

DRAFT WORKING PAPER FOR SEADRIF WEBINAR

SEADRIF Knowledge Series: Financial Protection of Public Assets

**Fact Sheet 1: High-Level Implementation and
Stakeholder Road Map**



**Disaster Risk Financing
& Insurance Program**



Introduction

This first fact sheet¹ is part of a Knowledge Series to support government officials as they develop their understanding of the steps needed to design, develop, deliver, and operate effective financial protection of public assets, particularly through risk transfer and insurance. The Knowledge Series encompasses the full end-to-end development of public asset financial protection and insurance, as shown in figure 1. Each fact sheet will cover a major theme related to the process and will highlight issues and considerations from the perspective of government officials and other stakeholders tasked with developing solutions. When taken together, these fact sheets are designed to act as a guide for government officials.

Figure 1. Overview of the Knowledge Series



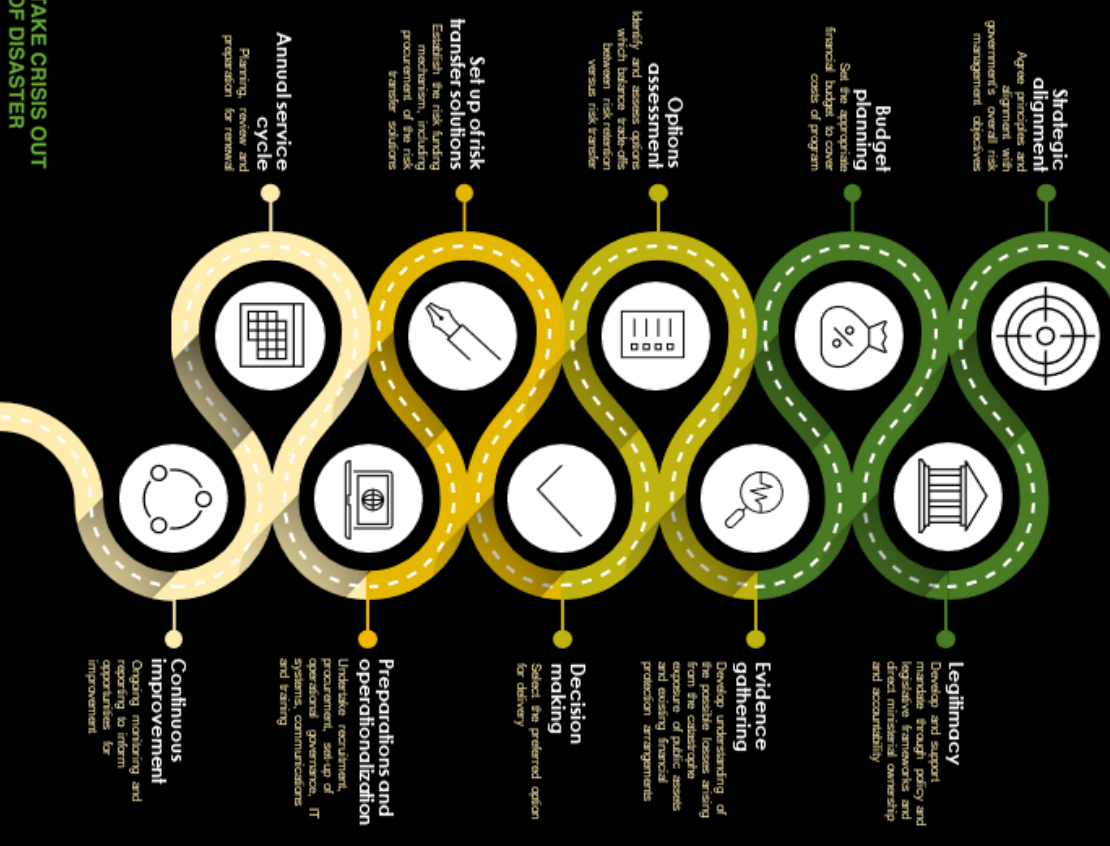
Road Map for a Public Asset Financial Protection Strategy

This fact sheet outlines the steps commonly required to form a public asset financial protection program that will specifically involve a risk transfer mechanism. The steps are organized along four key stages: Design, Development, Delivery, and Renewal. Each country government will approach public asset risk management in different ways and for different reasons. Many governments will have already made progress on some of the stages described herein. This fact sheet has been structured to show an idealized, from-the-ground-up approach to

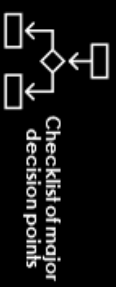
¹ Drafted by Greg Fowler, Matthew Foote, and Lit Ping Low, Disaster Risk Financing and Insurance Program, The World Bank, with inputs from Benedikt Signer, Hideaki Hamada, and Nicola Ranger. The draft will be refined and finalized after the series of SEADRIF webinar on the Public Asset Financial Protection, building on the feedback from the SEADRIF members and other webinar participants. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work.

instituting a public assets financial protection program. Using this approach, governments can reconcile their current progress against each stage and can plan for next steps in the development of their unique programs. Some helpful tips for good stakeholder engagement and management are also included at the end of the fact sheet.

Public Asset Insurance Program Road Map



RENEWAL **DELIVERY** **DEVELOPMENT** **DESIGN**



- | | |
|--|---|
| <ul style="list-style-type: none"> Alignment with government's overall strategic objectives | <ul style="list-style-type: none"> Cabinet Ministry/Department of Finance |
| <ul style="list-style-type: none"> Confirmation of mandate to proceed with necessary legislative amendments | <ul style="list-style-type: none"> Ministry/Department of Finance Government's legal office |
| <ul style="list-style-type: none"> Sign-off of budget with clear articulation of breakdown and scope | <ul style="list-style-type: none"> Ministry/Department of Finance |
| <ul style="list-style-type: none"> Development of full evidence base and options | <ul style="list-style-type: none"> Sponsoring agency/representative(s) Subject matter expert in government risk management/risk financing Loss Modeling service provider |
| <ul style="list-style-type: none"> Sign-off of preferred option and authorization to proceed | <ul style="list-style-type: none"> Ministry/Department of Finance |
| <ul style="list-style-type: none"> Operationalization of the risk transfer and risk retention strategies | <ul style="list-style-type: none"> Sponsoring agency/representative(s) Subject matter expert in government risk management/risk financing Risk transfer markets |
| <ul style="list-style-type: none"> Regular/annual review of the performance and continued alignment with strategy | <ul style="list-style-type: none"> Sponsoring agency/representative(s) Subject matter expert in government risk management/risk financing Risk transfer markets |

(1) DESIGN STAGE

a. Strategic alignment	<ul style="list-style-type: none"> • Agree key principles. • Define intended benefits.
b. Legitimacy	<ul style="list-style-type: none"> • Affirm mandate. • Develop a combined legislative and regulatory instrument. • Agree on an operational base. • Develop a strategic governance process. • Develop a review process.
c. Budget planning	<ul style="list-style-type: none"> • Establish core financial strategies.

