FACT SHEET 4 Disaster Risk Financing for Agriculture Technical Learning Series

Disaster Risk Financing & Insurance Program





Structuring a Financial Protection Scheme for Agriculture

This knowledge series aims to bridge the knowledge gap for government officials and practitioners on the development and use of disaster risk financing (DRF) mechanisms and instruments for de-risking and financially protecting the agriculture sector. Completion of the series will provide a grounding for Ministries of Finance and other related ministries to establish, evaluate, and implement Disaster Risk Financing for Agriculture (DRFA) programs as part of their overarching DRF strategy. The content builds on the Fundamentals of Disaster Risk Financing (FDRF) training series, which provides an overview of DRF principles and their application in different contexts. Familiarity with the FDRF content is assumed as a basis for this DRFA webinar and fact sheet series, and further resources and information can be found <u>here.</u>

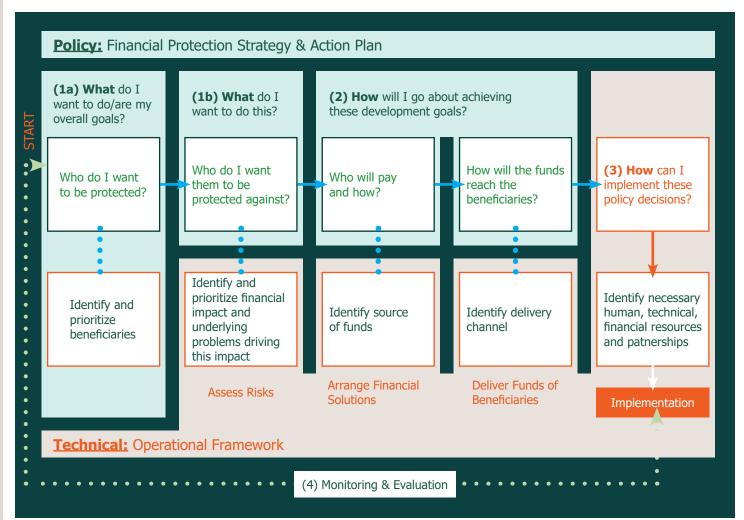
This module, the fourth in the series, will set out a framework for how governments can structure and implement a program to build financial resilience to disasters and de-risk the rural and agriculture sectors (food, farming, and fisheries). The framework outlines a process that starts with the initial policy decisions essential to understand why the program is needed, and then addresses decisions on implementation distribution channels and approaches. This module will highlight the value of pre-positioned finance and plans, provide more details on the available instruments (across the public and private sectors), and explain how these instruments can be structured as part of a risk-layering strategy to ensure they are complementary and cost-effective.

Designing a financial protection scheme

In the event of a disaster, it is likely that the government will (or will be expected to) step in and provide those affected with financial support for response, reconstruction, and recovery. This expectation is a form of contingent liability to the government, and it can be very hard to meet, especially in times of fiscal constraints. To manage this liability cost-effectively and in a timely manner, it is recommended that government agree in advance on how to fund such costs should they arise, using a disaster risk finance strategy that considers (among other things) risks to the rural economy and agricultural sector. In some cases, this approach may result in pre-funding financial instruments to provide liquidity before, during, or after a disaster.

When designing a financial protection scheme for any sector, there are fundamental questions that need to be discussed and answered as a guide for decision-makers. These fundamental questions are shown in the decision-making framework in figure 1. The framework is neutral to the sector being protected, but in this module, we will tailor it to show how to increase the financial resilience of national and subnational governments, businesses, households, farmers, and those most vulnerable to disasters and shocks affecting the agricultural sector. The agriculture focus introduces specific beneficiaries, stakeholders, financial institutions and services, technology, distribution channels, and links to existing infrastructure.

FIGURE 1: DECISION-MAKING FRAMEWORK



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Source: World Bank Group.



