level (difficult or very difficult)	Have enough money (disagree or strongly disagree)
Australia	26.0	33.7			19	22	20	26
Brunei								
Cambodia					56	45	56	41
China	71.6	90.8	62.1	80.1	29	41	46	46
Chinese Taipei					10	25	14	23
China, Hong Kong SAR	38.1	40.0	26.8	30.0	14		21	
India	52.4	59.5	52.4	61.1	50	36	55	50
Indonesia	57.2	59.5	56.9	59.5	18	27	33	33
Japan	32.4	38.8			9	41	10	28
Laos					24		22	
Malaysia	41.0	46.7	40.8	48.0	19	23	34	16
Myanmar					30	61	n/a	61
Philippines	79.8	83.3	47.6	52.5	50	41	56	41
South Korea	31.2	35.8			25	44	25	45
Singapore	57.0	61.6	39.7	44.1	15	21	17	23
Sri Lanka	37.4	40.7	37.4	41.7	42	40	44	43
Thailand	48.0	50.3	24.8	25.5	31		50	33
Vietnam	58.7	65.6	58.7	66.6	12	41	34	47

Source: OECD (2022), Note: In some jurisdictions, different rules for women and men, for example, for retirement ages, can lead to different values. In those cases, values for males are shown in this table, and Gallup Analytics (for attitudes).

Health care in retirement, be it medical or long-term institutional care, can be considered in different ways. Projections tend to make one of two assumptions or something in between the two, and it is an unresolved question.

- Option 1: Longer lives are increasing the number of people at older ages and, given that these groups use greater amounts of health services, the total impact of health care costs in society will increase significantly as the number of people in each of the older age groups increases; or

- Option 2: The vast majority of critical health costs are incurred in the last years of life. Longer lives are deferring these costs so the total impact on societies is beneficial because of this deferment given healthy aging.

Notably, although mortality gap estimates tend to ignore retirement gap estimates to avoid double counting, health protection gaps are usually calculated without reference to age, so they would include health costs for the elderly. The assumption that a certain level of income is required in older age would reflect the need to pay out-of-pocket costs for health care, and so would, to that extent, represent an overlapping estimate. However, health protection gaps tend to reflect current population distributions and so, unlike retirement protection gaps, will not reflect the impact of future demographic transitions on health expenditure because of population aging.

Other Risks

Other risks emerge and become more significant. Sectors can highlight special considerations such as for enterprise risks, SMEs, agriculture, gender, migrants, those vulnerable through disability, challenges with literacy, minority groups, and workers in other significant economic sectors such as tourism. All can be facing significant new risks. Some are also seeing that the primary risks may remain and are well understood, but "secondary risks", such as the subsequent economic consequences of the primary event, may be more significant than ever before.

At the time of writing, one such new risk is the large and largely uninsured exposure to cyber risks in many countries. This risk has been growing almost exponentially as the risk landscape is changing with both changed working practices (such as the shift to home-based work during the COVID-19 pandemic), changing technology (such as the advent of AI and its application by "bad actors"), as well as in cyber-defence.

Increasingly, efforts to reduce agricultural risks have been growing, including some initial attempts to quantify crop insurance protection gaps. Some opportunities to increase insurance penetration for this risk are noted later in this paper.

A similarly topical example of the secondary risk exposure was the considerable uninsured "business interruption" exposure of enterprises during the COVID-19 pandemic in many countries where businesses were "interrupted", but insurance coverage was not usually included for such circumstances – a protection gap as a direct result.

Similar mechanisms can be applied to resolving all of these gaps as would be applied to the other protection gaps discussed earlier.

Overall

Having completed the table as much as may be possible, it can then be used to further the discussion with stakeholders. Some stakeholders may be able to offer more information and estimates. Others may have views on the most practical steps that could be taken in the various solution groups even if only to contribute to views about whether solutions may be more or less feasible or easy to implement for “quick wins” and their potential impact.

Whilst it may be tempting to prioritise risks at an early stage to facilitate a process with constrained resources, it is recommended to avoid picking the most significant at the expense of most of the other categories. Instead, the initial evaluation may only justify eliminating the least important and retaining the rest for further examination. Retaining as many categories as possible from the first iteration can avoid selectivity too early in the process. It may also be sensible to look to refine estimates further for those that are retained.

Prioritisation: *It is too early to eliminate all except the least material risks. That said, stakeholder discussions may lead to a change of view so, even then, retaining as much as possible is ideal.*

To prioritise, however, the discussions with stakeholders could be targeted in order of importance based on these risk areas.

Subsequently, with additional input, further refinements of elements of the risk profile table can be made, reflecting an iterative process. Maintaining and updating the table will also ensure that as comprehensive a view as can be reasonably secured will remain the focus of those developing the overall strategy.

Global Asia
Insurance Partnership

B: Identifying Public Sector Partners, Stakeholders and Target Groups

B: Identifying Public Sector Partners, Stakeholders and Target Groups

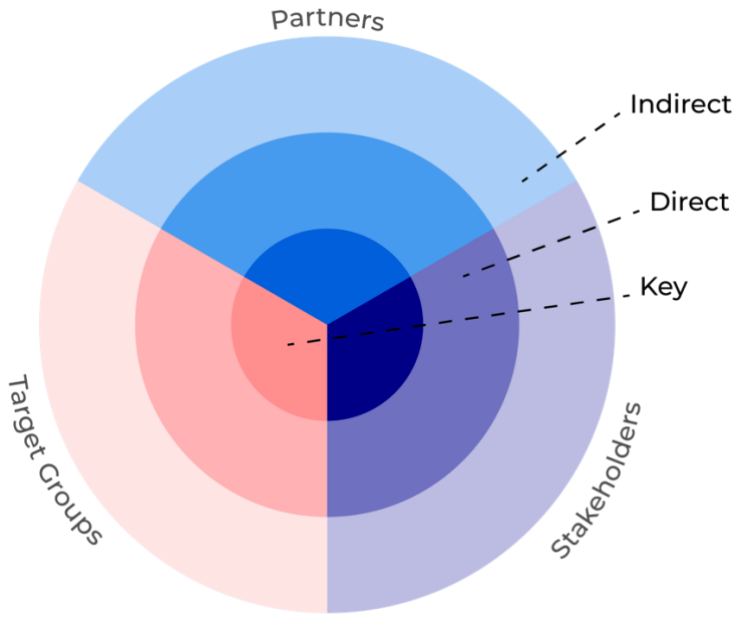
This step aims to identify important partners, stakeholders and targets of this work. We use the term “partners” and “stakeholders” to provide a practical distinction between those stakeholders who are internal to government (partners) and those who are external (stakeholders). Target groups are the intended beneficiaries of an initiative.

“Key” partners and stakeholders are those who are most critical to the potential goals. Through their actions, they may be critical to advance (or undermine) progress so are important to engage to secure the action needed. They are not mere spectators. Without their engagement, the effort may fail.

The identified risks and information on estimated gaps in the previous section can help to provide focus. Partners, stakeholders and target groups can be explored for the most critical risks and protection gaps first, then through those risks that follow.

Beyond partners and stakeholders, there are target groups who are expected to be the beneficiaries of initiatives. It is always useful to identify them and to work to understand their particular situation sufficiently.

Figure 7: Example of Template for Mapping Partners, Stakeholders and Target Groups

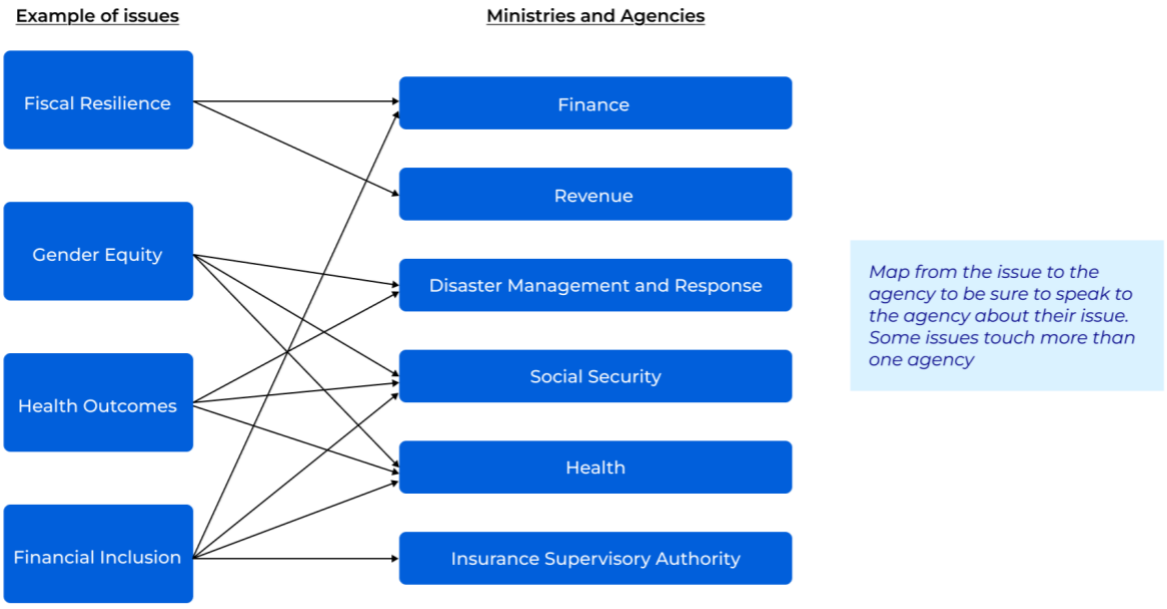


Public Sector Partners

The first step is to identify partners in the public sector. A "primary" list can always be expanded, but identifying the most obvious partners is beneficial. This will allow communication to commence and to leverage their expertise regarding issues, risks, technical estimation, stakeholders and target groups. The initial work on understanding risks and estimates will be refined by their contribution. The group can be expanded as the specific solutions are considered, but initially, it is useful to contact the most obvious areas of government, recognising that this is an iterative process to capture rather than rule out options. These "primary" partners may welcome the time to prepare and to secure support for projects with necessary political commitment at their respective ministerial levels.

Partners may be engaged based on their inherent policy interest or the importance of their engagement and support.

Figure 8: Example of linkages between issues, where reduced protection gaps would be beneficial, to relevant Ministries and Agencies



This suggests that the key economic and fiscal ministries would be involved along with the ministries covering health, social security, and disaster response. The insurance supervisory agency would also be critical. In addition, specific interventions that might lead to the later engagement could include ministries of agriculture, transport, tourism,

education, infrastructure, and employment, as well as agencies for revenue collection, statistical data collection, weather, and some more unlikely but key partners.

Table 10: Illustrative List of Potential Key Partners

Potential Key Partners	What could they do to contribute to the project?
Ministers	Political impetus, decision making, public communication
Ministry of Finance	Set budget priorities, create / increase sustainable fiscal space,
	Lead efforts to identify and implement ex-ante financing initiatives.
	Engagement with Donors
	Structure and financial considerations for PPPs
Insurance Supervisory Authorities	Regulations and guidelines that may need revision, industry data, insurance expertise within government
	Engagement with Donors
Disaster Risk Management / Response Agencies	Develop natural disaster mitigation initiatives. Deliver immediate aid.
Ministries of Health	Expertise and political support on health challenges
	Engagement with Donors
Ministries of Social Security	Expertise and political support on retirement health and mortality, as well as immediate social protection response challenges
	Engagement with Donors
Statistical agencies	Providers of data, especially regarding demography, household structures, incomes, economic activity, etc.
Weather Bureaus	Provide data, potential index calculation agency.
Ministries of Agriculture	Expertise and political support on agricultural challenges
	Engagement with Donors

Identifying *key* partners is important as they can advance or undermine the progress of the effort. Support for a mandate for action at the political level is always crucial and colleagues in other ministries as well as the lead minister responsible are important in ensuring that other ministers are well briefed and understand how reduced protection gaps advance their own goals.

Other organisations play more supportive roles at a level of detail. This may be in response to a particular solution or because their data support and technical expertise are critical. Engaging with all these key partners at the earliest opportunity will ensure that they are not challenged by tight turnaround times for input on initiatives that are new to them. Instead, they will be partners in the development and management of their particular roles and have ownership of them.

Ideally, a “mapping of key partners” could be prepared and then refined in consultation with them. It can start as a high-level summary and be refined through iterations as the strategy detail is developed. This template (Figure 9) will also assist in communicating with these partners. It sets out:

- **Why are these partners critical** in a brief statement. This will tend to be a statement from the perspective of achieving a successful outcome for strategy development and implementation.
- **What actions may they be required to take?** This statement identifies things that might need to be done and can only be done with the approval or even the initiative of the partner. For example, amendments to laws and regulations are likely to need to be developed and could be the responsibility of different partners. Providing data and expertise in some areas may only be possible with the cooperation of those that have that data especially if it is covered by legislative protections. Identifying these actions means that the strategy relies on partners and would be undermined if they were not in agreement or sufficiently motivated to take the relevant action.

Many carefully planned projects stop at these two bullets as they tend to be the focus when considering what needs to be done. There are two other important opportunities to be examined as they will need attention and can support positive communication with the relevant partners. By adding these additional elements, the review of partners goes beyond those that must take action to include those that may be able to add to or erode the effort to develop and implement the strategy through their influence. In this way, it is possible to capture additional support whilst mitigating risks to the success of the strategy.

- **What influence might they bring?** Some partners may not be required to act but may still influence the success or failure of the strategy should they choose to do so. For example, positive leadership contributions at the political level can greatly

assist in building community support. Silence from those who might be expected to be critical but choose not to get involved in debate could be positive or could be unhelpful. Expressions of uncertainty or direct criticism can undermine the initiative when coming from an influential source.