Why Is This Stage Important?

Before a public assets financial protection program is implemented, it must first have an established purpose that aligns with government’s common-good agendas, as well as the authority to act and use public funds. Without those fundamental attributes, the Development and Delivery stages run the risk of being challenged for legitimacy by various stakeholders with differing perspectives. Equally, by establishing a clear purpose, government officials can ensure that the roles and responsibilities of every stakeholder in each stage can be fully described and understood.

This approach also sets the boundaries and scale for potential solutions, thereby assisting development teams with the means to determine relevant and sustainable options. In particular, officials should fully articulate the general objectives of what the program is intended to protect. It may be that the key concerns are related to providing financial protection of large losses from the more extreme events (often termed “catastrophe” losses). Or there may be a need to provide compensation against more frequent losses from other causes, such as fires. If the program is to cover a range of asset types, the development of a consensus of objectives is even more critical to ensure clarity. The Design and Development stages of the program will be influenced by this collective view of its key objectives.

Strategic Alignment

A public assets financial protection program should be founded on principles that (a) align with the government’s strategic objectives, (b) reflect the risk management standards that the government wishes to create, and (c) set a consistent basis for options assessment and decision making through the Development, Delivery, and Renewal stages. As an example, a set of principles created for the New Zealand All-of-Government (AoG) approach to the financial protection of public assets has been included in annex 2.

Having a good understanding of the intended benefits is also important. Benefits should be described using the Specific, Measurable, Achievable, Relevant, and Timebound (SMART) approach. Well-articulated benefits, as key performance metrics, can help governments to track the progress of the program and make timely interventions when required.

Legitimacy

A public assets financial protection program must also have a legitimate basis (that is, it must have a mandate embedded in legislation and regulation). A sound legislative basis can support a long-term approach even through changing administrations. Accompanied by a sound policy framework, a legislated mandate can promote effective use of risk financing by managers of public assets.

Management and administration of a program will require an operational base. Options include creation of a statutory authority dedicated to managing a program or setting up of a dedicated unit or nominating an existing business unit within an existing government entity (for example, Ministry of Finance). The decision on the type of entity should be guided by the following:

- Level of operational and administrative complexity that is acceptable to the government
- Extent of financial segregation required from government accounts
- Level of independence or integration of the vehicle with existing public agencies
- Role of government agencies and other stakeholders in the governance and management of the vehicle

Financial and Budget Planning

Incorporated in the legislative basis is the fiscal management of the effects of both natural disasters and costs of administration. At the outset, financial planning is about establishing rules and safeguards for the use of public funds. From a budget perspective, officials could commit only to a high-level budget or a budget range, which is subject to refining as further details are gathered through the Development stage. Key decisions that should be reflected through the mandate are as follows:

- To what extent are the contingent liabilities associated with natural disaster impacts incorporated into government accounts?
- If a program is set up in a way that it may experience a *surplus*, can surpluses be accumulated over ensuing years to improve financial resilience?
- If a program is set up in a way that it may experience a *deficit*, what is the role of central government to guarantee replenishment or manage losses above the *capacity* of the program?
- If funds are to be accumulated within a program, what is the *investment protocol*?
- Does legislation authorize the procurement and use of risk transfer through *(re)insurance*²? If so, are there any restrictions on the choice of *capital partners* or *intermediaries*?
- How will the operational solution be funded?
- How will program implementation (for example, the costs associated with delivery) be funded?
- How will payouts flow to the implementation unit and then to owners of assets after an eligible disaster event?

² In these factsheets, the term '(re)insurance' refers to the combined approaches for financial transfer of risk between parties under the terms of the various policies and contracts. Please refer to figure 7 of the draft working paper - 'An overview of financial protection of public assets' provided for the first webinar.

(2) DEVELOPMENT STAGE

Evidence gathering	<ul style="list-style-type: none"> • Confirm scope. • Collect data. • Conduct loss modeling. • Develop the funding gap equation.
Options assessment	<ul style="list-style-type: none"> • Conduct an influence assessment. • Assess the degree of risk retention vs risk transfer. • Define services, roles, and responsibilities. • Assess costs and contribution arrangements..
Decision making and authorization	<ul style="list-style-type: none"> • Identify the preferred option of delivery.. • Obtain the required sign-off and authorizations.

Why Is This Stage Important?

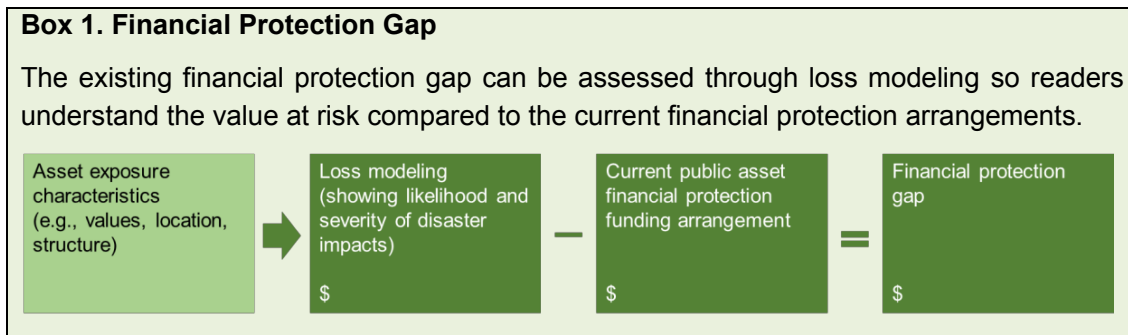
In this stage, officials quantify and qualify the financial protection need and identify the most effective and efficient means of protection. Throughout, they take a comprehensive, logical, and tried-and-tested approach. Decision makers will expect to see options and supported reasoning behind any recommendations. A detailed options assessment also prepares operational teams for the Delivery stage. In practice, data gaps, political urgency, and other factors may mean that governments do not have the luxury to include a comprehensive Development stage; instead they may need to pilot and evolve the appropriate financial protection solutions more quickly. Even with potential limitations, governments can gather evidence and assess potential options to allow for continuous improvement and adapting of solutions over time.

Evidence Gathering

Officials need to understand existing gaps in financial protection as they set priorities for a financial protection program for public assets. To assess this gap, they need to understand the possible losses arising from the catastrophe exposure of public assets. Details of existing financial protection arrangements must be known. The following are required:

- *Detailed data on the location, value, and characteristics of assets (public assets database).* The form and character of data should be appropriate for insurance transactional purposes. See Fact Sheets 3 and 4 for a detailed description of data and information requirements related to various asset types and financial protection methods.
- *Access to appropriate loss and risk modeling capabilities.* The models calculate the effects of natural disasters on the public asset base in the form of probability of an event (likelihood) and severity. Depending on existing capabilities, this modeling insight might come from government agencies (that can measure the effects of natural disasters), from commercial providers, or from historical risk information.
- *Quantitative (ideally, probabilistic) view of the risk arising from the exposure of the assets to assist in the pricing and underwriting of the risk.* If catastrophe risks are to be protected against, it may be that an analytical approach is needed that includes use of sophisticated catastrophe models.