Policy decisions: Financial protection strategy & action plan

The framework laid out in figure 1 starts with an understanding of the overall policy objectives of the government when it comes to building financial resilience; these points are highlighted in green. The first questions that need to be addressed are (1a) **what** do you want to achieve; and (1b) **why** do you want to do this. For example, the government may be interested in protecting budget lines or a specific target group of beneficiaries (this could be households, firms, etc.), and then it needs to consider what risks these beneficiaries need to be protected against (i.e., production risks and food insecurity, financial risk/price volatility, liquidity constraints, etc.). Once these objectives are established, the next stage is to consider (2) **how** these goals will be achieved through different financial solutions, and how this protection will be distributed to the targeted beneficiaries effectively.

Technical decisions: Operational framework

Once there is clarity on the key policy objectives, the issue to be addressed is (3) **how** to implement these policy decisions; these points are highlighted in orange in figure 1. Decisions could be implemented through a program of macro, meso¹, or micro¹ financial support, and could be delivered by the public or private sector or by both. Most importantly, in addition to having financing available, the contingency plans and distribution channels need to be clearly developed so the development impact is achieved. During design and implementation, stakeholder engagement is a vital project management tool. You can ensure that the project is demand driven by involving individuals, groups, and organizations that will be affected by your projectbeneficiaries, government ministries and departments, implementing agencies, donors, or the private sector-ahead of time. People who are engaged are much more likely to engage positively.

Developing a comprehensive program can take time, and throughout the development of a program, (4) **monitoring and evaluation (M&E)**, stakeholder engagement, and partnerships are key. With limited financing available, it's essential to use an M&E framework to improve the program over time.

¹ Meso level implies the level of communities, organizations, and firms, whereas micro level refers to individual households.

Disaster Risk Financing

Part 1: <u>What</u> are the government's overall goals and <u>why</u> does it want to do to achieve them?

The first step in the framework is to establish clear policy objectives and priorities to form the foundations for the program. These should focus on the needs of target beneficiaries-namely, farmers, value chain actors, the government, or a combination of all three. Having clear objectives helps with engagement of stakeholders (i.e., with senior ministers and donors) and reduces some of the project risks going forward. Recent disasters, the prevailing political economy, informal protection mechanisms, and historical related policy and programs may drive some of these objectives. Analytical work to better understand the risks and the existing response/capacity gaps can also support the identification and protestation of objectives. The goals of the final program should then relate very closely to the policy objectives the government wishes to address.

Sample policy objectives may include the following:



Helping farmers and/or value chain actors manage shocks better



Strengthening farming households' food security and smoothing their consumption needs during the lean season



Increasing financial inclusion



Reducing pressures on government budgets after a shock



Stabilizing local food market prices and the costs of food imports



Boosting agricultural income



When considering the policy objectives, it can be helpful to map out the potential beneficiaries of a program. The beneficiaries can be segmented based on their existing vulnerabilities and access to financial services, after which the government can prioritize and align any interventions to their needs. This approach can also be a useful communication tool to explain why some beneficiaries have been targeted. Within the agricultural sector there are a number of different target segments the government may wish to protect; an example showing farmer segmentation analysis is in figure 2.

FIGURE 2: DIFFERENT SEGMENTS OF FARMERS (SIMPLIFIED EXAMPLE WITH COUNTRIES IN SOUTH AND SOUTHEAST ASIA IN MIND)

Most Productive/ Less Vulnerable

Commercial Farmers

- Medium and large farm units (> 5 ha)
- Access to credit
- High levels of input use
- Produce for sale

Semi commercial smallholder farmers

- Small farm units typically < 5 ha
- Some assets
- Some access to credit
- Part consumption/part sale

Small subsistence farmers and sharecroppers

- Very few assets; < 1 ha land
- Subsistence farming
- Very vulnerable to climatic shocks

Landless Laboring households

- Very few assets; no land
- Paid labor
- Very vulnerable to climatic Shocks

Less Productive/ Most Vulnerable

Source: World Bank Group.