- **What objections might they have?** Whilst some objections may be fundamental, others may be critical to the partners but able to be addressed through the design to sensitively reflect their concerns. For example, an agency with a significant workload is likely to have a concern that they cannot reallocate resources for an extra initiative no matter how much merit it may have. Ideally, concerns can be addressed, and the support of the partners can be secured.

Figure 9: Template for Mapping Key Partners

Key Partner	Why are they critical?	What potential approvals, actions, or initiatives might they be required to take.	What influence might they bring that will add to or risk the success of the strategy?	What objections might they have that might need to be addressed?

The Role of the Insurance Supervisory Authorities

Increasingly, Insurance Supervisory Authorities have been engaged in the development of the sector. Even when they have a mandate focused on prudential soundness, the stability of the sector depends on ongoing trust and delivery, and the more that this social goal of insurance can be delivered, the more the industry earns trust in the community.

The IAIS recently emphasised the important role of Insurance Supervisory Authorities when addressing protection gaps[13]. Their protection gap paper established new ground by breaking down the oft-cited distinction between supervisors with a development mandate, those with a market conduct role and those that have a "purely prudential" financial soundness and stability focus. Instead, it advocated that all supervisors have, explicitly or implicitly, a basis for action on protection gaps.

Subsequently, in the strategic plan for 2025-29, the IAIS established "Supporting insurance to serve its societal purpose of building resilience" as one of its three strategic goals.

> *"Insurance supervisors can play an important role in supporting and shepherding insurance to deliver its societal purpose. At its essence, insurance exists to build societal resilience by offering risk management, pooling and diversification of risk, and mitigation of adversities. Insurance needs to deliver on this purpose, especially for vulnerable elements of society, through inclusive insurance markets characterised by product design, distribution and servicing which meets consumers' needs, addresses protection gaps and treats customers fairly. Access to insurance also has profound societal impacts which include helping to reduce poverty, bolstering social and economic development and advancing major public policy goals."*
>
> *IAIS Strategic Plan 2025-29*

Financial stability in the insurance sector relies on the ongoing trust that consumers need to have in the insurance sector and the reputation of the sector. For this reason, the extent that insurance products deliver socially important services is an issue of interest to all supervisory authorities. Large protection gaps can undermine this trust. Financial stability is also critically secured by reduced protection gaps, given that they reduce the impact of adverse events on the broader economy and the consequences that those economic shocks can have on financial institutions.

Insurance supervisors are often the government's most valuable source for:

- **Technical Understanding of Risk and Insurance**: the mathematical and statistical basis of contingent risks, the legal framework for insurance contracts, and the interaction between risks and other factors such as economic and social influences are all items where the insurance supervisory staff will have expertise to bring to the table that may be the strongest across government.
- **Market knowledge**: The dynamic of the insurance sector is an important part of the protection gap issue, and with respect to potential solutions. The insurance supervisory authority will have a deep knowledge of each entity's business profile and performance currently and historically as well as their expectations for their business plans in the near term. They will have a close knowledge of product

[13] See IAIS (2023).

performance in several metrics, from financial performance to growth and (most likely) customer response.

- **Relationships and regular engagement**: The supervisory authority has the most regular engagement with the sector and has intimate knowledge of all key people in both the organisations and the industry associations. It also has communications mechanisms in place and the convening power to bring these people together to discuss issues of importance.

The IAIS paper noted that insurance supervisory authorities can make a strong contribution regarding five key areas. Their explanation, and our elaboration is as follows:

1. **Assessing insurance protection gaps;** Data collections and the powers to collect additional data are the most obvious roles, but authorities can also have an important understanding of relevant risk models and the root causes and importance of various risks and protection gaps. Authorities have unique access to both regular data collections and, potentially, ad hoc inquiries and surveys from the insurance sector. They also have confidentiality obligations so that they can collect market sensitive information for analysis. They have the technical skills to analyse information received and to develop informative conclusions. They can engage directly with experts and investigate insurance sector modelling to develop a deeper understanding of risks. This information can be fed into broader considerations from the supervisory authority with credibility, as they provide a dispassionate connection between policy and practice.
2. **Improving consumer financial literacy and risk awareness**; Many supervisors have a direct role through product and disclosure regulations, but this reach extends further through leadership engagement in public debate, through official websites and, in some instances, engagement in detailed programs that aim to advance insurance and risk awareness and literacy. Agencies can socialise information through their credible expertise, partner with others with reach to vulnerable communities, support research and benchmarking efforts, and engage in direct initiatives for consumer education.
3. **Incentivising risk prevention and reduction of insured losses**; Supervisory authorities most critically can ensure risk-based pricing mechanisms are functional. They can also raise awareness of the benefits of risk awareness, preparedness and prevention.

4. **Creating an enabling regulatory and supervisory environment to support availability of insurance and uptake of coverage**; Insurance supervisory authorities may well need to review rules and guidance and their supervisory practices to facilitate some new initiatives, particularly directed at increasing insurance penetration. They will also be able to monitor the extent that innovation is taking place and identify barriers that may be limiting efforts. Supervisors are well placed to investigate some areas where barriers may be preventing effective insurance access including, through data on claims and profitability, assessing value and cost metrics, access to reinsurance, treatment of parametric products, and much more.

> *Implementing approaches that reflect the "principle of proportionality in practice" is critical. Insurance Supervisory Authorities are engaged in advising governments on insurance laws. They also have many areas where their own actions are critical. From subsidiary rules and guidance to administrative practices and procedures, they can ensure more proportionate approaches are adopted.*
>
> *Proportionality in practice is fundamental to ensuring that the regulatory and supervisory system is not a barrier to inclusive insurance and is failing to support the goal of reduced protection gaps.*

5. **Advising government and industry, including on the design and implementation of public-private partnerships or insurance schemes**. Especially for those schemes that are designed to respond to risks that are difficult to provide cover for through the normal insurance mechanisms, supervisory authorities have been closely engaged in the establishment and monitoring of arrangements. In some cases, the partnership involves a particular entity that is regulated. Supervisors also have international networks with colleagues that can be usefully leveraged when regional partnerships are under consideration.

As a result, the supervisory authority is a critical player for government when considering reducing protection gaps. Whether they are the "captain" or "vice-captain" of the team is a matter for local consideration. Most likely, the breadth of engagement in government may mean that the leadership may rest with a key ministry so that the political weight can be brought to the effort most readily, however, the insurance supervisor should be a key deputy.

If the insurance supervisor is given the lead role, then they also have to be given a clear mandate to implement change engaging with the broad range of government partners needed for the various solutions. Without such a mandate, experience is that they focus on the things that they can influence. This influence is usually focused on

facilitating innovations in product and distribution and, therefore, is limited in scope. When such limitations apply, the need for a more holistic approach is immediately lost and the potential to reduce the protection gap materially is also reduced.

Stakeholders

Having identified internal (to government) partners, there are also a key group of stakeholders outside government who will be critical to any successful strategy. The stakeholders will be wide ranging, from those with an interest in most of the topics to those with a defined interest in one area only.

A stakeholder is a non-government organisation who has an interest in the initiative and its outcome.

A key stakeholder can influence the outcome (positively or negatively). Similar to partners, their action or reaction may be expected, or it may have to be elicited.

Other stakeholders who are not "key" have an interest but limited influence to help or hinder progress. Nevertheless, they will need to be considered in communication efforts.

Other Stakeholders

At the first stage, it is best to avoid ruling out options even though there will be a desire to do so for expediency in the development of the overall strategy. Canvassing a range of stakeholders beyond the insurance sector is a useful investment as the strategy is developed.

Table 11: Illustrative List of Potential Key Stakeholders

Potential Key Stakeholders	What could they contribute to the project?
Technical Assistance Providers	Support project resources, assist in analysis and modelling, Contribute to implementing projects, including on topics such as Insurance penetration, Insurance literacy, underserved customer needs studies, Pilot insurance penetration projects, index-based insurance development initiatives
MDBs / IFIs / bilateral donors / specialist organisations such as WFP and WHO and ILO	Contingent credit and other similar instruments Catastrophe bond issuance Technical Assistance Support Donor financing and lending operations Existing projects may be relevant to take into consideration.
Global foundations	Funding and assistance

Insurance industry (insurance and reinsurance companies, distributors, advisors) see section below	Provide risk coverage Innovate for inclusion Data on insured risks. Technical and other modelling expertise
Insurance Associations	Collaboration and convening of insurers Some solutions see associations taking on centralized administrative roles.
Innovative distribution partners	Finding groups who have good relationships, connections and infrastructure to meet underserved customers can be critical to cost effective service delivery, reach, and trust.
Data and scientific sources	Data for risk assessment Risk models for quantification Indexes for parametric products
Community groups	These organisations can act as the voice of target groups or others impacted by proposals.

Depending on perspectives, other governments may be considered to be stakeholders or partners. Subnational governments may be important when implementing some solutions. It is also possible that external governments in other countries may be useful when risks overlap country borders or regional solutions are being considered although it is less likely that solutions will depend on the actions of other governments outside the jurisdiction.

A similar template to that for Key Partners suggested in Figure 9 can be useful for stakeholders. It is useful, however, to prepare a separate list as stakeholders are outside of government and will require different channels of communication. This will highlight the key stakeholders who need to act, likely a smaller group than for key partners, and those who are only going to be influencers.

Again, the iterative approach will likely mean that new stakeholders will be added once some specific solutions are selected. For example, some solutions may require the engagement of particular enterprises or industry groups and their representative associations.

The Role of the Insurance Sector

The insurance sector is the most obvious stakeholder as their role fundamentally responds to one of the three solutions (increased insurance penetration). It is also directly important for the other two solutions.

Risk reduction interacts with insurability and can create a virtuous cycle[14], and sovereign risk benefits from several solutions that can involve the insurance sector. The discussion around the insertion of the insurance processes between mitigation and sovereign risk financing impacts highlighted a key benefit of early engagement to capture the virtuous cycle. Capturing these benefits demands that policymakers engage with insurers to get their input on the full set of initiatives under consideration.

Secondly, there may be some parts of the protection gap that exist because of difficulties in providing insurance risk coverage due to the nature of those risks. This "uninsurable portion" may need a public private partnership as part of the solution (discussed further in the relevant section below). Both insurers and reinsurers will be able to contribute at an early stage to ensure design decisions can then facilitate the management of the risk being covered by the PPP, as well as the distribution of cover and the linkage to other insurances that customers may take that is more readily insurable.

For any effort to improve the level of inclusiveness of the insurance market to increase penetration, both appropriate products and innovations in distribution can be expected to be needed. This implies that both insurers and distributors will be relevant stakeholders.

The sector also has the most granular data on risks that are insured and access to risk modelling expertise and systems that extend beyond that within government. The one constraint that the insurance sector has is more limited data about uninsured populations and risks; although they will have important views about what may be needed to bring those populations into the insured space. Some of this risk modelling expertise exists in the insurance sector, but also with reinsurers and large brokerage firms in particular.

[14] The companion paper explains this interaction when arguing for the merits of a holistic and integrated approach. See GAIP, (2025), "Catalysing Resilience and Well-being: An Integrated and Holistic approach to Protection Gaps", especially pages 33 to 37.

Critically, therefore, the sooner that the insurance sector can be engaged in discourse as the strategy is being developed, the better. Even when it is not clear precisely what role the insurance sector may play, their participation in exploring these roles is beneficial. It is vital to avoid eliminating opportunities for attractive synergies.

Ultimately, the sector will be a key stakeholder to implement some of the solutions.

Target Groups

A "**target group**" is a group in the community who are expected to be the principal beneficiaries of the policy action of addressing protection gaps, connecting the action to the desired policy outcome. Target groups may be defined in terms of their particular exposure to particular risks, particular barriers that make it difficult for them to mitigate or insure risks, or even where government interventions have proven to be difficult.

A target group is the expected beneficiary of the policy action in defined terms. They would be expected to benefit and, in some cases, change behaviour, in response to the policy action that will reduce their risk, advance their resilience and well—being in quantifiable ways.

One way to address this is to approach it from the risks identified and then to seek to identify and describe the relevant groups who are vulnerable to these risks and may be thought to have significant protection gaps. More than one target group may be identified for a particular risk, and the same group may appear for several risks. It may be useful to identify any experience of the exposure of the group to the relevant risk, even if only from past examples.

Key issues for individuals go well beyond property damage, injury or illness. Economic wellbeing is impacted through loss of ability to work, loss of key items such as transport links. Food and water supplies may be compromised, and limited supplies can be very difficult and costly to obtain. Regular expense payments may still come, so some opportunity exists for seemingly unrelated providers to get involved as stakeholders and partners[15].

The description of the target group should seek to identify characteristics that might be relevant to both risk exposure and the possible solutions. These characteristics should go

[15] For example, Medibank private (a health insurer) offered the opportunity to defer premiums for 3 months or suspend cover with a right to re-enter later after flooding impacts in Victoria (see https://www.insurancebusinessmag.com/au/news/catastrophe/insurers-extend-support-to-floodaffected-customers-472953.aspx)

beyond “not being insured” or “facing particularly expensive insurance costs”. They may include vulnerability or underserviced insurance delivery due to low-income levels, location, occupation, language barriers, education, product relevance, gender, religious belief, or other characteristics. They may face challenges due to their employment, exposure to particular risks or because of their immigration status, formality, or seasonality in work. It is also useful if some indication of the size of the group could be estimated.