- *Catalogue of existing arrangements for financial protection of public assets.* Examples include contingent reserves, existing insurance arrangements, and secured post-event loan arrangements.
- *Quantitative comparison between existing funding capacity and the potential effects of natural disasters.* Officials need to gather the data about the financial protection gap. The financial protection gap assessment that is based on these data is the starting point for options assessment, including a determination of what perils and assets should fall within the targeted scope of the financial protection solution. Box 1 illustrates how to determine the financial protection gap.



Options Assessment

The development of options for managing the financial protection gap will focus on balancing the trade-offs between risk retention and risk transfer while accounting for internal and external influences. Figure 2 outlines the key activities and considerations for the different types of assessments required.

Figure 2. Activities and Key Considerations in Option Assessments

Type of assessment	Activities and considerations
Assessment of drivers for change	<ul style="list-style-type: none"> • Assess internal drivers, such as risk appetite, fiscal policy objectives, financial tolerance, the broader risk context, and other government priorities. • Assess external drivers, such as global financial conditions, shocks from earlier natural disaster events, transfer market appetite, and transfer market pricing. This assessment can be informed by reinsurance market pre-engagement (including price indicators). • Account for internal and external drivers that will lead to a better understanding of efficient use of capital in the context of broader government priorities. Such accounting also helps the government decide how much of its budget it should retain to finance losses directly or to use as premium financing to secure insurance coverage under different loss-event scenarios.

Type of assessment	Activities and considerations
Risk retention versus risk transfer assessment	<ul style="list-style-type: none"> • Develop options regarding the balance of financial risk retained on government accounts versus that transferred to external (domestic and international) markets. The decisions will be unique to each situation depending on the influences. (See box 2.)
Roles and responsibilities assessment	<ul style="list-style-type: none"> • Consider the likely roles of key stakeholders, including the delivery of the specific functions, for example: <ul style="list-style-type: none"> ○ What services or functions are required to manage, administer, and oversee the operational program? ○ Who should deliver those services, and what capabilities are essential (that is, what can be developed in-house versus expertise that should be outsourced)? See box 3. ○ What is the role of the risk transfer market, including market players such as brokers, (re)insurers, and so on? ○ Will there be a requirement or a preference to include domestic markets, including rules about state-owned (re)insurers? ○ What is the role of procurement? • Remember that typical services considered in public assets financial protection solutions should include the following: <ul style="list-style-type: none"> ○ Governance and oversight functions ○ (Re)insurance broking (intermediary) services ○ (Re)insurer services ○ Claims management services ○ Account management services ○ Actuarial services ○ Risk modeling services ○ Audit and compliance services
Cost assessment	<ul style="list-style-type: none"> • The previous assessments will enable a cost assessment of options through a Total Cost of Risk (TCOR) approach and will take into account the following for each option: <ul style="list-style-type: none"> ○ <i>Estimated cost of retained losses.</i> Cost of losses retained over a predetermined period as per the risk retention strategy (informed by loss modeling). ○ <i>Estimated cost of risk transfer.</i> The cost of risk transfer fees and premiums over a predetermined period (accounting for prescribed terms and conditions of coverage). ○ <i>Estimated cost of administration.</i> The cost to maintain in-house services and contract outsourced services over a predetermined period. • The TCOR approach can also include the cost of risk control, which is the cost of risk management interventions to reduce likelihood and severity of loss event effects. See the Continuous Improvement section of the (4) Renewal Stage for more insight.

Type of assessment	Activities and considerations
<p>Cost allocation and contribution assessment</p>	<ul style="list-style-type: none"> • After the cost estimates attached to options are accounted for, consideration needs to be given to how that cost will be allocated (that is, who will pay what proportion of the total cost). Will there be an element of centralized funding, and will there be the requirement for participating government agencies to contribute a fair and transparent share? • Typical allocation approaches include the following: <ul style="list-style-type: none"> ○ <i>Solidarity, or unit-based, pricing.</i> A unit of exposure or operation is identified, and participating agencies pay a flat share in accordance with the number of units attributed to them. An example is the U.K. risk protection arrangement for schools, in which schools pay a fixed per pupil amount that is reviewed annually by the Government Actuary's Department to ensure that the overall income for the scheme is adequate given its contingent liabilities. The schools deemed to have greater risk are, therefore, having their cover subsidized by those with better claims experience (that is, solidarity model)^a. ○ <i>Risk-based pricing.</i> Most programs use a risk-based approach to set the pricing for participating agencies, in which the cost of agency premiums reflects the level of expected risk of a participating agency. This approach, although enabling differentiation of the cost of risk, relies on the ability to adequately and consistently quantify the relative loss potential between asset entities.

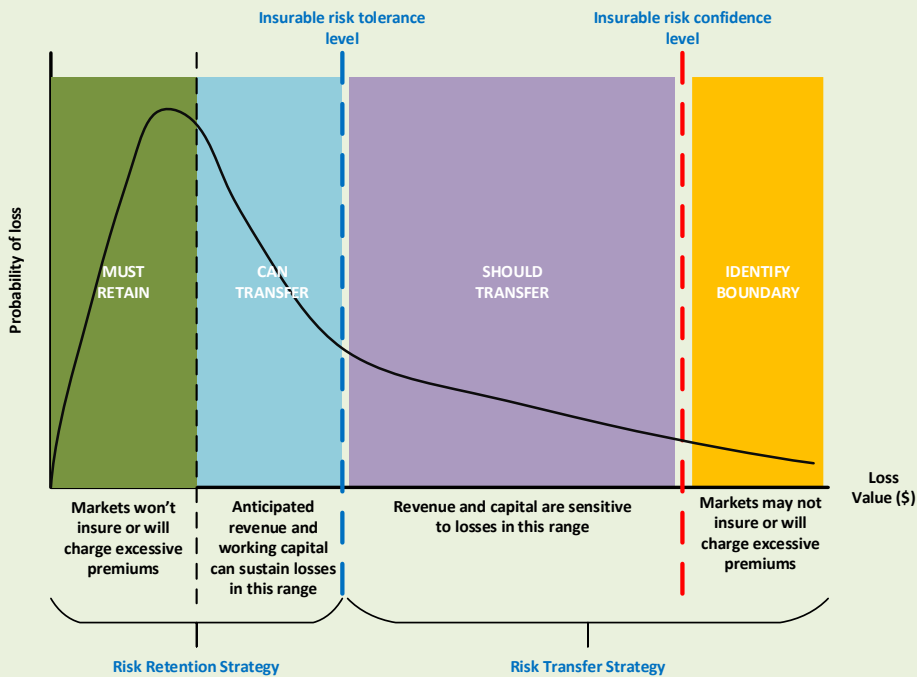
Notes:

- a) The approach is described in a 2017 report from the Government Actuary's Department of the United Kingdom, "Risk Protection Arrangement (RPA) Actuarial Analysis," <https://www.gov.uk/government/publications/risk-protection-arrangement-rpa-actuarial-analysis>.