Part 2: <u>How</u> do we go about achieving the development goals?

Who will pay and how?

Once the government has established who it wants to protect and from what, the next step is to design a program that enables delivery of financing in a timely and cost-efficient way. This may be through sovereign products to protect government budgets, or instruments at the micro and meso level to target specific households or firms.

A solid and growing body of evidence shows the multiple benefits of a timely response to shocks and disasters. A financial protection scheme for agriculture and rural economies that provides timely assistance to the household level can greatly increase the impact and effectiveness of crisis response, in part by ensuring direct household-level welfare gains in food security and child nutrition. Speedy assistance also preempts household reliance on negative coping strategies, such as the sale of productive assets, which undermine resilience and push households into poverty. These benefits reduce the overall costs of humanitarian response, which increase as response is delayed. Reducing crisis losses and impacts also reduces the economic impact nationally and ensures that scarce government and donor resources are not diverted from basic public services or other development investments.

International experience of DRF instruments has highlighted the fact that no single instrument can provide the financial protection needed by all. Instead, a mix of instruments is often required to ensure timeliness and cost-efficiency. For example, the best financial products could be a mix of risk retention products (reserve funds and budget lines), risk transfer products (insurance, bonds), and banking products (credit and savings). Based on extensive learnings, the products should be developed with the following dimensions:



1. Clear and transparent triggers that determine how/when financial disbursement will be made



2. Financing that has been secured at the lowest cost through an optimal mix of risk retention and risk transfer instruments



3. Disbursement systems and plans that ensure the finance reaches the targeted beneficiaries in a timely and transparent manner

If designed appropriately a financial protection program can also support the growth of local financial markets.

Below we look at some examples of financial protection instruments that can be used - these are split between sovereign risk finance instruments and meso/micro level risk finance instruments.

SOVEREIGN RISK FINANCE INSTRUMENTS

The government can put in place risk finance instruments to protect its budgets and provide quick liquidity at times of disaster. When managing the contingent liabilities from disasters, there is a balance to be struck between risk retention and risk transfer instruments, as these come with different up-front costs and risks. Risk transfer instruments enable the government to pass some of the risk to the private sector and to leverage additional finance from capital markets, but they also require an upfront budget commitment to the premium, without certainty of any payout. In contrast, risk retention instruments provide more flexibility, as any unused funds can be reallocated, but they do not leverage additional funds and they keep the funding cost on the government's balance sheet.

Some instruments, including risk transfer instruments, can be arranged before an event occurs (ex ante rather than ex post), as part of the annual budgeting cycle. This pre-positioning helps create the discipline to plan and build resilience into policy objectives and means the government does not need to reallocate funds away from other development programs. It helps ensure timely payments to the affected populations. Further, for severe shocks, it keeps the government from having to solely rely on international assistance, which can be slow, unreliable, and vulnerable to leakages.

The funds available through these sovereign products can be linked to pre-defined continency plans, and the government can work with the private sector to disburse the funds to a registered group of targeted beneficiaries. Table 1 provides examples of ex ante and ex post sovereign risk finance instruments.