Figure 10: Template for Mapping Target Groups

Risk	Target Group	Relevant Characteristics	Potential Exposure

The relevant public sector partners will be useful as a first point of contact to assist in this endeavour, as they will have a better understanding of potential target groups and civil society advocates in their area of expertise, and because they are likely to be important partners in the implementation of any potential solutions. They may also have useful data at a far more granular level about the target group and additional experience of testing solutions regarding a range of policy interventions. Some stakeholders may also have a unique expertise that can assist.

Target groups may be prioritised by avoiding spending undue resources on groups that are particularly small or have only limited exposure to particular risks.

Communicating with partners, stakeholders and target groups

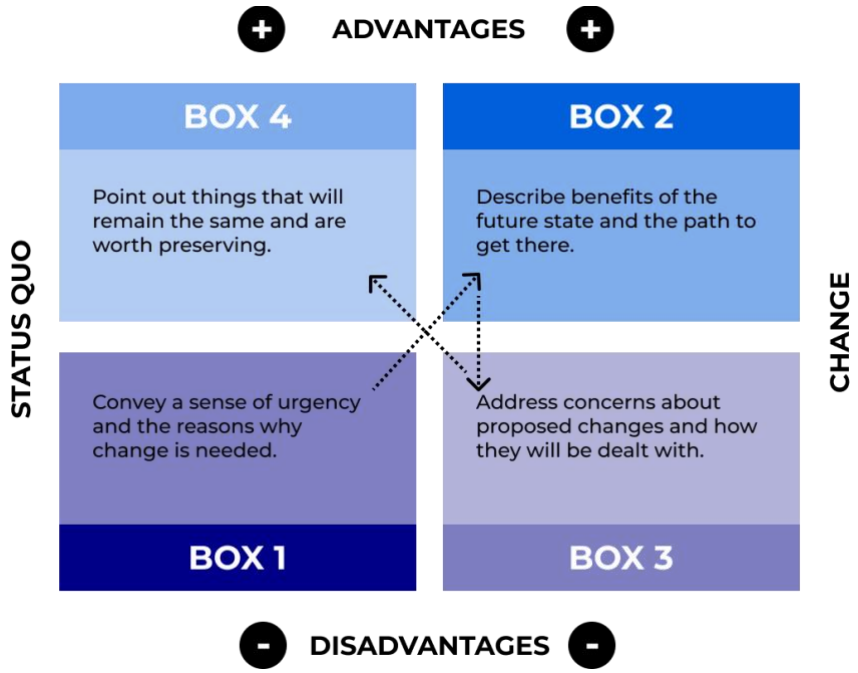
There are several tools available to assist in communicating with partners, stakeholders and target groups, just as there are plenty of examples of poorly planned communication undermining a project.

Key to effective communication is understanding the perspective of the counterpart. As a result, considerable information is available in the companion paper[16] and the side paper on motivations[17], to facilitate the defining of the communication about reduced protection gaps in terms of benefits to the goals of the key counterpart.

A useful approach is a "four box model" that considers the communication needs and the perspectives of the audience[18]. The first "box" covers the disadvantages of the current situation (the "status quo"), the second "box" covers the advantages of changing. Often, messages stop there, but it is also important to discuss the disadvantages of change and, if possible, have something to say about dealing with them. For example, in the third box, technical staff who have invested a career in expertise applicable to the current situation will be concerned about needing to learn new skills - something that could be addressed by acknowledging the need for training programs and support. The final box can usefully acknowledge that there are some advantages of the current approach that will still remain.

[16] See GAIP (2025) "*Catalysing resilience and well-being: An Integrated and Holistic approach to Protection Gaps*".
[17] See GAIP (2025), "*Motivating Change: Why the protection gap is key to policy objectives*", forthcoming.
[18] For example, see https://execed.schulich.yorku.ca/news/the-four-box-model-can-support-workplace-transformation/ and http://www.noma.on.ca/upload/documents/job-aid-strategic-influencing-4-box-mode.pdf

Figure 11: The "4-Box" Communication Tool



Source: Schulich School of Business.

Through this understanding, it is important to generate a case for change that starts with the disadvantage of not changing. Ideally, this is a “burning platform” where standing still is not an option. And then, communication elaborates the merits of the change.

Unfortunately, enthusiasm for change is not key to communication. Others are concerned about their substantial investment in the current approach. Therefore, it is important to communicate “what is not changing” as well as the relevant issues that might arise for the counterparts regarding the change that will be addressed sensitively. These two points are more critical for effective communication than continued reinforcement of the merits of the proposed change. Unfortunately, we often stress and re-stress the change rather than address the concerns of counterparts.

So careful planning to see the perspective of the counterpart is critical to effective communication and buy-in. Training on this issue is recommended.

It should also be remembered that partners and stakeholders are not fully occupied in achieving the project goals. In fact, they have a “day job” that is separate. Some stakeholders move on and are replaced in their roles. So, reinforcing and repeating the messages is necessary to ensure their successors are also engaged. Repeating what was agreed at each step will help newcomers to “catch up” and avoid too much repetition responding to questions that they may have.

Global Asia
Insurance Partnership

C: Develop the Solutions Menu

C: Develop the Solutions Menu

Our solution set identified focuses on three interrelated areas. These are addressed here in order. In our second policy paper, we reviewed solutions that had been pursued across Asia and found that there were good examples of many of them, but that the size and scope of these successes were insufficient to impact on the protection gap materially[19]. We need more and bigger efforts, and as proposed here, there is also a very significant opportunity to make more optimal decisions on solutions.

One of the reasons that the protection gap is getting bigger is the fact that the good solutions we have are not being pursued at the scale and scope needed even though they have shown that they can work.

With five good examples from five separate countries, how much more powerful would results be if we considered all five in every country? Local adjustments might be needed, but not trying them at all in any form does not get us to where we need to go.

Elaboration of specific solutions is left to more detailed notes[20] but they are mentioned here to present a menu for consideration. In each case, we focus on the risks highlighted in the groupings above.

The first step is to develop a large list of relevant potential solutions and to get an initial view concerning their feasibility, effectiveness, and interactions with other parts of the overall solution so that leverage and synergies can be considered. The approach illustrated in Figure 12 might be a basis for this work, including notes on a process and a suggested template for each proposed solution on the menu.

[19] See GAIP, (2023b), "The Solutions Landscape: Learning from efforts to reduce the Protection Gap", GAIP, December 28, 2023, available at https://www.gaip.global/wp-content/uploads/2023/12/Protection-Gaps-The-Solutions-Landscape_Final-v5.pdf

[20] A number of these notes are forthcoming and will be published after this paper. Readers can also refer to the second paper that discussed observed solutions in Asia. GAIP (2023b) where the relevant note is not yet available.

Figure 12: Approach and Template for Solutions Menu

Initiative	
Implementation leader	
Cost estimates	
Expected overall feasibility	
Expected overall effectiveness	
Identify relevant key risks	
1. Main risks	
2. Relevant secondary risks	
Description of expected benefits and value	
1. Risk mitigation	
2. Increased Insurance Penetration	
3. Sovereign Fiscal Exposure	
4. Broader economic benefits	
5. Other	
Key partners	
Key Stakeholders	
Principal target group(s)	

Eventually, the process may lead to a shorter list. However, it is important to keep solutions for the final cost-benefit analysis to avoid dropping solutions with significant leverage opportunities too early. For this reason, the work done on partners, stakeholders, and target groups will be important as partners and stakeholders will have views on these interactions and useful information on the situation of target groups. Insurers should be able to comment on possible increased insurance penetration because of projects that target other areas, for example. Some stakeholders may even go from being influencers to critical actors who will be delivering part of this leverage benefit, possibly pointing to a more formal PPP approach.

Having discussed with stakeholders and partners, it may be possible to do a first pass and high-level cost-benefit analysis, even if only to identify solutions that have promise compared to those that are almost certain to be eliminated, even on an approximate assessment. This will allow more promising options to be refined, although some may not end up being included.

> ***Prioritisation:*** At this stage, it is possible to eliminate the least attractive options based on a preliminary cost benefit. Avoid eliminating options on grounds other than potential benefits being limited compared to the costs.

Risk reduction

Logically, and in practical experience, any effort that can avoid or reduce the impact of risk is valuable. These solutions tend to be much more powerful than facing the risk. Additionally, these solutions tend to be easily and powerfully cost-justified. However, the potential risk reduction solutions are many and varied, so some might capture some benefits, whilst others may create a multiplier effect, as noted above in the discussion on insurance processes as pathways.

Mitigation interventions can be many and varied. Instead of seeking those that are cost-justified in their own right, we advocate considering those that may generate additional benefits through the insurance process (making risks insurable where they were not) and factoring in broader economic benefits (gains to the economy even without the adverse event, as discussed further below) as these are particularly obvious as missed opportunities in earlier efforts. The section on cost-benefit analysis includes a template to assist in this attention to broader benefits.

Catastrophic Natural Hazard Events

Many natural hazard events call for mitigation in terms of the following:

Intervention	Examples	Interactions to consider
Avoid risk by creating physical barriers	Levee banks, flood walls, dams and lakes for river flow control, river channel dredging, changed stormwater management systems, pumping stations for flow management, maintained fire breaks, etc.	The reduction of risk can be expected to make properties more insurable. This should allow the insurance process to engage and provide leveraged benefits.
Re-establish natural environmental barriers that reduce risk	Reef, wetlands and mangrove restoration. reforestation.	Can advance economic activity without adverse events such as eco-tourism.
Introduce early warning systems to sense and communicate risk	Tsunami warning systems, effective typhoon and cyclone modelling, river flow flood modelling, seismic sensors, wildfire early detection through fire spotting, drones, etc. Models to project the expected path of risk.	Can also improve data and modelling for risk assessment, supporting additional risk transfer tools at insurer and sovereign level.
Public education regarding disaster preparedness	Enable communities and households to identify their risks and prepare emergency kits, evacuation plans, etc. Public drills[21]. School programs on survival of perils[22].	Reduction of post disaster support needs from governments, more resilient communities bounce back faster, reducing overall negative impacts.
Changed building codes and practices to improve the resilience of structures in the face of potential risks	Depending on the hazard, buildings can be made more resilient by requiring reinforcements, using materials that resist the relevant peril, and other minimum standards such as, for example, requiring electrical outlets to be more elevated in flood-prone areas.	The reduction of risk can be expected to make properties more insurable. This should allow the insurance process to engage and provide leveraged benefits.
Rezone land use to reduce exposure of people and property in high-risk locations[23]	Restricting building in flood-prone areas, or with appropriate setbacks to allow for storm surge.	Reduces potential physical risk and also encourages construction and development in insurable zones.
Establish preparatory response and “first response” planning to reduce the immediate impact of events	Medical supply stockpiles, forward placement of equipment for rescue, restoration of utilities, etc. Community volunteer-based response teams[24].	Rapid response reduces the ultimate cost of risk and recovery.

[21] For example, some pacific island countries hold annual tsunami evacuation drills.
[22] For example, earthquake survival is part of the “Disaster Reduction and Human Renovation” program in schools in Japan.
[23] The specific experience of efforts to relocate communities has been documented in many cases. It is not always practical to do so and may, in some situations, raise concerns of a cultural or social nature for the communities involved. This further highlights the relevance of a consultative approach.
[24] Several countries have such local organisations that assist in rescue and recovery in coordination with other emergency services. For example, Australia’s “SES” (State Emergency Service), the Community Emergency Response Teams (CERT) in the Philippines, Pacific Islands Fire and Emergency Services Association (PIFESA) has volunteer firefighter and emergency responder programs, Japan's Community-Based Disaster Risk Reduction

Although this list is not exhaustive, it illustrates the range of options[26]. Some seek to avoid risk altogether while some seek to find better preparedness to reduce the impact, and others look to minimise the impact after an inevitable event. Most interestingly, some environmental restoration options have shown promise but have been underutilised. Potentially, considering the benefit to ongoing environmental tourism or fishery management would push up the "benefit" in a cost-benefit analysis for such efforts. This is an example of how a broader approach to cost-benefit analysis can bring new solutions into focus.

Insurers in Australia reported that around 1/3rd of claims from Cyclone Alfred in March 2025 were for food wastage caused by power outages. Given that data on power outages is available at a customer level, integration between power suppliers and insurers could support rapid payment, even if only a downpayment, for impacted customers. This would greatly assist in early funding that is very useful to mitigate the impacts of disasters[25].

There is also the potential for partnerships to make the immediate response to a crisis more effective, or at least avoid undesirable consequences. Some insurance products can provide an immediate benefit to assist with short term needs. Others may simply avoid creating hardship, where examples include insurers who might waive or defer premiums, or lenders who may forgive loan repayment instalments for a short period.

Although health insurers may be targeting rapid response to health disasters, some also facilitate short term premium holidays for customers impacted by natural disasters. This small cost additional benefit can have a high impact on disaster recovery. Other concessions may come from banks or other financial institutions. Regulatory support for such risk sharing is useful and amending rules may be needed.

Programs helps neighborhood associations to organize response teams and organize training, Bangladesh has Village Disaster Management Committees (VDMCs) where volunteers manage early warning systems and evacuation processes. Sri Lanka's Sarvodaya Shramadana Movement trains volunteers in risk reduction and emergency response and grassroots empowerment to mitigate flood and landslide risks.

[25] See Insurance Business report of March 20, 2025 "IAG ramps up recovery efforts for ex-cyclone Alfred victims" at https://www.insurancebusinessmag.com/au/news/catastrophe/iag-ramps-up-recovery-efforts-for-extropical-cyclone-alfred-victims-529145.aspx

[26] For more information see the note "Risk Mitigation and Physical Risk", forthcoming.