Box 2. How Much to Retain? How Much to Transfer?

Although the process is generic, the influences are unique to each situation; therefore, the balance between retention and transfer will also be unique. For instance, funding restrictions may lead some governments to rely more heavily on risk transfer as a means of financial protection, while other governments may place more weight on the side of calculated risk retention, choosing instead to retain funds internally.

In addition, a risk transfer program can be implemented without an explicit risk retention program (that is, there is no requirement to formalize a fund to manage retained risk in order to start a risk transfer arrangement). If circumstances dictate, establishment of a risk transfer program to manage losses above a government’s financial tolerance can be a wise risk management strategy, thus allowing for further maturity of the risk retention strategy over time.



Source: Praxiom. 2010. "Fundamentals of Risk Management for CFOs – Unlocking Hidden Value."

Box 3. Develop the Program In-House or Outsource It?

The split between in-house and outsourced services is a matter of preference for the government. An in-house strategy requires more internal resources and the ability to recruit and develop the necessary expertise. This choice may require considerable budgetary resources and a substantial time period to develop the necessary capacity. Outsourcing can often be applied as an interim strategy, thereby enabling start-up of an operational program, although in some cases, use of third-party expertise may be appropriate even when internal capacity has been developed (for example, use of intermediaries for marketing and transactional activities). Regardless, contracting outsourced experts allows for key lessons to be learned and positions a government to make well-considered decisions about what services it may choose to keep in house over time.

Decision Making and Authorization

Selecting the most effective and efficient financial protection program involves making comparisons between the available options. Some options might retain more risk than others. Other options might have differing means of service delivery and cost allocation. Each option will have unique advantages and disadvantages. Figure 3 provides an example of a way to collate those decisions and to see the comparison. The “Do nothing” option represents the status quo and offers a benchmark for decision makers regarding the merits of change. After decision makers identify and approve a preference, the process of delivering the solution can begin.

Figure 3: Example of Options Appraisal to Support Decision Making

Option characteristics	Do nothing	Option 1	Option 2
<p>Option description:</p> <ul style="list-style-type: none"> • Scope (perils/assets/agencies) • Vehicle (standalone/business unit) • Risk retention strategy • Risk transfer strategy • Service/administration delivery strategy • Cost (TCOR) • Funding (allocation and implementation) 	XX	XX	XX
<p>Option attributes:</p> <ul style="list-style-type: none"> • Benefits (hard benefits, or financial, plus soft benefits, or nonfinancial) • Disadvantages (hard disadvantages and costs, or financial, plus soft disadvantages and costs, or nonfinancial) • Risks and issues • Constraints • Dependencies 	XX	XX	XX

(3) DELIVERY STAGE

Setting the risk financing solution	<ul style="list-style-type: none"> • Establish the risk retention solutions. • Establish the risk transfer solutions.
Preparing for the solution	<ul style="list-style-type: none"> • Establish the operational governance. • Establish the functional architecture. • Establish the external engagement procedures including communications and onboarding of agencies.

Why Is This Stage Important?

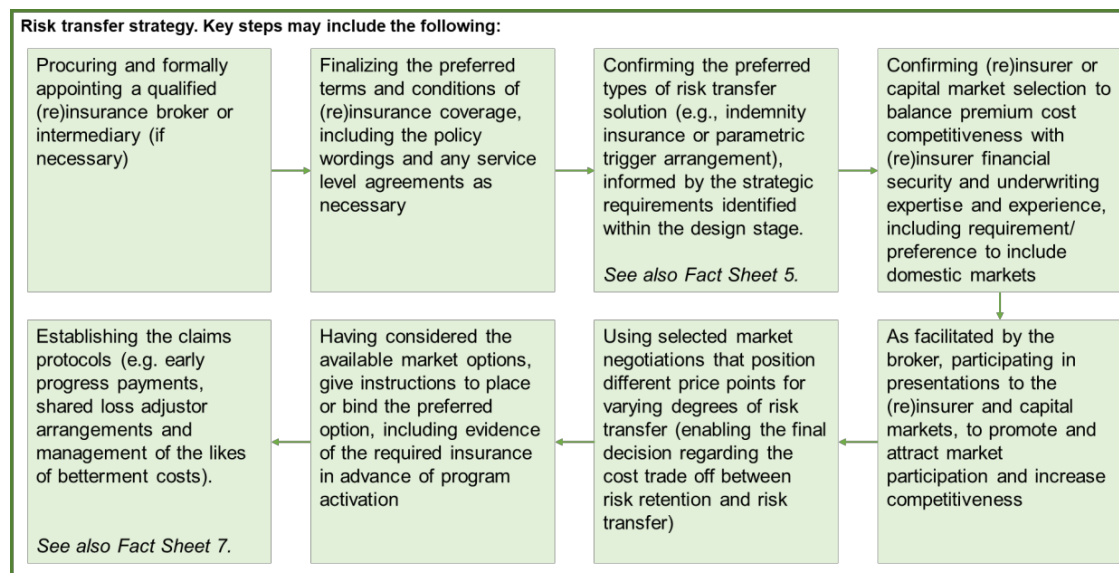
The Delivery stage turns plans and expectations into reality. Some costs may have been tentative in previous stages, but they must become fixed in the Delivery stage. Service delivery needs to be embedded as much as possible in advance of activation taking into account the possibility that a loss event could occur on the first day of operation.

Setting the Risk Financing Solution

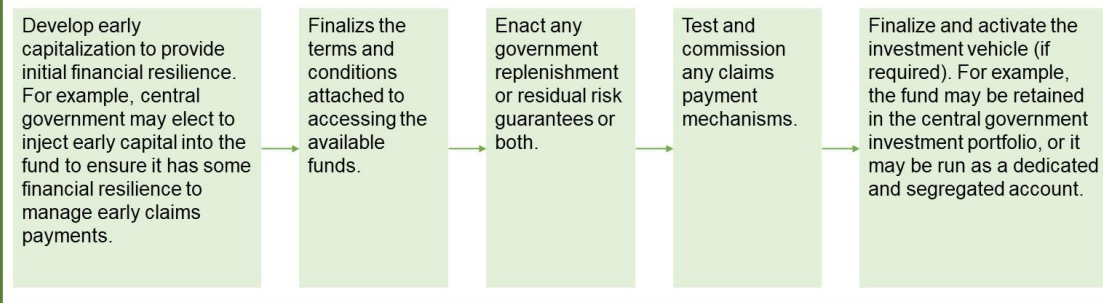
In this component, funding availability will be established in line with the agreed-upon risk retention and risk transfer strategies.

Figure 4 illustrates some of the core activities and considerations under the risk retention and risk transfer strategies.

Figure 4. Key Activities under the Risk Retention and Risk Transfer Strategies



Risk retention strategy. Key steps may include the following:



Preparing for the Solution

Although having the necessary funding available is important, it is also imperative that the internal architecture is set up to receive and administer the needs of stakeholders.