TABLE 1: EXAMPLES OF EX ANTE AND EX POST SOVEREIGN RISK FINANCE INSTRUMENTS

	Description	Ex ante or ex post	Advantages	Disadvantages
Contingency Funds	A specific fund set up and capitalized with ring-fenced budget line that can be drawn down in the event of a disaster.	Ex ante	 Cost-effective as a way to finance frequent shocks Quick liquidity Allows implementers to plan Approach has been used in many contexts; thus experience is available for countries to build upon 	 Requires fiscal discipline High opportunity cost of funds if unutilized, given rates of return forgone on other government investments Can be hard to defend politically given opportunity cost
(Contingent) Credit	A line of credit with pre-agreed terms that can be drawn down in the event of a disaster. Offered by some development banks on concessionary terms depending on pre- agreed policy and intervention measures. The World Bank Cat-DDO is an example.	Ex ante	 Cost-effective tool for funding response to mid- frequency shocks Fast when conditions for disbursement are met Allows implementers to plan Can incentivize proactive actions to reduce risk (e.g., policy actions in disaster risk reduction and disaster risk management) 	 Has conditionality so may not disburse Opportunity cost to arranging loan limits access to other concessionary funds Adds to a country's debt burden and must be repaid Countries may prefer investment projects where resources are guaranteed
Risk transfer	Insurance is a commonly used risk transfer instrument. An initial premium is paid to an insurer, and the insurer pays a claim in line with the policy coverage. For example, if the modeled losses from a tropical cyclone are above US\$ 50 million, the insurance contract may cover the next US\$ 20 million of losses. The drought cover offered by African Risk Capacity (ARC) is an example of sovereign insurance; other examples include cat bonds, swaps, or derivatives.	Ex ante	 Can be a cost-effective tool for managing less likely extreme shocks Can be fast to disburse to affected communities, in particular if product uses parametric triggers (for example, ARC policies triggered by their drought risk model) Allows implementers to plan Supports fiscal discipline 	 Can be expensive for frequent shocks Can be vulnerable to criticism and "regret" Can miss need Expertise required to negotiate contract Trade-off between the cost of premiums and the frequency or scale of payout



	Description	Ex ante or ex post	Advantages	Disadvantages
International	Assistance provided by international donors following a disaster. Assistance can be of any type, e.g., services or monetary.	Ex post	 Flexible and can respond to need Doesn't have to be repaid 	 Can be slow so the hazard impact increases Can be unreliable Undermines planning
Other ex post instruments	Any finance that is provided after a disaster, for example budget reallocation, borrowing, tax increases.	Ex post	 Approach has been used in many contexts; experience is available for countries to build upon 	 Can be slow Can have negative impact on long-term development/ investment programs Can be expensive if required during a crisis

As noted in table 1, the ex ante instruments come with different advantages and disadvantages, most notably the differing up-front costs and opportunity costs associated with using them. For this reason, combining these instruments using a risk-layering approach can help manage different risks in a cost- effective way. One way to categorize the risk is to consider the financial impact to the government should this risk occur—i.e., the frequency of the loss (how often/how likely) and severity of the loss (the impact/size). Having a range of instruments can also mitigate basis risk, which is associated with parametric products. Figure 3 looks at an example of the types of instruments that can be used depending on the frequency and severity of the loss.

FIGURE 3: SIMPLIFIED RISK-LAYERING APPROACH

HAZARD TYPE		FINANCING INSTRUMENT	THREE-TIRED RISK-LAYERING STRATEGY FOR GOVERNMENT		
w Frequency/ Jh Severity		Market-Based Instruments	Risk Transfer Risk Transfer for assets such as property insurance or agricultural insurance and risk transfer for budget management like paramedic insurance, cat bonds/swaps	ssistance	
/ Low F cy High		Contingent Financing	Contingent Credit Financial instruments that provide liquidity immediately after a shock		(uncertain)
High Severity/ Low Frequency		Budgetary Instruments	Budget Reserves/Reallocations Reserve funds specifically designated for financing disaster-related expenditures, general contingency budgets,or diverted spending from other programs	Intern	

RISK FINANCE INSTRUMENTS TARGETED AT THE MICRO AND MESO LEVEL

Along with implementing sovereign products, the program can target specific segments of the population and provide financing directly to them, using products offered by the public or private sector. Examples of such products include the following:



Payments enable money transfer, widening opportunities for trade and increasing productivity.



Savings accounts allow people to deposit money, keep it safe, and build up financial resilience in good years while earning interest, and then withdraw money in bad years.



Emergency credit products reduce the need for resource-poor families to cut back their consumption and/or to engage in distress sales of productive assets after a disaster.