Health, Mortality and Retirement Security

Again, regarding health, a menu can be structured around risk avoidance, risk impact minimisation and rapid response.

Health interventions commonly include[27]:

- Avoiding risk by prohibiting harmful activities, exposure to harmful substances, products or situations,
- Product labelling,
- Public education,
- Taxes to incentivise reduced use of products associated with adverse health consequences,
- Wellness programs including vaccination or health screening, or encouraging or incentivizing healthy lifestyles,
- Rapid response disaster preparedness in the health sector,
- Water and sanitation infrastructure,
- Operating public sector health delivery services,
- Social protection programs securing access to health services for the most vulnerable in society,
- Pandemic and Endemic preparedness through stockpiles, monitoring and response preparedness, and
- Ensuring effective interaction between emergency services, hospital medical emergency teams, and ongoing medical service providers.

Regarding mortality, this is often seen through a health lens. Sickness is one route, but accidents can provide a focus. However, for accidental deaths in particular, prevention is key, so avoidance is the main strategy. Government interventions in workplace safety, road safety, civil aviation, civilian safety in public settings, and other potential dangers are one set of examples that target accidental causes, and these include minimum standards and rules, public education or warnings of dangerous areas, enforcement, and efforts to address events rapidly to avoid compounding cost and impact. Many other public safety interventions are directed at avoiding premature death from child safety regulations to suicide counselling hotlines, public swimming lifeguards, first aid training, chemical safety regulations, gun laws and credible criminal enforcement and penalties.

[27] For more information see the note “Risk Mitigation in Health, from daily life to pandemic extremes”, forthcoming

Other Risks

As risks emerge, it can be expected that preventative interventions might be considered to follow the same approach. Cyber-risk[28] provides a useful current example where the protection gap is large, but many risks are currently considered to be uninsurable from the perspective of the insurance sector. One reason is that many smaller enterprises do not have "cyber-hygiene" in place to a level that exists in larger organisations, making the larger organisations more attractive as a risk to insure. Even if there were sufficient additional insurable entities, the capacity from the insurance sector to provide capital at risk would be stretched given the potential magnitude of the market. Finally, there are some areas of concern that may be technically uninsurable by the sector, such as "acts of war" or risks that quickly aggregate rather than are diversified across potential insured parties.

As a result, in terms of mitigation, the main approach being taken as the risk transitions are:

- Mitigation for the most insurable risks is driven by the **underwriting process** of insurance; and
- Mitigation for the rest of the (largely uninsured) risks is starting to be addressed through **public education campaigns** where governments provide toolkits to enterprises. Over time, the effect of these campaigns will be to improve the basic "cyber-hygiene" for many more currently uninsured entities to a minimum standard that some of them, at least, will then become insurable.

The combination of these two interventions may well be supplemented in the near term by the potential for a government-arranged backstop in the form of a risk pool for risk that is too substantial for the sector to cover. This proposal has been floated by some sector associations and other private sector experts but has yet to get traction, although it is likely to be only a matter of time. Such a pool could follow similar operational approaches to other risk pools currently operating[29].

This commentary illustrates a generic similarity to other risks as synergies are optimised.

1. *Efforts to make uninsurable risks more insurable through risk mitigation.*
2. *Potentially, technically uninsurable risks need to be addressed so that the insurance sector can step up.*
3. *As insurance expands, the underwriting process encourages further self-funded mitigation on the part of*

[28] For more information on these risk pools and their operation see the note "Cyber-risk protection gaps and Cyber Insurance", forthcoming
[29] For more information on these risk pools and their operation see the note "Partnerships to improve insurance reach and delivery for natural hazards", forthcoming

Already, risks associated with the adoption of artificial intelligence are being mentioned as the next issue after Cyber[30].

Increased insurance penetration

Fundamentally, increased insurance penetration focuses on addressing barriers. The key challenge, for some reason or another, prevents customers and insurers from coming together and completing an insurance transaction. Reasons can vary, from issues on the customer's side, the insurer's side, or from the environment (regulatory or otherwise).

Barriers to inclusive insurance need to be overcome. Either:

1. *Remove the barrier; or*
2. *Find an effective path to overcome the barrier by going around or over it?*

Without action barriers remain. A lack of inclusion will continue to be a problem. If we do not change, even when we recognise the need for a different solution, we cannot fool ourselves to thinking we will find a different result.

Only through innovation and change can we find a new path.

From the customer perspective, there are three most frequently cited barriers.

- Insufficient "insurance literacy" means that customers do not understand the role and use of insurance sufficiently. This tends to lead to calls for increased public education.
- A failure to see the value of insurance, leading to calls for compulsion. and
- For the low-income segment, the "cost" barrier means that insurance is too expensive for this group. This leads to calls for subsidies.

Since efforts to make insurance markets more inclusive have been pursued for around three decades, a body of knowledge and experience has developed that suggests that these three barriers and their solutions might understate the challenges and could give rise to unsuccessful initiatives.

Other barriers have been identified, including:

- **Affordability: in contrast to "cost",** this means that the product is not "too expensive" but the funds to pay the premium may not be available compared to other priorities or due to timing when it is sought by the insurer;
- **Value**: where a product may be affordable, but the process of applying or making a claim is such that the effective value is eroded. For example, if a product is offered with 1/10th of the premium and sum insured compared to more widely sold

[30] For example in November 2024, Risk and Insurance magazine reported that "Cybersecurity and Related AI Risks Top 2024 Concerns of Risk Professionals".

products, it may not offer value to this segment when the opportunity cost of taking time to apply and claim is very high.

- **Location**: the distance between customers and point of sale may be significant
- **Social barriers**: some groups may feel uncomfortable discussing some information or may find being in some environments to be quite intimidating. For example, in some cultures, women may avoid standing in customer service lines with men.

An example of value barrier lessons in low-income insurance is death claims that need a death certificate available from government for a fixed fee (illustratively $100) and time and effort to apply (for low-income people a half day not working can mean reduced meals that day) can be expensive. For sums insured of $100,000 then this is a low imposition but for $1000, it could be much more prohibitive. As a result, inclusive products seek to find cost effective processes that may differ from their higher premium equivalents.

Additionally, although the higher income customer may find value in a claim paid after 3 weeks or two months, very low-income clients may need a much shorter timeframe for real value.

- **Religious barriers**: Conventional insurance is not always delivered in ways that reflect religious concerns.
- **Language**: Material may be presented in written form that is not the native language of the customer segment.
- **General literacy**: aside from insurance literacy, some customer groups may have low financial literacy more generally and generally low literacy skills.
- **Trust**: some underserved groups have a mistrust of formal institutions generally or of insurance and insurers specifically.

From the perspective of insurers, there can also be a range of barriers.

- **Understanding the customer**: As an underserved or unserved group, this new customer segment is not going to be as well understood as current customers. Often, however, insurers may act on preconceived views rather than on market research, given the potential cost of such research;
- **Data**: Understanding the risk and setting prices can be problematic for any new client group. Loading assumptions in pricing for uncertainty will, however, only increase cost, affordability and value barriers.
- **Technical barriers**: where the required insurance is not able to meet the technical conditions to be insurable.
- **Process barriers**: where the usual procedures used for current insurances simply are not workable for the new customer segment;

- **Profitability barriers**: Many products rely on achieving scale, both to deliver the benefits of diversification and economic expense levels. Scale can be difficult to achieve in these segments.
- **Trust**: Senior insurance executives may mistrust the potential client group.

As an example, it is not unusual for insurance managers who are not familiar with inclusive insurance concepts to be concerned about increased potential for fraud and nervous about any suggestion of relaxing procedures. Applying the same diligence to very small policies is, however, counter intuitive when considered on economic grounds. When sums insured are low, it can cost far more to check all claims for fraud using conventional methods than is saved by finding cases and avoiding those claims. No point spending $100,000 to save $5,000 from 10 $500 claims!

As the challenge is to serve a group that is currently underserved or unserved, then it is clear that the current approaches of both customers and insurers are not working sufficiently for reasons associated with these barriers. The barriers must be removed or overcome. The approaches used must, in some way, be different, as the current method is, by definition, not working. In short, **there must be "innovation" in processes and products** to meet the needs of the market. Over these last three decades, innovations have been introduced with considerable promise, often by learning painful lessons, but still are underutilised. In some areas, however, developments are more embryonic or new technologies with additional promise are coming forward.

Digitisation: Technology has long been seen as a route to more effective delivery of processes. Sales, customer enrollment, premium collection and claims are all processes where digitisation has advanced, especially with the transformations when home-based work was greatly extended during the COVID-19 pandemic.

Mobile Phone Distribution was a significant leap forward in the distribution of insurance and rapid achievement of scale. Since the early phases, it has gone through several iterations and remains a successful approach to achieving scale in distribution. Learning the lessons of the early ventures has led to significant refinement in the way that products are sold and customers are enrolled, and the products that are offered.

Continuing use of cell phone connections can be expected as post-sale service delivery applications increase.

Digital opportunities continue to expand. Applications are diverse and include providing insurance to mobile banking customers, insuring mobile phones, and using phone cameras to validate identity, all take advantage of increasing cell phone penetration among all income groups. Other innovations include initiating product cover for crop insurance, where farmers activate the insurance at the point of sowing the crop, and the geolocation of the phone assists in recording the location of the risk. Telematics for vehicles and anything else that moves (from delivery

drivers to livestock), has been usefully transferred to leverage the connectivity and additional data available from mobile phones.

Beyond a mobile phone itself, a range of sensor devices can be used to address risk, and feed information to facilitate effective insurance service delivery. This is most evident when sensors can support either the reduction of risk or the more effective processing of claims to reduce the cost and affordability barrier. These sensors can include water level sensors that can alert homeowners of a potential water leak to allow them to avert serious damage (or automatically stop it), or can detect water levels that trigger immediate payment of flood claims on a parametric basis. Health sensors, wearables for workplace injury prevention, and many others can all reduce risk and support faster, more efficient claim handling[31].

At the time of writing, the opportunities for carefully applied artificial intelligence technologies are exploding. Creative opportunities are being explored and will generate useful solutions, although these have not yet emerged at scale; without doubt, they will do so in the near term.

Alternative distribution: the "last mile" to the customer is often the most difficult and leads to underserved customers. Digitisation may help, but there are several other approaches to alternative distribution that are available and have found application. In some cases, the effort to introduce them in countries has met with regulatory hurdles, whereas in others, the ability of firms to form partnerships where value to both partners and clients is available has been problematic.

There is evidence in many countries that the barrier of trust can be overcome when the distribution is channelled through a trusted intermediary. In many cases, but not all, this means that distribution that leverages local trusted entities and structures is very valuable. This might include community groups and social associations (some of which may be legally informal), religious groups, extended family collectives, educational institutions and charities. Others might include co-operatives, business input suppliers, or

[31] Some sensor-based insurances are very useful to provide early payment on an index-based parametric approach such as the "high temperature" insurance in the SEWA example (see below). See https://www.forbes.com/sites/christinero/2023/05/27/the-new-type-of-insurance-that-protects-indian-women-during-extreme-heat/ and https://jpia.princeton.edu/news/heat-linked-parametric-insurance-system-offers-climate-change-lifeline-indian-women-informal and https://www.swissre.com/our-business/public-sector-solutions/insights/parametric-structure-for-sewa-in-south-east-asia.html and https://onebillionresilient.org/project/extreme-heat-protection-initiative/ and https://aidmi.org/blog/parametric-insurance-and-extreme-heat-sewas-experience/ and https://www.climateresilience.org/wcsprogram and https://iufap.org/2024/07/12/in-the-face-of-rising-heat-waves-sewa-seeks-to-protect-the-health-and-livelihoods-of-women-workers-in-the-informal-economy/ for coverage of the case.

credit providers who have business relationships with the target group. Whatever group may have a close connection with the customer base is a valuable opportunity. Of course, it is often a challenge to ensure that such distribution partners can be recognised under an insurance law, especially when it was established with traditional agent-based distribution as the focus.

Product Bundling: When distribution partners offer products to clients, then the potential to bundle together the insurance product (and premium) with the partner product exists. Experience has always cautioned that such bundling can lead to sales without transparency and consequent issues regarding the fair treatment of customers. As a result, cautious regulation may exist that is a barrier to this opportunity. Revisions might be considered to reflect the specific circumstances of such new opportunities and safeguards developed that facilitate the initiatives, whilst being sensitive to consumer protection objectives.

Traditionally, the usual bundling presents through life insurance supporting credit lending products as a bundle. This is also evident in more inclusive insurance especially through distribution through large banks all the way to small microfinance lenders. Some adverse cases have raised concerns for policymakers so they have given it special attention to find a solution in the face of poor behaviour associated with bundled products.

But bundling also can occur in other products such as the combination of agricultural insurance with the sale of other agricultural inputs such as seeds and fertilisers. Agricultural risk transfer has also supported the willingness of farmers to access finance and lenders to provide it so was bundled to facilitate this finance.

Health Product Innovations: To reduce claim costs as part of the product cost, mobile phone distribution has developed a new product known as “hospital cash”[32]. Wearables, health support apps and other innovations have also helped to make healthcare both accessible and affordable for new markets.