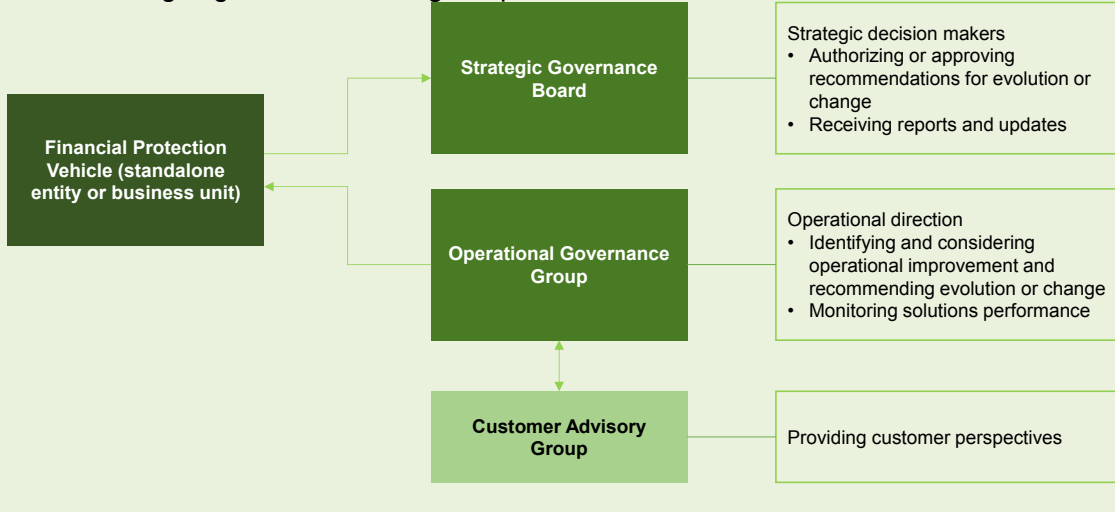
Figure 5 shows the different components of the broader architecture of the solution as overseen by an effective operational governance mechanism. See box 4. Communications with external parties need to be a core consideration, including ways and processes to bring onboard new agencies to help with the solution. Training of staff members and all relevant stakeholders is also integral in developing both shared understanding and essential competencies in operating and managing a complex program.

Figure 5. Key Activities as Part of the Architecture



Box 4. Governance

The governance function will provide the means to coordinate oversight and scrutiny of the program, to review and audit the financial processes, and to make strategic decisions about the ongoing levels of coverage required.



Ideally, a program should have a target activation date (that is, the date at which the risk financing solution is in place and the supporting infrastructure is embedded). The activation date sets the key milestone for this stage, and the delivery of each component within this stage should be reverse engineered from that milestone.

(4) RENEWAL STAGE

Annual service cycle	<ul style="list-style-type: none"> • Manage risk financing cycle. • Manage service and administrative cycle.
Continuous improvement	<ul style="list-style-type: none"> • Monitor and report on benefits. • Manage ongoing risks. • Develop lessons learned. • Manage ongoing stakeholder engagements.

Why Is This Stage Important?

Operating environments are fluid. Priorities change, new risks emerge, and the systems and technologies to deal with them continue to advance. In addition, risk transfer instruments are timebound. They have expiry dates, meaning they are subject to regular review and renewal cycles that need to be managed proactively.

This stage is important because financial protection needs to be continuous, and it needs to constantly reflect on lessons learned, on changing risk characteristics, and on ways to evolve in tune with the strategic and operational environment.

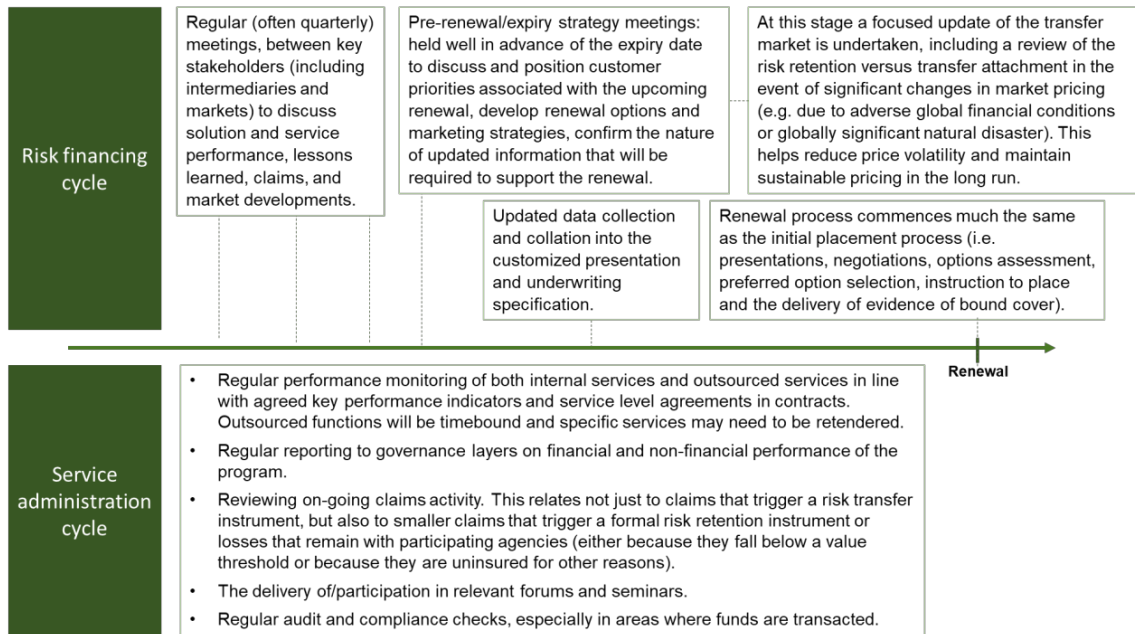
Annual Service Cycle

The annual service cycle has two aspects:

- *Risk financing cycle.* As with the initial placement of the risk transfer instrument, the (re)insurance broker will commonly confirm and trigger much of this service cycle. The key milestone is the expiry date of the existing instrument, so the renewed instrument should be agreed upon without incurring gaps in coverage or terms. This annual process can be modified by a significant claim event or a mid-term change in government's risk exposures (for example, caused by onboarding new agencies or by a large capital expenditure that is significantly changing the risk exposure).
- *Service and administrative cycle.* The architecture and functions sitting behind the risk financing solution should also move through a regular cycle of review and delivery.

Figure 6 shows the key activities of the two aspects.

Figure 6. Annual Service Cycle – Key Activities



Continuous Improvement

Any program as complex as an all-of-government approach to public assets financial protection must be dynamic. It should seek regular insights, both from internal learnings and external teachings, with a goal of constantly evolving to meet the needs of government. Any recommendation for change needs to be evidence based (that is, evolution through evidence-based performance). Ways to inject continuous improvement include the following:

- **Use benefits tracking.** SMART benefits were established during the Design stage. Actual performance against those benefit targets should be tracked regularly. This check assists with identifying what is working well and what may require adjustment. Reporting against those targets will form a key component of the governance function.
- **Incorporate the risk management feedback loop.** It is important to link risk control intervention initiatives to the program. If a type of risk control investment is made, and it affects (positively or negatively) on claims experience and risk pricing, it should be included as evidence supporting program evolution and included in market documentation during renewal discussions. It is also important that any analytics and modeling undertaken can consider factors that may materially alter the resilience or vulnerability of the insured assets.
- **Maintain a lessons-learned register.** The register should be reviewed on a regular basis within the governance function to inform potential change recommendations.
- **Ensure stakeholder training is not limited to the inception of the program.** It should be continuous and evolve with the program.

Tips for Effective Stakeholder Management

As with all successful programs, effective and timely stakeholder engagement and management are critical. Numerous good practice resources and tools are available across different platforms, so this fact sheet aims to provide only a simple guide to some of the good practices. Different resources will point to different terminologies, processes, and tools depending on the context, but they all adopt similar principles.

Stakeholder engagement is an umbrella term encompassing a range of activities and interactions over the life of a project or program. Relevant key components are summarized in figure 7. It is important to prioritize the level of engagement with different stakeholders, as well as to distinguish between what stakeholder 'need' and what they 'want'. Using experienced project managers or stakeholder engagement experts can help navigate some of these complexities.

Figure 7. Good Practice Tips for Effective Stakeholder Management for a Public Asset Financial Protection Program

 Stakeholder identification and analysis	 Stakeholder consultation and information disclosure	 Partnership establishment and negotiations	 Stakeholder management functions
<p>Who are your stakeholders? What makes them tick?</p>	<p>What strategy should you use to engage with them? When is a good time?</p>	<p>What do we <i>need</i> vs. <i>want</i> out of this? What are our red lines?</p>	<p>Have we checked in with our stakeholders? How do we maintain the relationship?</p>
<ul style="list-style-type: none"> Invest time to identify and prioritize different stakeholder groups and assess their interests and concerns; document your progress using stakeholder mapping tools as appropriate. Identify and verify stakeholder representatives to enable engagement with broader groups, such as appointed ministry or local authority representatives. 	<ul style="list-style-type: none"> Plan the process for different consultations and document your progress and decisions; follow up post-consultation. Communicate information in meaningful and accessible formats. Disclose relevant information with transparency and accountability and in a timely fashion. Implement data confidentiality practices for sensitive information. 	<ul style="list-style-type: none"> Identify opportunities for strategic partnerships that can serve common interests, especially in the context of risk pooling. Seek to maximize cost-effectiveness of solutions and competitiveness with potential insurance providers but with an open mind and a willingness to engage and to reach agreement. 	<ul style="list-style-type: none"> Adopt structured methods and functions for stakeholder management over long term, including ongoing monitoring and reporting processes. Hire, train, and deploy the right personnel to manage stakeholders, with relevant reporting lines. Develop and maintain a stakeholder database.

Across these key stages, a variety of different stakeholders will need to be engaged to develop, agree to, and implement important considerations and decisions. The stakeholders required may differ for each situation. Figure 8 summarizes the typical constituency of key stakeholders across the stages.

Figure 8. Typical Stakeholders Across the Stages of the Road Map

Stakeholder	DESIGN	DEVELOPMENT	DELIVERY	RENEWAL
Cabinet	Responsible for passing regulations			
Steering Committee	A leadership subgroup to ensure that progress is aligned with expectations			
Governance board		A leadership subgroup to ensure progress is aligned with expectations		Provide governance and authorize scope change.
Relevant government ministers (for example, Minister of Finance)	Provide and confirm strategic-level risk appetite and a point of authorization and advocacy for relevant legislation/regulation.	To remain informed and provide feedback where necessary about strategic alignment with government objectives		
Ministry/Department of Finance (or equivalent representative(s))	Confirm alignment with fiscal policy objectives and positions and consider the options for amending fiscal policy as may be required.	Cooperate and provide inputs into the options assessment and recommendation outputs.	Support and input to the preparation and activation of risk retention mechanisms, such as claims transaction processes and surplus/deficit management.	Cooperate and provide inputs into the renewal tasks, which primarily are regular performance reviews.
Sponsoring agency representative(s) (if not the Ministry/Department of Finance)	Contribute to design research and discussion; collate the outputs of the Design stage.	Lead the evidence gathering and options assessment process; control the key document outputs.	Lead the implementation project; control the key document outputs; represent government in risk transfer market engagements and outsourced services procurement.	Lead the operational solution; control the key processes; represent government in ongoing risk transfer market engagements and outsourced services procurement; act as the conduit for governance reporting.
Government agency representation	Provide customer perspective, including preferences, risks, and issues.	Cooperate with data collection requirements; provide regular customer perspective feedback into design options.	Cooperate with updated data collection requirements and prepare operations to receive the solution.	Cooperate with updated data collection requirements and comply with standard operating procedures.
Government legal office	Confirm and advise on compliance with existing legislative arrangements and propose amended/new legislation.			
Subject matter expert in government risk management/risk financing	Provide objective insight/lessons learned from other jurisdictions and the risk financing industry, including insurance market, risk modeling sectors.	Provide technical input into the design options assessment.	Provide technical input into the delivery process; in many cases this is a (re)insurance broker.	Provide technical input into the evolution of the program; in many cases this is a (re)insurance broker.
Catastrophe loss modeling service provider		Provide detailed loss modeling to help inform funding requirements.		
Risk transfer markets		Provide an early assessment of risk transfer market availability and affordability.	Provide terms and conditions for risk transfer.	Provide terms and conditions for risk transfer; pay claims that fall within the coverage parameter.
Outsourced service providers			Deliver services subject to service levels specified in contractual arrangements.	Deliver services subject to service levels specified in contractual arrangements.