Parametric insurance for agriculture: The development of parametric insurance in agriculture has found some traction, especially in crop insurance. Parametric versions of this insurance have taken interest further, as it reduces the cost burden on farmers whilst presenting similar benefits and offers the very important benefit of rapid claim assessment and payment to facilitate re-cropping. Importantly, these parametric insurances focus on crops and the successful harvest (or otherwise) and not only on the risks associated with extreme climate events. Farmers have benefited from this insurance

[32] The product dispenses with the need to assess claims in terms of the illness and the relevance of the service. Instead, it simply pays a fixed amount per night of admitted hospital stay regardless of whether it is to address a common cold or a heart attack. This greatly simplifies the product terms and conditions (making it easier to explain) and the claim payment (avoiding the need to consider the relevance of the specific services offered).

in several ways, including through accessing credit and optimising productivity as a result of the insurance risk transfer mechanism. However, projects to date have largely focused on small holder farmers. Much of the farming community surrounding agriculture is also exposed to similar risks in some form when it comes to their income security. Whether it be rural town businesses or farm labourers, this form of insurance has yet to extend to them.

Crop insurance has been a popular source of development projects, but livestock insurance is potentially more important to customers and is much more underdeveloped. In many countries, a simple analysis of the number of households involved in crop farming and those with livestock will show that many more families have some livestock even if only a small number of animals, and are candidates to insure those animals this is particularly the case when large agricultural operations are excluded to focus on the most vulnerable[33]. Regulatory arrangements for parametric insurance and for piloting are critical to support the development of these insurances[34].

Parametric insurance for natural catastrophes: Not all potential customers are farmers, but parametric insurance can still offer the considerable benefit of early claim funds in the event of natural catastrophe. Insurance in this form can be paid quickly and is a great benefit, as rapid payments significantly help recovery. So, bringing together the parametric structure to retail and micro insurance has considerable potential. Some industry stakeholders have shifted their focus to solutions on the same parameters at the macro (sovereign) level to avoid the challenges of basis risk, but others remain optimistic that retail index products have a future.

In India, in partnership with the Self Employed Women's Association (SEWA) labourers are able to secure a rapid payout on days of high heat stress defined by a parametric product. This means that they receive some valuable funds when they would otherwise suffer the loss of wages, critical when living financially "day-to-day".

Parametric insurance has proven particularly valuable to address cost barriers, through automated claims assessment processes.

It can also be very valuable to facilitate rapid payment of funds but, although early funds are of tremendous value to those with limited resources, it may not provide more complete coverage for overall economic losses.

SME and MSME: To date, considerable work in the inclusion space has focused on households but the MSMEs and SMEs are a key group with serious insurance needs. The COVID-19 experience particularly with the confusion around business interruption,

[33] In many countries, livestock represents 75% of agriculture compared to 25% for cropping but crop insurance is more available.
[34] For further information see the note "Indexed Farming: Parametric Insurance and the Agricultural Sector", forthcoming

highlighted that there are risks that the sector wishes to seek protection for, and these are not yet finding product solutions. MSMEs are further complicated by the blending of household and business risks. Taken together, this sector is an emerging stage in the insurance inclusion space and can be expected to emerge in a similar way with new products and service delivery solutions to become a more substantial market opportunity.

Leveraging universal health enrollment and other national health awareness initiatives: In many countries, efforts to increase coverage of social health schemes have seen significant increases in private health insurance at the same time, increasing health financing sources and coverage at both the minimum social level and for additional services. This can be a secondary benefit arising from the greater public awareness of health care coverage and household preparedness.

Migrant workers health and life insurance: A full review and benchmarking of compulsory insurance in our second paper revealed considerable diversity in Asia and local priorities[35]. However, one segment stood out as an opportunity, the insurance for migrant workers, especially the itinerant who are largely migrating temporarily and retain heavy connections with their home country. The opportunity to develop a sensible minimum standard product is clear and socially responsible, and so would be expected to get widespread support across Asia. As a compulsory class with defined minimum benefits, it could be more readily implemented than many other attractive options, so is a "low hanging fruit".

Effective compulsion: In some jurisdictions, although an insurance product may be compulsory, there can be incomplete observance of the requirement. Resolving this issue will increase insurance penetration. When compulsion is ignored, this can indicate some perspectives on the part of customers that are unhealthy to the development of the insurance sector more generally. Action to do so should target the cause of the lack of compulsion. But when making the compulsion more effective, it is also important to ensure that the product is serving the policy objectives – that is, it is not useful to enforce the compulsory purchase of a product that is a poor product

In Uganda, observance of the obligation for compulsory motor insurance was very low, understood to be below 20%. A combination of counterfeit insurance certificates, corruption in enforcement, and high costs for legitimate insurance means it is far more likely that a traffic accident victim will not benefit from insurance - creating a reputational risk where all insurance is perceived to be of poor value.

[35] See GAIP, (2023b), "The Solutions Landscape: Learning from efforts to reduce the Protection Gap", GAIP, December 28, 2023, available at https://www.gaip.global/wp-content/uploads/2023/12/Protection-Gaps-The-Solutions-Landscape_Final-v5.pdf particularly at page 66 where the annex details the results of the survey.

from the perspective of the customer, the beneficiary, and is sustainable for insurance providers.

Funding innovation - Encouragement: Innovation is necessary to achieve change, but the level of innovation is not yet at what is needed to secure the change in protection gap levels needed. Regulatory barriers are important to remove. Removing them can then create a more enabling environment. This includes:

- **Proportionality**: critical to both regulation and supervision, this principle can be implemented to facilitate many of the flexible elements suggested elsewhere in this paper.
- **Pilots and experiments**; sandboxes by whatever name will be needed for innovation especially in the areas of agricultural and other index-based insurances and for some innovative distribution initiatives.
- **Review regulations which prescribe solutions** that may not work
    - Careful consideration of regulations for disclosure, licensing smaller entities, composites, alternative distribution channels, and customer identification for AML/CFT are among those that should all be reviewed.
- **Taxation on premiums**. Taxation on products may be contributing to the cost barrier and preventing sales. If there are no sales, advancing them should mean consideration of a sales tax exemption as this is revenue neutral (the tax is not being collected now from the uninsured, so exempting them is not a revenue loss). If advances in the enforcement of compulsion or other developments, increase revenue from premium-based taxes, then it may be considered whether or not some relief can be given to lower-income groups to address cost barriers whilst maintaining revenue at pre-reform levels.
- **Enabling environments versus proactive engagement**: is it enough for supervisors and other policymakers to get out of the way? Should they be more proactive to encourage participants into the market if too many insurers sit on the sideline? This can be achieved through sponsored activities such as innovation competitions with funding grants, innovation events to showcase the experiences of other jurisdictions and other such engagements by government leaders[36].

[36] Some governments have mandated that insurers provide certain services to certain underserved groups. This approach tends to be challenging in terms of longer-term sustainability and is appropriate only in the most specific country circumstances so is not generally supported under the category of “encouragement”.

Funding Innovation - Addressing market constraints:

In some markets, some compulsory insurances are a drain on insurer revenues and profits. They are not achieving their social goals or the commercial goals of insurers. Worse still, they may be a very material part of the portfolio of current insurance risks. This sets up a situation where the "fire fight" for market share and profitability in competitive classes is the key driver of commercial action and management attention, and there is no bandwidth or funding for change. Although everyone accepts that change is needed as the same approach is not working, most market players beyond the top one or two have no time or money to invest in change.

Across the world, motor insurance claims ratios are, on average, 152% higher than other non-life insurance claims ratios making it a significant drain on the financial resources of insurers.

Source: AXCO Statistics, Author's analysis

There is quantitative support for this market dynamic in the insurance sector. So, the insurance policymakers may need, in such situations, to push for rationalisation so that "more than two" insurers in their market are able to finance innovation. Without doubt, if only 2 out of 30 or 40 or 50 insurers can afford to invest in change then this will not create the step change we need.

Recommendations for policy action:

- Ensure that innovation in all its forms can be advanced without regulatory restrictions that are inadvertent. This includes digital, parametric, and other key areas of attention.
- Make sure that all potential distribution channels can be pursued under the legal structure. If necessary, clarify the approach that is proposed in legislation or circulars outlining the supervisory practice to the sector.
- Ensure regulations are appropriate and proportionate and facilitate innovation
- Examine the extent that innovation is taking place and consider the need to push innovation further, including by more market players when market structures are not facilitating change adequately.

Sovereign risk financing

All risks that are not handled privately or through community engagement have the potential to fall to the government. In addition, the operation of the government also brings its own risk exposures that need to be given proper attention. This section discusses how governments can address these risks in line with the various objectives they may have rather than taking a "risk-specific" approach.

The place for ex-ante financing in the strategy

When it comes to sovereign risk financing, a range of in-advance (ex-ante) solutions can be put in place. Some ex-post solutions are usually necessary after the event if ex-ante solutions are not in place or prove to be too small. The list of responses that are usually discussed are:

Ex-Ante[37]	Ex-Post
• Regular Budget Allocations, setting aside funds to cover anticipated needs each year. • Contingent budgeting, considering amounts for various contingencies. • Reserves, establishing funds set aside to be drawn down as needed. • Contingent credit, where the contingent finance is drawn upon only when needed. • Parametric (re)insurance, • Catastrophe bonds	• Fiscal revenue increases • Fiscal expense reallocation • International donor assistance • Borrowing, domestically or internationally.

Sources: Surminski et al (2019), Cummins and Mahul (2009) and others

Although ex-post solutions may have an initial appeal and theoretical support in economic literature based on a view that sovereign governments can adequately diversify catastrophic risk[38], the experience is that they are less effective and less reliable than ex-ante solutions. In each case, the ex-post solutions have the appeal that they may respond precisely in the amounts reflecting the event, but the reality is quite different:

[37] Ex-ante solutions are shown in order of those that are often considered appropriate in a multi layered solution from coverage for lower cost higher frequency events (for example local flooding) to higher risk (low frequency greater severity such as major floods, earthquakes, or cyclones).
[38] For a fuller discussion see "*The Cost of Hindsight: Prioritising Ex Ante Solutions over Ex Post Damage Control*", GAIP forthcoming. The economic argument started with Arrow and Lind (1970) although what is now known as the "Arrow-Lind principle" rests on assumptions that are not fully present for most countries including the need for an unlimited borrowing capacity and a very large population.

Ex-post - Fiscal revenue increases: In the face of adverse events the economic circumstances are negatively impacted and can be recessionary. This is not the time to announce further fiscal burdens on the economy. In addition, these initiatives can take time, requiring policy decisions, legislative change, and implementation, so they will not be very useful to support finance in the shorter term. This implies that other alternatives will be more attractive and practical.

Ex-post - Fiscal expense reallocation: Although some redirection of expenditure can be achieved in a shorter term than revenue increases, the political process of identifying available funds is still likely to take some time. Just as allocating funds to various budget items is competitive, reducing or deferring projects also can be expected to meet with arguments that burdens should fall elsewhere, and some programs should be protected from budget cuts. Given that the adverse events will have caused hardship and the demand for a response, then this will have merit, meaning that the burden will have to fall "disproportionately" on other expenditure areas, making the decisions more likely to raise some stakeholder reactions.

Ex-post - Borrowing, domestically or internationally: Although some borrowing may be available in a shorter time frame, the economic adversity caused by the event may make borrowing costs more expensive or constrain the options available. There is evidence that global bank lending to countries impacted by disasters tends to reduce rather than increase[39]. Some borrowing options may still take a year or more to complete. Some lending can be redirected, but to the extent that is the case, is not actually supplemental to financing. This redirection of borrowing allocations has been documented in the case of country borrowing from multilateral and bilateral agencies.

Ex-post - International donor assistance: For some countries, international donors can be expected to respond. The experience of countries, however, shows how this source is insufficient and unreliable. Data indicates that "International donor assistance, for eligible countries, also can take some time to execute, and donor response can also be a function of the visibility of the event in the international press, which adds an element of variability. Evidence also points to some substitution, rather than new funds sourced through donor channels, as funds can be reallocated within overall country commitments. Asia's experience in the last 20 years has not generated significant donor funding as a proportion of total losses, with the average contribution in cases where there was funding

[39] See Ilabaca, F., Mann, R., and Mulder, P., (2024).

at just 12% of the economic loss. No country received donor funding reliably for all events experienced, rather, a small proportion of the events tended to result in support".[40]

The ex-ante options have different characteristics. Some have advantages over others in terms of usefulness, depending on the frequency and magnitude of the adverse events. On budget items tend to be more relevant for high frequency lower impact events as they correspond more to regular allocations in budgets. Less frequent higher impact events can be converted into annual allocations through external risk transfer financing vehicles.

"On budget" allocations work well when they can be expected to be consistent amounts from year to year. Risks occur, however, with some volatility. The smaller the jurisdiction, the greater the level of volatility that can be expected in the total cost of risk events each year.

Ex-ante - Regular Budget Allocations, and Reserves involve setting aside funds to cover anticipated needs each year. This approach has been used in many countries. For reserves, a separate fund is created, sometimes allocated to the management of a separate agency. Allocations can expire if unused, whereas, for some arrangements, reserves can carry forward unspent funds for future years, especially if provided to a separate agency from the government that can build up a balance sheet of its own. These funds are cost effective to respond to events that are smaller and more frequent, allowing governments to intervene and meet important needs at local levels.

These funds can provide several advantages. Firstly, they make a practical and effective contribution to the overall policy objective of improved resilience. Governments have a readily available source of funds to respond immediately after an adverse event, allowing for rapid disbursement. This supports immediate needs and reduces the longer-term impact of the event.

The disadvantage of such funds lies in the opportunity cost of unused funds in years when events are less frequent or lower cost, and the risk of shortfalls in years when events are more frequent or larger.

[40] Analysis of EM-DAT data as reported in GAIP (2023b), p42.

When a separate fund is established and administered, this encourages greater transparency and offers additional opportunities. Some funds also act as the lead agency to arrange insurance and other risk transfers to further supplement the resources of the fund itself. This interaction with insurers, reinsurers, and others is usefully coordinated over time and can benefit from a longer-term perspective than usually comes with annual budget cycles. Some funds also complement government efforts by encouraging research, risk modelling, data gathering, and public education. The governance and transparency associated with such funds are important, as the risk of mismanagement of the reserves as they build up can arise.