Annex 1: Overview of Fact Sheet Series

1	High-level road map and stakeholder definitions	Fact Sheet 1 outlines the steps commonly required in forming a public asset financial protection program—from legal to data and analytics, to institutional and operational requirements. It will outline the key decisions and considerations for government officials.
2	Policy, institutional, and regulatory requirements	Fact Sheet 2 is an overview of the roles of policies, governance, institutions, and regulations in the establishment and operation of a public asset insurance program. It will detail the need for governments to outline their objectives and to build a consensus around priorities.
3	Public asset management and the role of data	Fact Sheet 3 covers the wider aspects of public asset management and the role of insurance. It will use case studies to demonstrate the key aspects of a public asset management program, including public asset registries. It will also highlight key policy and business requirements for the systems and will compare the data and functional needs for general public asset management versus insurance.
4	Information requirements for public asset disaster risk financing and insurance	Fact Sheet 4 addresses data requirements for an insurance transaction for public assets. It will include an overview of the approaches for assessing and quantifying asset exposure, the use of catastrophe risk analytics, the historical loss and damage data, the risk-based pricing method, the underwriting information packs and engineering data, and the claims management requirements.
5	Developing and leveraging domestic and international markets	Fact Sheet 5 outlines the various roles and options available to construction of cost-effective insurance. The information will include consideration of insurance program structures commonly used, as well as indemnity versus parametric, and it will use case studies about existing program. It will highlight pros and cons of options (financial, operational) and needs to consider in relation to budgets, risk appetites, and government priorities.
6	Pooling and mutual options for public assets insurance	Fact Sheet 6 includes a description of approaches, advantages, and disadvantages of pooling and mutualization of large-scale public assets insurance programs. It includes detailed case studies about existing municipal programs in the United States and elsewhere, as well as management and operational considerations. It also explains the general concepts of mutual insurance and reinsurance structures.
7	Managing insurance programs	Fact Sheet 7 outlines the operational aspects of managing a large-scale public asset insurance program. The fact sheet will look at the roles and responsibilities of governmental officials and stakeholders within an internal insurance program as compared to commercial approaches. It will consider multiyear aspects, renewals, and claims management processes.
8	Innovation and the future for public assets insurance	Fact Sheet 8 examines the use of technology (platforms, smart infrastructure, data) to improve insurance efficiency. It also addresses market drivers and trends, plus the use of insurance expertise, including risk engineering to increase resilience of assets.

Annex 2: New Zealand All-of-Government Risk Financing (ARF) Principles

<p>1. All of Government <i>The primary objective of the ARF is to achieve a better outcome for Government as a whole.</i></p> <p>We take a neutral view on surpluses or deficits that emerge between the ARF and participating agencies where these have actuarial justification, are short term and sit within a context of a reduction in AoG costs overall.</p>	<p>2. Customer focus – stability and ease of transition <i>The ARF solutions should maintain a focus on the agencies as customers.</i></p> <p>In the longer term the solution should seek to reduce fluctuations in both the reserving and premium allocation to the extent possible. Where change may happen, for example in response to emerging trends, this should be communicated early.</p>	<p>3. Risk management and data improvement <i>The ARF will facilitate excellence in risk management.</i></p> <p>The operation of the ARF should provide incentives for agencies to manage risks. The ARF will provide a platform for Government to build and improve knowledge and expertise over time.</p>
<p>4. Insurable risk financing and coordination <i>The ARF is a vehicle to pool, fund and coordinate the management of insurable risks. The ARF is not an insurer.</i></p> <p>The ARF will coordinate the management of insurable risk on behalf of participating agencies.</p>	<p>Actuarial Guiding Principles</p>	<p>5. Long term public value <i>The ARF solution will facilitate reduced costs over the long term.</i></p> <p>In putting forward the case for change we have a preference for those solutions and paths that are expected to reduce costs over the Long Term based on the actuarial modelling of risks, including in particular the impacts of low frequency high severity scenarios such large natural disasters and large claims.</p>
<p>6. Equity <i>The operations of the ARF should be fair, and the treatment of different participating agencies transparent and defensible from an equity perspective.</i></p> <p>The total contributions received for the ARF solution should reflect a reasonable contribution from each participating agency – this would balance the agency’s inherent risk where there is actuarial evidence to support it.</p>	<p>7. Simplicity and transparency <i>Simple approaches and models, where adequate, will be preferred over more complex ones.</i></p> <p>The ARF solution should be simple to explain. The participating agencies should be able to understand, both overall and for their perspective, how contributions are calculated and the drivers of movements from year-to-year.</p>	<p>8. Prudence <i>Where there is uncertainty the ARF should err on the side of caution.</i></p> <p>Actuarial analysis and modelling are subject to model and parameter error. The proposed solutions will have a preference to reflect risk and err on the side of acceptable prudence. A further example is that where evidence emerges that contributions can be reduced, we would take a prudent view and reduce contributions over time as data emerges.</p>

Bibliography

Insurance Development Forum (IDF). 2019. *IDF Practical Guide to Insuring Public Assets*.
https://www.insdevforum.org/sites/default/files/2019_09_IDF%20Practical%20Guide%20to%20Insuring%20Public%20Assets%20-LR.pdf

Praxiom. 2010. "Fundamentals of Risk Management for CFOs – Unlocking Hidden Value."
<https://www.slideshare.net/Praxiom/fundamentals-of-risk-management-for-cf-os-3398412>

Local Government New Zealand (LGNZ). July 2016. *Risk Financing in Local Government*.
<https://www.lgnz.co.nz/assets/9190f8591f/42600-LGNZ-Risk-Financing-Guide-Final-WEB.pdf>

World Bank. 2017. *Catastrophe Insurance Program for Public Assets*. Operational Framework. Technical Contribution to the APEC Finance Minister's Process 2018. World Bank.

Stakeholder Engagement Good Practice Resources

International Finance Corporation (IFC). 2007. *Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets*.
https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_stakeholderengagement_wci_1319577185063

PRINCE2 website. 2011. *How to Engage Stakeholders*.
<https://www.prince2.com/eur/blog/how-to-engage-stakeholders>

Glossary of Selected Terms

Binding/Bound	Binding is, by definition, the act of imposing a duty to keep a commitment. In the insurance industry, binding refers to insurance coverage. It means that coverage is in place, although a policy has yet to be issued.
Broker (intermediary)	A specialist commercial advisory and advocacy agent that acts on behalf of the insured to acquire best cover and terms for the assets at risk. Services include analytics, legal wordings, claims services, and transactions. Brokers are regulated entities.
Capacity	The largest amount of insurance or reinsurance available from a company or the market in general. Capacity is determined by financial strength and is also used to refer to the additional amount of business (premium volume) that a company or the total market could write based on excess (unused) capital—that is, surplus capacity.
Capital partners	Partners/entities that have contributed capital or placed capital at risk on agreed terms and conditions.
Catastrophe	An unusually large natural or anthropogenic loss, usually defined in terms of frequency and severity of the potential loss.
Cedant	The insurer that transfers part of its risk to a reinsurer under a proportional reinsurance treaty or facultative quota share placement (Chartered Institute of Insurance definition).
Claim	A formal notice and request for compensation by an insured to the insurer, or a cedant insurer to a reinsurer under the terms of the policy between them.
Compliance	The process of ensuring insurers are operating within the requirements stipulated by regulators and the law. Compliance processes are both external and internal to the insurer.
Contingent liability	A contingent liability is a potential liability that may occur in the future, such as a modeled disaster event. If the liability is likely to occur and the amount can be reasonably estimated, the liability may be recorded in accounting records.
Coverage	Coverage is the amount of risk (usually financial) that the insurer or reinsurer guarantees to the insured will be compensated for in the event of a loss.
Deficit	Applies when the financial assets of a risk financing vehicle are less than its liabilities over a defined financial period.
Event	An event is a situation that will cause a claim against a policy. The definition of an event, and its duration, will vary by the type of peril and terms of the policy.
Expiry	In the context of insurance, is the exact day insurance coverage ends. Many insurance policies offer the option of renewal. Upon renewal of a policy, a new expiration date applies.
Exposure	Exposure is the situation or characteristics of the insured assets that could lead to a loss. For public assets, exposure could refer to the character of its structure, its value, and its vulnerability or resilience to the type of peril being considered.
Facultative reinsurance	The reinsurance of risks on an individual basis where the insurer has no obligation to offer a risk, nor has the reinsurer any obligation to accept or decline an offer (Chartered Institute of Insurance definition).
Hazard	A situation that determines (increases) the chance of a loss from a given peril. For example, proximity to a floodplain generates a hazard from flooding.
Insured (Assured)	The entity/entities who are covered under the policy issued by the insurer or reinsurer.
Lead (insurer)	The policy issuing insurer of a consortium or reinsurance panel. Usually the lead will accept and retain a larger proportion of the total exposure and share of the premium.
Limit	The maximum amount an insurer/reinsurer is liable to pay the insured/reinsured under the terms of the policy. Can often be capped to the Probably Maximum Loss.
Loss (claim)	The damage or financial impact suffered by the insured. A claim for the loss will be made by the insured to the insurer under the terms of the policy.
Loss Adjustment	The process of investigating, estimating, and advising on the size of a claim. Usually a Loss Adjuster is employed by the insurer.
Loss Assessment	A loss assessment is undertaken by the insured to quantify and determine the size of claim to be made for a loss to the insurer.
Market	The business of insurance and reinsurance. Used to define the general form of business conditions existing that influence the price, capacity, and terms of insurance or reinsurance. Markets can be defined as “hard” (premium is higher, policy terms are more favorable to the insurer) or “soft” (premium is lower, policy terms are more favorable to the insured). Market conditions tend to follow cyclical trends.