In Indonesia, the government is establishing a pooling fund for natural disasters to be managed by a unit in the Ministry of Finance. The fund is empowered to accumulate assets reducing fragmented approaches for post-disaster financing, streamline disbursement of funds, and build financial capacity including through insurance mechanisms.

Figure 13: Illustration of relevance of Layered Instruments as part of Sovereign Gap Response Strategy

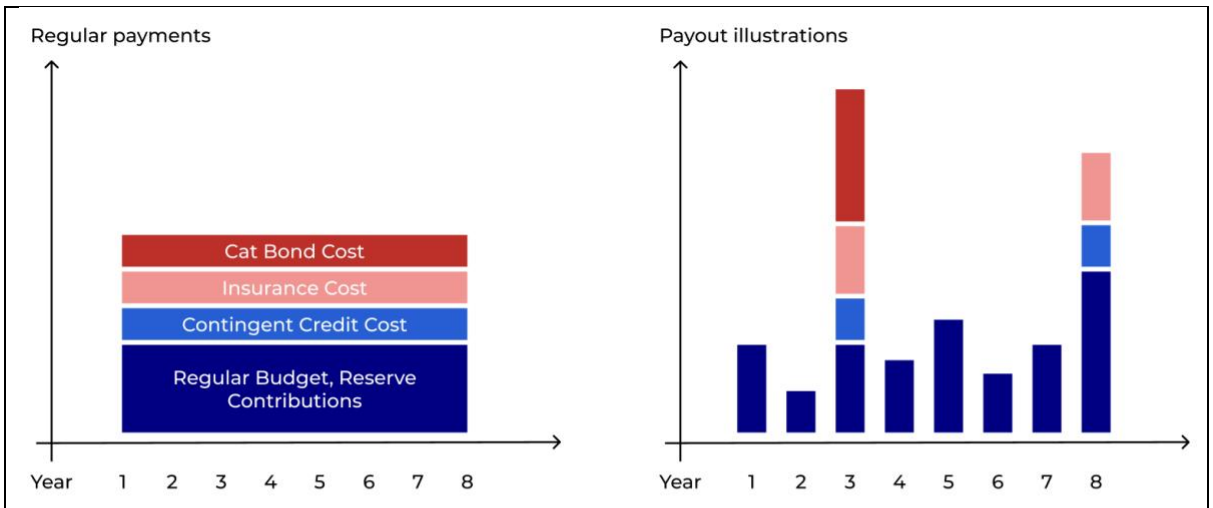


Chart on the left illustrates the cost to budget being relatively even from year to year for all investments.
Chart on the right illustrates the payouts may vary significantly as risk exposure varies.

Year 1: Cost of adverse events largely equals reserve and contingent budget allocations, so all is balanced.

Year 2: Only light costs are incurred, reserves are also sufficient, and spare funds would remain at the end of the fiscal year or could be reallocated.

Year 3: If remaining balances from the year before were reallocated to other budget priorities, then the severe risk in year 3 sees only one year of reserves available but, fortunately, the other layers made a substantial contribution.

Year 4: Unspent reserves were carried forward.

Year 5: Greater payout when experience was worse, includes unspent reserves from year before.

Year 6 & 7: Spare funds were also carried forward

Year 8: Higher reserve payout was insufficient and usefully supplemented again with contingent credit and insurances.

Ex-ante - Contingent credit: Where contingent finance is drawn upon only when needed, it is a useful tool for many countries, and is offered particularly by some bilateral donors and several multilateral development banks. Bilateral donors, the ADB and the World Bank, all offer such instruments. When a contingency occurs, funds are made available quickly given that they are all pre-approved both in terms of amounts and the terms of the funding.

The Japanese Government has signed a number of contingent credit support instruments with the Philippines. They provide, in the event of the contingent event occurring, significant budgetary support at attractive rates. Both natural catastrophe and health related issues are covered by these

Ex-ante - Parametric (re)insurance: Through arrangements with the insurance and reinsurance sectors, this can be provided to governments or to their agencies. Some expertise is required to develop these insurances including the index or parameter and the point where it triggers a payment. Technical assistance is available from development banks, insurers and reinsurers, and insurance brokers. Examples exist in Asia of insurances taken out to provide funds to national and subnational governments directly or to specified agencies charged with response and recovery.

SEADRIF Insurance is the fourth of the regional grouping risk transfer arrangements following similar operations in the Caribbean, Pacific, and Africa.

The Laos Government has taken out cover and benefited from claims paid for flooding through SEADRIF.

Insurances have also been taken out in Philippines, Indonesia and India at various levels of government directly with global markets.

Ex-ante - Catastrophe bonds: These operate similarly as they tend to be based on parametric trigger-based payouts. These instruments differ in structure as they focus on risk transfer to capital markets, albeit that insurers and reinsurers have been involved in supporting such arrangements. The bonds are usually structured through special purpose vehicles. Funds are contributed by investors who subscribe to the bonds and by the insured party who pays a premium. The funds are invested in underlying bonds that pay interest and will ultimately mature. In the event that there is no claim, then the funds are paid back to the investors, offering a better return than would be secured had they invested in the underlying bonds directly. However, if there is an adverse event that meets the conditions for payment of a claim, then the investors in the bonds are penalized, and the funds released by that penalty go to the insured. Keys to this arrangement are (i) the terms of the trigger, (ii) the defined penalty when triggered, and (iii) the credit quality of the underlying bonds. As a result, it is often the case that high-quality government bonds or those issued by multilateral development banks operate as the underlying bonds.

Regarding sovereign insurance and catastrophe bonds and other such insurance linked securities, these can sometimes be accessed and managed as part of PPPs that aim to address challenges of insufficient or problematic insurance capacity (see “The potential for PPPs” below).

Action steps:

The assessment of protection gaps and target group priorities will take priority over assessing sovereign risk, but initial steps can include:

- Identify current ex-ante funding mechanisms and the approach to determining their size, including the experience of cash flows and any modelling that would be useful.
- Consider the risk impact of events on key government assets and infrastructure, and on response, recovery and reconstruction through discussion with relevant agencies, documenting recent experiences, or conducting stocktakes of key assets.
- Discuss risks where insurance capacity is particularly problematic with key potential partners in the insurance sector to identify areas where government backstops through PPPs may be needed.
- Engage with potential partners to identify those that may be able to offer technical assistance regarding risk modelling and risk transfer program design.

Global Asia
Insurance Partnership

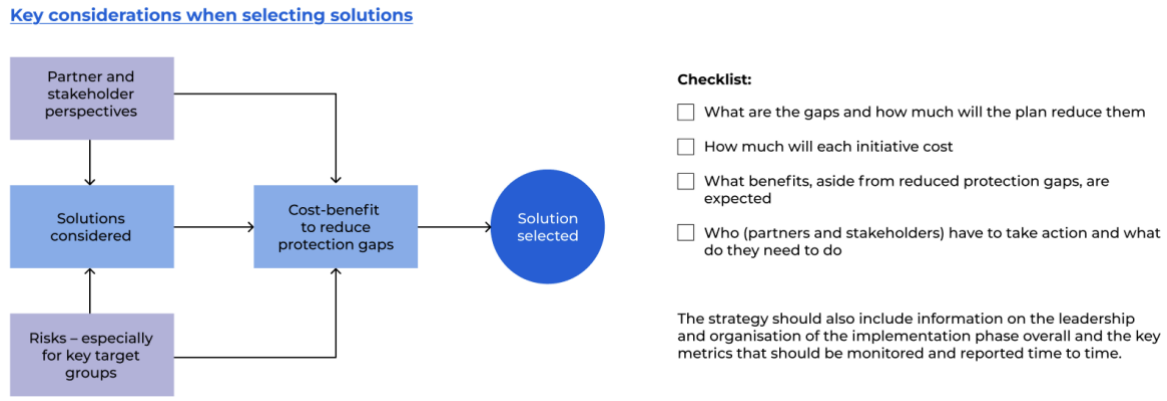
D. Develop Implementation Plan

D. Develop Implementation Plan

This section discusses some key questions that will arise as the plan is being developed and documented for implementation.

The Plan

Having developed the various materials, then the plan can be brought together.



Mandates

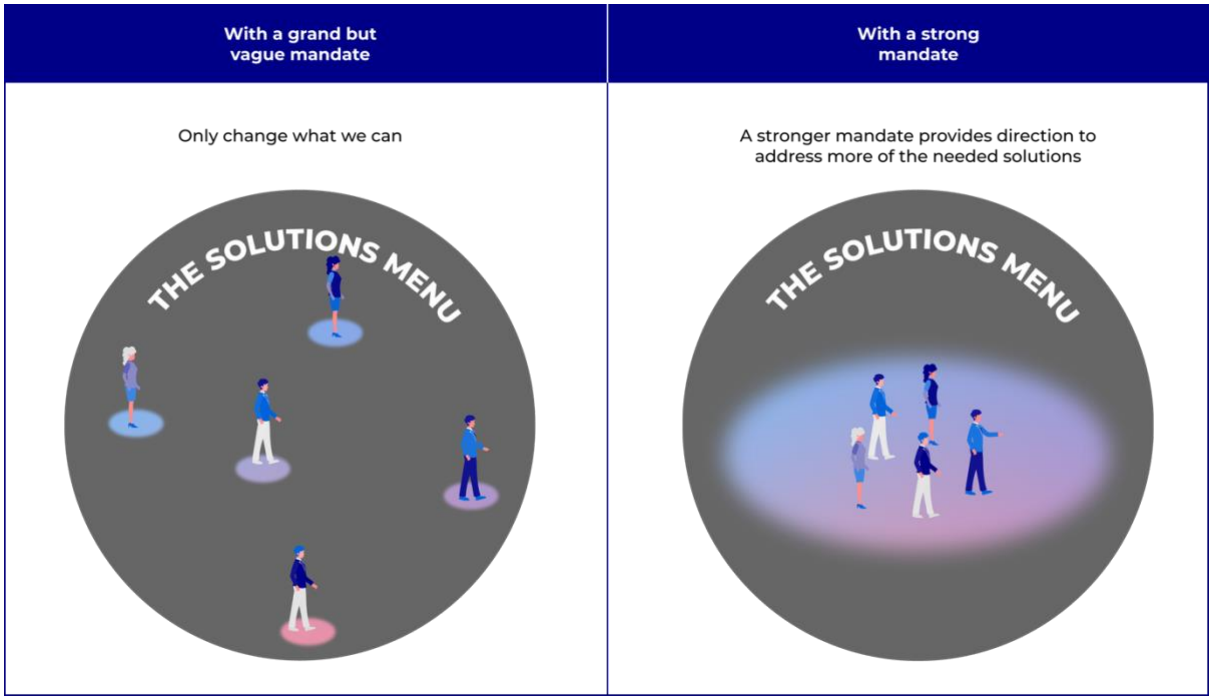
A key question is “Who should be in charge of the strategy?” As we have seen, the scope of potential work is vast, and the range of partners in government as well as the private sector is also quite extensive. Solutions can involve ministries of finance, health, social security, transport, employment, telecommunications, commerce, as well as agencies covering revenue collection, financial sector supervision, disaster response, and many more, even including traffic enforcement! Few parts of the government have the existing reach over all these elements.

An initial view can be to give responsibility to one organisation. The insurance supervisory authority has good linkages and many have been given a “developmental mandate”. Some insurance supervisory authorities also have a development mandate written in their law and even included in the name of the authority in some cases. The A2II monitors such mandates and reports that an increasing number of supervisory authorities have a development mandate.

But this has not generated sufficient results to date. The main reason is that the goal is given to the supervisory authority but they are not provided with sufficiently clear political support to engage meaningfully with other ministries or agencies. As a result, they focus on actions that are within the scope of their existing regulatory oversight, automatically reducing the solutions menu materially to insurance market dynamics, particularly regarding insurance licensing, supervisory processes, distribution, and product innovation. **This is the kind of forced sub-optimalisation that needs to be avoided**.

More problematically, some insurance sector stakeholders may look to the insurance supervisory authority to carry forward this work. The supervisory agency may be viewed in the private sector as potentially the best agency within government that has technical insurance expertise, industry knowledge, and close relationships with the sector. As a result, the sector will discuss their concerns with a broad range of issues in the knowledge that they are likely to be understood. But understanding from a government agency does not replace the need to speak to the other responsible agency.

Figure 14: The impact of an incomplete mandate



As can be seen from the earlier discussions in this paper, the scope of activities that may need attention to reduce protection gaps far exceeds those under the authority of the insurance supervisory authority. The strategy may require coordination across government extensively, convincing others to act, and relying on issues being a priority for these other organisations. The scope for change involving such a broader range of

government policy areas suggests that **leadership should be given explicitly and supported by both administrative/legal authority and political commitment.** To that end, some jurisdictions may choose to clarify the development mandate of the insurance supervisory authority or, alternatively, to mandate a senior ministry.

The explicit decision about who to mandate to take the lead needs to be sufficient in scope and breadth, and have the necessary support provided. If it is not the insurance supervisory authority, then it is to be expected that the authority will be a critical supporter to the lead, as they will need to take some actions as set out in the discussion above in the section on key partners.

A cross functional steering committee may also be common for such efforts. Such a committee may include a core of the most critical representatives and could bring in others with a more limited focus from time to time. Operational projects may involve shorter term implementing teams from focused areas of government.