Mutual Insurer	An insurance entity formed to provide collective coverage to its members. Profits are reimbursed to the members.
Parametric Insurance	A method of insurance that forms an agreement between the insured/reinsured and insurers/reinsurers to provide a payout in the event of a particular condition or set of conditions under agreed criteria being met. It does not indemnify the pure loss to the insured and is not therefore reliant on claims settlement.
Participation	The share that a particular insurer or reinsurer will take in coverage of an insured. Usually referring to both the risk accepted, and the share of premium received in return.
Payout	The sum paid to the insured in the event of a claim. In indemnity insurance, and for larger or more complex claims, commonly after conclusion of loss adjustment.
Peril	An event or a phenomenon that could cause a loss to the insured/reinsured. Earthquakes, floods, landslides, wildfires, theft, and explosion are all perils. The precise definition of a peril in a policy can determine the type of payout to be expected, and exclusions.
Policy	The (time limited) contract between the insured/reinsured and insurer/reinsurer that details the terms under which the insurer/reinsurer will compensate the insured/reinsured.
Policy Holder	The insured.
Premium	The agreed price paid by the insured/reinsured to the insurer/reinsurer for the coverage provided. It is derived using the rate and value of the insured assets.
Pricing	The determination of the rates and price charged by the insurer/reinsurer for the coverage provided.
Probabilistic	Probabilistic risk is the chance of something adverse occurring. This method assesses the likelihood of an event(s).
Quota share reinsurance	A form of obligatory and automatic proportional reinsurance agreement indemnifying the insurer against a fixed percentage cession of each and every risk falling within its own maximum retention (Chartered Institute of Insurance definition).
Regulator	An entity authorized to conduct oversight and supervision of insurers, reinsurers, and brokers within a certain market.
Reinstatement	The ability for a policy to be renewed in the event of its termination. Usually in reference to the ability for coverage to be renewed in the event of a claim and payout. Reinstatement clauses can be included in a policy, usually for a premium.
Reinsurance	The insurance of insurance companies. Provides the means for insurers to cede part of the risk they have accepted, usually to reduce loss volatility and protect capital.
Retention	The amount of monetary loss that the insured remains liable for after a claim and is therefore not insured or reinsured for. In the event of a limit being set, for example as a PML, the insured will retain any loss in excess of that limit (also termed overspill).
Retrocession / Retrocessionaire	A specialist form of reinsurance for reinsurers to cede excess risk. A reinsurer who provides reinsurance to reinsurers.
Risk Appetite	The risk that an entity is prepared to retain, transfer, or cede. Can be applied to both insured and insurers/reinsurers. Usually determined by the management of the entity and determines risk transfer strategy.
Risk Tolerance	The level of loss that is acceptable under risk appetite conditions.
Schedule	The details of insured assets and conditions under which they are to be covered. Forms a component of the policy.
Surplus	Applies when the financial assets of a risk financing vehicle are greater than its liabilities over a defined financial period.
Total Cost of Risk	The cost of managing risks and incurring losses. Total cost of risk is the sum of all aspects of an organization's operations that relate to risk, including retained (uninsured) losses and related loss adjustment expenses, risk control costs, transfer costs, and administrative costs.
Transfer	Risk transfer is a risk management and control strategy that involves the contractual shifting of a risk from one party to another (for example, reinsurance).
Underwriting	The pricing and acceptance of risk by an insurer or a reinsurer. An underwriter is a professional authorized to accept risk to an agreed premium.

Factsheet 1: High-Level Implementation and Stakeholder Road Map
Test your knowledge and record your insights through this easy, DIY worksheet!

Activity 1: Identify the Activities Conducted in Different Stages of Financial Protection Program

Identify the stage in which the activities listed below are most likely to be conducted while designing a public asset financial protection program.

At what stage...	Design	Development	Delivery	Renewal
1. Do we need to consider overall budget and financial planning of a potential public asset financial protection program?				
2. Will the detailed data & information on public assets influence cost of the program?				
3. Do we establish the risk funding mechanism, including the procurement of risk transfer solutions?				
4. Are expiry strategy meetings held to discuss and position customer priorities?				
5. Do we finalize preferred terms and conditions (re)insurance coverage, including policy wordings and other service level agreements?				
6. Do we decide how much risk to retain and how much risk to transfer?				
7. Do we define the key principles on which public asset financial protection program should be based?				
8. Should we establish the governance function to coordinate the oversight and scrutiny of the program?				

Activity 2: Identify Key Stakeholders

Identify three key stakeholders that need to be engaged for overall success of the financial protection of public assets program and identify ways of engaging the stakeholders better.

# Stakeholder Name/Department	Status of Engagement	One thing I can do to engage better
1.		
2.		
3.		

Activity 3: Assess the status and benefits of financial protection of public assets program

Pick any three public assets in your country and assess the current status of their financial protection funding arrangement/program and identify the intended benefits of the program.

Name of the Asset	Do you have any existing financial protection funding arrangement?	Identify the main intended benefit to protect this asset.
1.		
2.		
3.		

Activity 4: Reflections

[1] My Top 3 Takeaways from this Factsheet are:

- 1.
- 2.
- 3.

[2] Three concepts/ideas I would like more information on are:

- 1.
- 2.
- 3.

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