At all times, the operating structures should focus on facilitating the relevant project steps and outcomes. Public announcement of the structure and mandates will assist external stakeholders to communicate with the right people.

Action Step: Ensure that the full and clear mandate is given to a lead ministry or agency, along with necessary resourcing and political support.

More on Data and Modelling

As noted in the above section, materiality and priorities are important during the strategy development detail and this includes data and modelling.

> ***Any data point or model, no matter how approximate, is better than no data at all.*** *Key is to understand how uncertain the observation may be and to make decisions that reflect this uncertainty, then to refine the analysis on the remaining.*
>
> *It is better to start with something than wait for perfection that may never be available.*

However, the first step is to make an estimation based on a current "best endeavour" type basis reflecting the available data and models and the time and resources available. It is better to have a summary of a range of views of stakeholders, even if each of them is providing a view from nothing more than their own expectations, than to consider that there is no data point until a

perfect data calculation and detailed model can be developed. Key to this approach is to act on the data based on the credibility that it has.

To illustrate, if there are 10 solutions projects proposed and no information then a survey of stakeholders and experts providing views independent of each other may lead to a ranking and a range of uncertainty on each project as feedback. This may be sufficient to allow the elimination of the lowest ranked proposal but less reliable to suggest a focus on the top proposal only.

Rarely is there "no data at all". Data may be available from local sources. Observations that tell us something but are not completely comparable may still be useful and can come from experiences in different situations, jurisdictions, or time periods. Some less-related data sets can be very useful, providing detailed information on a part of the problem. The qualitative experiences of other jurisdictions are, in fact, data points. For example, detailed information is available on many topics, from mobile phone ownership and usage to food production to topography and climate to vaccine effectiveness. Earth observatory type data is useful for hazard monitoring and modelling. Population movement data sourced from mobile phone tracking became particularly useful when managing the COVID-19 pandemic.

Data on property (public, private, residential, commercial etc.), crops and livestock, business income, healthcare costs, demographic trends, livelihoods (income and assets and liabilities at individual or household level), and population numbers are all available in one form or another sufficient to provide some preliminary perspectives at least. Other sources of data for a strategy may include public sector administrative data such as taxation data, and insurance sector data on products, coverage, costs, and reach of distribution by gender, location and product type.

All of this data may be useful to collect, collate and present to a range of stakeholders. Where public sector data is protected, it may be possible to use it to support analysis, then report the overall conclusions and some broader aggregates that do not breach individual privacy but still make a supportive point of communication.

It is also relevant to consider that data can be used, once collected, for some time and does not all need to be updated continuously. For example, data about details of insurance coverage at a granular level or customer perceptions of risk may be collected every few years. Just because data might be useful does not mean it has to be collected every month. Similarly, some data can be collected on a survey basis, sufficient to provide

the necessary information for decision making, rather than collecting and collating all instances.

Models are also areas where the availability of perfectly applicable solutions may not be immediately to hand. Some modelling is proprietary but can be accessed by engaging with the stakeholders who have them. Other models are rigorous for other jurisdictions but may require some local data to calibrate them to the local needs. This work can be done for the more detailed and final quantification. Before then, more parsimonious models might be instructive if not conclusive.

Costs and benefits

Thirdly, **a more holistic and integrated approach encourages the use of cost-benefit analysis to select solutions rather than only to justify them**. Many risk reduction measures can be cost-justified on their own merits. However, when taking a more holistic approach, the scope of the benefits that would be considered is broader so the opportunity exists to use the results to select the best solutions even when most would be able to be justified. Some will be "more justified" than others, particularly when considering the broader benefits.

To that end, efforts to capture the usual and secondary benefits would consider:

- **Risk reduction**: The direct effects that reduce risk, and also the secondary risk reduction through flow on processes such as insurance sector underwriting and pricing;
- **Risk financing**: Increased access to insurance creating a larger pool of resources directed at adversity, changes to insurability increasing the risk pool, and the opportunity to better deliver effective sovereign risk transfer solutions;
- **Ex-post risk response**: opportunity for more effective rapid response and response financing reducing overall impact of adversity, reduced fiscal cost and cost pressures in the event of adversity, making for a more timely and targeted approach, reduced need for less cost-effective solutions, reducing hardship.
- **Benefits beyond adverse events**: Increased benefits from investment outside of adverse events ranging from macroeconomic (employment, productivity, investment) to ecotourism, food security, climate, welfare, etc.

One of the barriers to progress reducing protection gaps is the approach to cost benefit analysis. There are two main approaches that need to be avoided.

- First, when seeking to select solutions that offer the best investment of funds and capture the most benefits, **the cost-benefit analysis should be a fundamental part of the selection of solutions** to pursue. Often, other criteria are used without cost benefit analysis data to prioritise and eliminate some solutions from further consideration.

- Second, the **cost-benefit analysis should take a comprehensive view of benefits**. Many project ideas generate a positive cost benefit, taking into account only the most obvious benefits, so they can be justified and may move forward compared to others. However, this sometimes means that projects with very strong leverage or secondary benefits are eliminated because those benefits were not considered.

When the goal is to maximise benefits, reducing protection gaps, a cost-benefit analysis should be used to make the choices, not to justify a choice after it has been made.

The solutions menu is intended to investigate early potential for leverage and secondary benefits. This should carry through to the ultimate cost benefit calculations. Data will, however, not be immediately available, and some benefits might only be able to be estimated as a broader range. Even if the final "benefit" in the cost benefit analysis is a range, it is still useful. Key parameters that create uncertainty in the range will also be useful as performance indicators to be managed during implementation. Over time, during the development of the strategy, the most significant project contributions may be refined by investment in additional expertise. Smaller amounts can be left approximate when they are less material to decision making.

To illustrate the advocated approach to cost benefit analysis, a template is provided as Figure 15. This template can be completed even when not all costs may be paid for by the government and not all benefits may fall directly to the government, which is useful to then prompt consideration of where funding might come from. The perspective of the government's cost and benefit is also needed, but is not the only part of the analysis.

Figure 15: Sample Cost-Benefit Template

Solution Proposal				
Name of Initiative				
Implementation Leader				
	Year 1	Year 2	Year 3	Ongoing
Cost estimates				
Benefits				
1. Risk Reduction				
- Directly from intervention				
- From additional action incentivised				
2. Additional Risk Financing				
- Increased access and use of insurance				
- Changes in insurability				
- More effective sovereign risk solutions				
3. Risk Response				
- Reduced fiscal costs				
- More rapid recovery reducing costs				
- Avoiding inferior solutions				
- Reduced hardship				
4. Benefits beyond adversity				
- Identify potential benefits to various segments of the economy, employment, productivity gains, food security, welfare, climate, investment, health, gender and education outcomes.				

KPIs, Measurement and Reporting

Key Performance Indicators are as important for a Protection Gap Reduction Strategy as they are for any other undertaking. Some KPIs serve to gauge progress of implementation whereas others are more directly related to the expected outcomes. Some indicators are also very useful to provide ongoing insights and support decision making.

As a result, it is critical that a strategy provides both the resources to carry out the initiatives and also to collect data and report results along the way. It will be clear from the earlier discussion that data collection and measurement may be a task that improves in quality over time. Some data may be available through insurer data collections or from other sources. Other information may only be available occasionally through surveys and, as a result, will need resources. However, survey data usually will not need to be high frequency data collections and may involve significant collections every couple of years or ongoing small data collections to build up a trend over time.

Some KPIs may directly reflect or impact incentives. Others, even if they do not, should be monitored as they will help to build an understanding of impacts and potential benefits.

Measures of protection gaps would be a headline metric. The goal is to reduce these gaps. The downside is that the full calculation may be quite complex and so lends itself to less frequent assessment. Nevertheless, it is worth considering that new information can become available and allow values to be updated in part, even if not in full. A measure of the natural catastrophe protection gap can be done on an event-by-event basis which is considerably less demanding on resources, although it has to be recognised that it will produce year-to-year variation depending on the nature, severity, and location of events and can be influenced by multi year cycles such as the El Nino / La Nina impact on cyclone and typhoon experience.

Ideally, the components that impact the ultimate protection gap calculation should be calculated separately, and some may be able to be monitored more frequently and be applied to solution projects. Figure 16 provides an illustration of how the components may be developed in a hierarchical fashion for two of the protection gap areas. Of course, the final strategy in each jurisdiction will mean that some elements get greater emphasis.

Figure 16: Illustration of components of Overall Protection Gap

Measures should also reflect **key project metrics**. The traditional measure of **insurance penetration** (premium divided by GDP, often expressed as a percentage) would normally be included. Additionally, for example, where it is intended to increase insurance penetration to underserved groups then there are **specific metrics regarding policy take up in target groups** available that can be monitored[41]. **Financial literacy** can be measured using one of the standard scoring systems that are available. **Insurance literacy and insurance awareness** can also be monitored – all through short survey-based approaches. It may also be useful to investigate the **extent that innovation is**

[41] See, for example, methods applied as part of inclusive insurance project evaluations such as Radermacher, R., and Roth, K., eds., (2014).

occurring by surveying stakeholder groups from time to time. As innovation may also be constrained by financial resources, the **sustainability and profitability of key products** may be important to monitor. Any identified barriers to inclusion may be measured to look for progress in the reduction of those barriers in practice. Other "activity-based measures" may include numbers of mitigation projects, amounts of mitigation funding spent, numbers of educational events, etc.

Outcome-based measures are also useful. It is useful to reflect on the SDG motivations for reduced protection gaps. We have already set aside the protection gap as a metric and would aim to see it reduced. However, some of our partners and stakeholders are motivated by other things and so it is good to monitor these **SDG outcomes** in parallel. The SDGs have a set of indicators that will provide direct inspiration[42]. **Where the strategy is expected to reduce gaps that will impact specific SDGs, then the relevant indicators for those SDGs should be included in the panel of KPIs being monitored**.

If a partner becomes engaged because we argue that a reduced protection gap will also produce benefits for their SDG goals, then we should not be afraid of including that SDG KPI in our monitoring.

For example, if we argue that gender equality in education is advanced by reduced mortality and health gaps in households then we should monitor both the take-up of such products and the continued retention of girls in schooling.

Even better, we could monitor school retention, insurance penetration, and the incidence of adverse events at the household level together especially if we are targeting a particular group in an intervention.

It is important to review progress on metrics on a regular basis even if every metric is not available with the same frequency. When developing KPIs, some information can be available already. Other information may need to be gathered. To reduce the cost of data collection solely for reporting purposes, a survey approach may be usefully adopted. Such surveys can be done on a rolling continuous basis or less frequently but reaching larger numbers. For much of this work, the question is not the precise result but, instead, whether things are being improved. As a result, rolling surveys will provide sufficient information in many cases.

Ideally, **a public reporting of metrics** would be maintained so that all partners, stakeholders and those with an interest in supporting target groups would be able to understand the progress being made and engage actively in continuing dialogue toward improvement. **An annual statement** is a useful discipline.

[42] The side note on motivations has a more detailed elaboration of the table covering SDGs including the targets and indicators for those that are most relevant to protection gaps and information on where to get cross country data on those indicators in the annex to that note. This annex can assist to identify important KPIs and to benchmark targets.

Finally, the important construct is to have a range of measures to guide ongoing public discourse and inform continuing efforts. Not all indicators have to come with set goals that must be achieved without fail for the program to be a success. Instead, they "paint a picture" of progress and point to areas where efforts can be redoubled or further leveraged.

Creating an enabling environment

Several of the solutions may need to be advanced by appropriate regulatory settings. The following is a summary of the key items that may require legal change as identified by a range of studies and the recommendations of bodies such as the International Association of Insurance Supervisors and others. The list is not exhaustive, and a fuller study is always beneficial, especially once solutions menus are being developed. Case studies on each solution will provide useful information on key regulatory items. However, they will certainly include:

- **Establish a system for pilots that encourages innovation**. Pilot project structures should be able to address initiatives that innovate fundamental insurance elements, including distribution and product design, but also for processes such as digitisation and other customer service delivery approaches. It is important to ensure that these systems are sufficiently flexible to enable projects that have applications for parametric agricultural insurances and seasonal weather-related events that may need to operate over a longer period of time[43].
- Aside from pilot approaches**, ensure regulations are appropriate and proportionate and facilitate innovation more broadly**.
- **Ensure that parametric / index-based insurances fit in the insurance regulatory framework** and the treatment of them, such as uncertainties relating to the treatment of "insurable interest" under the law.
- Provide clear guidance regarding **key market conduct questions** relating to index-based insurances delivered to retail customers, including characteristics of credible indexes and the usefulness of back-tested illustrations of the operation of the index.

[43] The forthcoming note on parametric insurances includes a discussion on pilot approaches in more detail. Although this discussion is not specific to parametric insurances, it is particularly critical to such cases as the potential for "pilots" is more evident in parametric insurance especially in agriculture.

- As part of the application of proportionality, consider **permitting sovereign risk transfer insurances to be directly placed** with insurers without a local presence when appropriate[44].
- Make sure that **all distribution channels** can be pursued under the legal structure. If necessary, clarify the approach that is proposed in legislation or circulars outlining the supervisory practice to the sector.
- Ensure that required **legal forms for licensed insurers** are not unduly restrictive.

In addition, some solutions may require legislation to create the necessary **public private partnerships**.

The potential for PPPs

There is considerable opportunity for PPPS to be part of the solutions selected. These partnerships can be more formal, including documented actions structured to deliver solutions or they may be less formal. Key partnership roles may fall in two main groups (i) functional partnerships; where connecting a range of services is the fundamental goal of the partnership; and (ii) those that involve specific provision of risk protection.

For all partnerships, it has been suggested that transactional partnerships are less effective than those where the goals of each partner are understood by the other partners and that "**all partners are committed to the goals of the others**"[45]. In discussions to establish a partnership, this common commitment cannot be taken for granted. Most partners approach the initial discussion focused on their own goal and do not have a clear understanding and appreciation of the concerns and goals of the other partners. A focus on one's own goals leads to a transaction – a commitment to the goals of the other partners is something that the most successful partnerships have achieved, sometimes after some trial and error.

[44] In some jurisdictions, there is a requirement to "place local risks with locally licensed insurers" in the insurance law. This requirement was established to reinforce the view that "unlicensed insurance should not be permitted" as is reinforced in the Insurance Core Principles. However, some jurisdictions readily interpret this to mean "insurance in the retail market". Reinsurance is often placed outside the jurisdiction despite this legal statement. If it is considered that governments cannot take out reinsurance (as they are not licensed insurers) or they must channel a product through a local insurer purely for legal reasons, then the best solution is to change this to allow sovereign risk transfer directly. At the time of writing, the author has an expectation that the IAIS will release a revised application paper on inclusive insurance that follows this logic.
[45] Quoted from author's interviews with schemes.

Functional Partnerships

Functional partnerships aim to deliver a process that leverages the partners' situations to better deliver the services and products to the target customers. Some partnerships improve the key challenge of reaching underserved customers. Others, can bring skills and resources that may make the delivery of claim services or other product functions more effective. Although similar partnerships may exist, each functional partnership brings some innovation to the market as they serve customers who were otherwise underserved.

An example of the functional partnership is the Thailand Rice Growers Scheme where the industry association partners providing administrative handling of risk and reinsurance and a bank partner provides insurance distribution and optional complimentary lending. The government provides, among other things, a partial and targeted subsidy.

Partnerships for Risk Coverage

A special focus of PPPs exists in cases where the intervention is directed at **addressing cases where risks may not be easily handled by the insurance sector**[46]. These PPPs tend to involve the creation of a public sector agency that provides some risk cover where the insurance sector is unable to do so or there are challenges of affordability. There are several examples around the World, and they can be structured differently. Some provide a retail level insurance contract that can be accessed by customers, directly or through existing insurance channels[47]. Others provide an "insurer of last resort" facility that covers those that are declined by all retail insurers. Some provide cover through reinsurance of insurance companies, backstopping a level of cover that then is provided by the insurers to clients[48].

Key to such risk transfer schemes is the level of "solidarity" involved. Where cover is optionally selected from the scheme, then the risk profile will be, as a matter of fact, worse than if all insureds are covered by the scheme or the pool of risks is centrally managed but shared in terms of contributions made from the whole market. Compulsion is one

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[46] For a fuller list of examples of such partnerships, see the references. For elaboration on their operation in more detail and guidance on their application to particular situations, see the side paper "*Balancing fiscal risk and societal contracts: PPPs that address protection gaps*". This paper specifically addresses risks that are difficult to insure in the private market.
[47] For example, the National Flood Insurance Program in the USA provides flood cover to households that can be purchased through any existing insurance channel including the agents of private sector insurers.
[48] For example, the ARPC in Australia provides terrorism insurance and windstorm insurance in two separate pools on a reinsurance basis.

acceptable solution in some cases, but not in others. With compulsion, cross-subsidies in pricing are possible to balance the most extreme actuarial prices. Without compulsion, cross subsidies are a perilous route, and any subsidies for high-cost customers should be explicit and separately provided.

Even without full compulsion, solidarity may be stronger or weaker for cultural reasons. The greater the solidarity, the more likely that there will be benefits in pricing that can be passed on[49]. The level of solidarity reflects local political and social attitudes, but where they exist and can be included as part of the scheme, then the opportunity for financially beneficial arrangements is greater.

Over and above the advantage of risk pooling, schemes may have some advantages by operating on a non-profit basis. They may also have access to cheaper capital than private insurers, including through government guarantees rather than subscribed capital

Another common lesson from these arrangements is that it can be a benefit to **establish a specific organisation.** This creates a clearer mandate, operational procedures, and durability through policy cycles. The organisation can promote risk management and monitoring[50]. It can also develop relationships with risk transfer markets that reflect the same longer-term views that these risk transfer markets have with direct insurers, at least more easily than government ministries, with the challenge of competing priorities[51]. As a provider of backstop cover, the organisation can be created as an insurer, although it can often also be created as a government agency that is supported by a defined government guarantee rather than capital – giving it a potential cost advantage to pass on as well. As a provider of risk cover it can also operate on a non-profit basis, giving it a further advantage.

However it is structured, schemes have found that it is preferable to integrate the claim payment processes. Duplicative claim processes at the time of adversity create inefficiencies and confusion. Coordinated claim processes also facilitate a partnership rather than a separation.

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[49] In contrast to the NFIP, which includes an element of voluntary purchase, the Australian Reinsurance Pool Corporation (see https://arpc.gov.au) operates a program for cyclone risk that is compulsory for all but the smallest insurers ensuring that it captures the diversification benefits of risk across the continent.
[50] In the early phase of the New Zealand Earthquake scheme, a considerable investment was made on establishing a better network of monitoring and sensing and to refine modelling. Prior to that, international risk partners were using models that were not fully reflective of the risk in New Zealand. This led to improved risk prices for the scheme.
[51] For example, the ARPC uses reinsurance extensively for the terrorism pool but not for the cyclone pool where the risk is more geographically diversified and has lower accumulations.

Taken together, these schemes can offer risk cover that is not able to be offered by the private sector. This means that the overall price and potential to provide cover can be better than the private sector can deliver, making the “uninsurable” into “insurable” risks.

Regional risk sharing pools

There are a number of regional risk pools that provide a good example of how risk sharing can be useful. They play an important role in providing their member governments with ex-ante programs. They also support and partner with their members in the development of risk awareness, monitoring and measurement.

SEADRIF (the Southeast Asia Disaster Risk Insurance Facility) is the newest of the four main regional groups. The others, in order of longevity, are the CCRIF (Caribbean Catastrophe Risk Insurance Facility), PCRIC (Pacific Catastrophe Risk Insurance Company), and ARC (African Risk Capacity)[52].

All the schemes offer parametric solutions to their member governments, along with some assistance in designing and understanding the interaction between risk and the potential solutions. All schemes have made useful payments in a timely fashion to governments to support their immediate needs. All the schemes have been established after studies have been made that show the benefit of risk pooling across their region to save costs to member governments. However, given the fact that some are more mature and each has their own local design features, there are some interesting differences. Differences due to maturity are particularly interesting as a pointer to the potential for SEADRIF in the Asian region as it develops.

The oldest scheme, CCRIF, has developed a series of products that expanded the types of peril it covered and also expanded the number of countries covered. When expanding countries into central America, it established a “sub pooling” approach to allow new members to join whilst monitoring any cross subsidy from the initial Caribbean members from a pooling effect. More recently, it is offering risk coverage at subnational level particularly to utilities and other semi-government agencies. Further, it has piloted a micro product that can be directly accessed by institutions in country and on-sold to their customers with some success.

[52] References at the end of the paper include website addresses and other information on each of these schemes.

An unusual feature of ARC is the “ARC REPLICA” product. This innovation allows donors and others to take additional coverage leveraging the basic cover provided by ARC to the partner government. It also leverages the checks and balances that the ARC structure has embedded in its operations. This means that the normal operation of an ARC coverage can be copied by a third party, greatly increasing the capacity and taking advantage of the identical trigger already adopted.

The benefits of such regional pools are relevant for both large and small countries. The diversification benefits of pooling risk are fundamental to insurance concepts. Small countries will be acutely aware of the impact of an adverse event. Larger countries may feel that they can diversify within their own geographic boundaries, but the evidence is that they will also benefit. Even today, Chinese insurers are taking advantage of this access to global diversification through their domestic reinsurance catastrophe pool first, but also through catastrophe bonds issued through the Hong Kong exchange and into global markets.

Overall Conclusions

Overall Conclusions

This paper has taken our work in this area to more concrete steps, actions and tools to support the substantial progress that is needed. With that progress, we will ultimately achieve the goal of improved resilience, well-being, sustainability and equality, with greater collaboration, participation and engagement of governments and the insurance sector.

Countries can move from concern to action using the tools and processes suggested. Gathering information on the extent of protection gaps and other relevant indicators is a start, and this can be further supported by the GAIP project to develop an online risk platform.

Discussions with partners can commence immediately using the tools in this paper. Identifying concerns and synergies at an early stage will provide an opportunity for progress. Inspiration for solutions can also be gathered through access to case studies. The second policy paper, "The Solutions Landscape", includes many examples from the region and is being supplemented by additional side notes focused on particular practical areas, from parametric insurance to health and from sovereign risk transfer to services for low-income households. All of this is further supplemented by ongoing training and development so that responsible policymakers at senior and mid-levels are better able to address these challenges.

Now, more than ever, we can

- make the case for change;
- provide estimates of the magnitude of the problem;
- identify and engage with key partners and stakeholders in a broad way;
- build a menu of solutions;
- select the solutions based *particularly* on the benefit they bring to reducing protection gaps;
- ensure an empowered team to carry forward the work and report on progress.
- with all partners working together to achieve this goal whilst recognising how it supports their own objectives.

The vision is to reduce protection gaps. Progress has not been what is needed. Progress has to be more effective, and it can be. The work so far has analysed the successes and

constraints. It has generated an approach and some tangible tools to work through those challenges. No longer is “no data” an impediment. No longer should suboptimal mandates for change restrict needed actions. No longer should solutions be based on anything else than the benefit of reducing protection gaps. Now, moving forward with renewed energy and focus will deliver for the greater good of the most vulnerable, and every household in communities, and the well-being and resilience of nations.

References

References have been grouped into topic categories of interest. The previous papers in the series are as follows:

GAIP, (2023a), "*About the Protection Gap: Understanding and motivating change, improving and sustaining resilience and well-being in Asia*", GAIP, April 3, 2023, available at https://www.gaip.global/publications/about-the-protection-gap/

GAIP, (2023b), "*The Solutions Landscape: Learning from efforts to reduce the Protection Gap*", GAIP, December 28, 2023, available at https://www.gaip.global/wp-content/uploads/2023/12/Protection-Gaps-The-Solutions-Landscape_Final-v5.pdf

And the companion paper to this paper

GAIP, (2025), "*Catalysing Resilience and Well-being: An Integrated and Holistic approach to Protection Gaps*", GAIP, available at https://www.gaip.global/publications/catalysing-resilience-and-well-being/ .

The cited forthcoming notes supporting this paper in more detail are:

- ***Motivating Change: Why the protection gap is key to policy objectives:*** Elaborating more details on the key linkages between motivation for protection gap reduction and the goals of key partners, stakeholders and target groups. The paper also includes some practical steps on communication strategies.
- ***The Cost of Hindsight: Prioritising Ex Ante Solutions over Ex Post Damage Control:*** Elaborating evidence and arguments why ex ante solutions are better than ex-post solutions for sovereign risk financing solutions.
- ***Healthy Outcomes with Healthy Finance: Addressing Asia's largest protection gap***.: Ensuring the link between health insurance and healthy outcomes is achieved in proper partnership between insurers and governments. Critical is the need to balance the health financing challenges in the context of changing demographic transitions, whilst also taking advantage of opportunities to advance underserved target groups.
- ***The Innovation Imperative: How proactive should governments be?*** Facilitating change or addressing real challenges to insurer dynamism in response to opportunities. How to ensure that the clear path for change is taken up by insurers by addressing the impediments that they face.
- ***Balancing fiscal risk and societal contracts: PPPs that address protection gaps*** discussing the approaches to implement PPPs directed specifically at addressing concerns about risks that are difficult to insure in the private market.
- ***Practical Parametrics: What to do and why to facilitate parametric insurance to reduce protection*** *gaps* : discussing the nature of parametric insurance, regulatory solutions that may be needed to facilitate these products in line with international best practice, proportionate applications at micro, meso and macro levels, and examples of key experiences and lessons learned for each of these micro, meso and macro applications.
- ***Indexed Farming: Parametric Insurance and the Agricultural Sector****:* In addition to the broader parametric insurance side note, this note provides a version specifically directed at the agricultural

sector. It can then be useful for discussions with Ministries of Agriculture and the agricultural community without the unnecessary material associated with non-agricultural applications. It can also deal specifically with agricultural examples and the issue of appropriate subsidies.

- ***Partnerships to improve insurance reach and delivery****:* Although recent attention has been given to risk sharing partnerships, many other opportunities exist where solutions can be found to address the barriers of less than fully inclusive markets. In particular, the challenges of reaching customers in ways that are both effective and cost efficient have been key opportunities.
- ***Who leads government efforts to reduce protection gaps? On mandates for action and the role of insurance supervisory authorities.*** A key to success if ensuring that roles and responsibilities are clear and well organized. It has been a hinderance to progress in many cases when incomplete.

The remaining topics are:

Protection Gap Estimates

Actuaries Institute, (2024), "*Cyber Protection Gap Widens for SMEs*", Institute of Actuaries of Australia Dialogue Paper Series, available at https://actuaries.asn.au/docs/thought-leadership-reports/cyber-risk-gap-widens-for-smes.pdf?Status=Temp&sfvrsn=5da8b1f4_2

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Regional Risk Pools

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CCRIF – Caribbean Catastrophe Risk Insurance Facility

- Website: https://www.ccrif.org/

PCRIC - Pacific Catastrophe Risk Insurance Company

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- Website: https://seadrif.org/ and, for the insurance operations, https://seadrif.org/the-seadrif-insurance-company/