Insurance offers protection from financial loss, with clear triggers and timely payouts. Most risk transfer and insurance products for the agricultural sector are micro-level retail policies sold to individual farmers (crop producers), livestock producers, and fish farmers. Given the very high transaction costs of distributing insurance to small-scale farmers, efforts are now focusing on developing suitable covers to be offered to risk aggregators such as financial institutions, producer organizations, input dealers, and other value chain actors.



Partial credit guarantees are structured so that a third party (i.e., the government) will absorb part of the default risk of the borrower, thus increasing access to borrowing by the private sector and small businesses.



Shock-responsive social protection scales up the coverage of a social protection intervention if need increases due to a disaster event. Early warning systems should be used to determine when scale-up is needed, and households should be pre-targeted for assistance. Ideally the scale-up would be funded using a sovereign risk finance product, such as insurance, designed to closely match the triggers of the scale-up mechanism to ensure timely and certain liquidity.

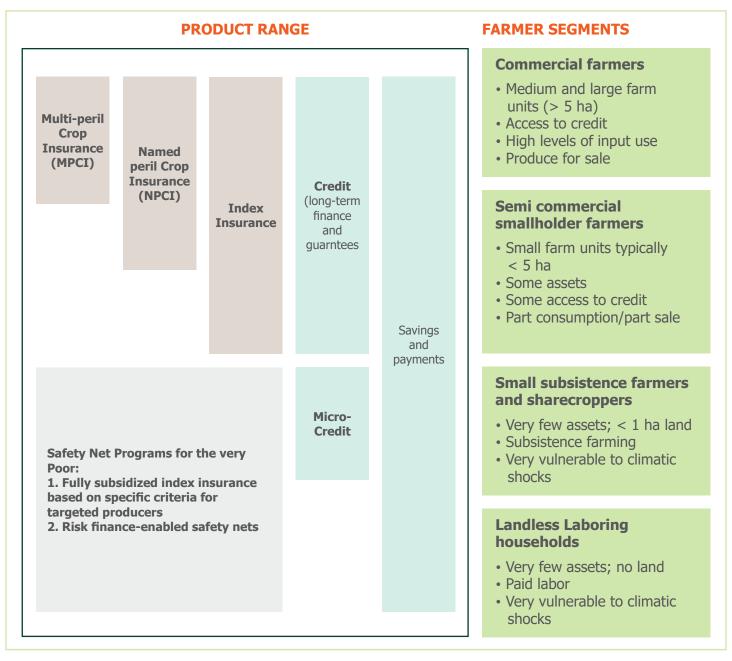
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Adoption of these financial instruments can lead to behavioral change and stronger risk management. For example, an insurance product that is priced based on risk can incentivize the use of more climateresilient crops, which will reduce the cost of an insurance premium. Government support for such products involves risks, however, including moral hazard: for example, if someone else is taking the risk, farmers are not incentivized to pay back loans, and the lender is not incentivized to monitor the loan.

Providing a package of financial services that meets the needs of those on the ground and that can respond to different types of risks is critical. There is no one instrument that will meet all the risk management needs for each segment of the rural farming population or be able to provide all the required financial resources. For example, when considering the types of instruments for managing different types of risks, savings can be considered for minor shocks; credit for investment in strengthening resilience for minor and moderate shocks; and insurance to manage severe shocks. Not all farmers will be able to access credit, however, and certain insurance products will not be suitable for their needs unless they are index-based and fully subsidized. The example in figure 4 shows how different financial products can be matched to different farmer segments. Subsidies incentivize adoption of financial services by the beneficiaries but setting the level of subsidy is challenging and requires close consideration (to avoid creating an unnecessary dependency).

FIGURE 4: DIFFERENT DISASTER RISK FINANCING TOOLS TO MEET NEEDS OF DIFFERENT SEGMENTS OF FARMERS (SIMPLIFIED EXAMPLE WITH COUNTRIES IN SOUTH AND SOUTHEAST ASIA IN MIND)



Source: World Bank Group.



Other considerations when structuring a program

In practice there are numerous other considerations to think about when selecting who to protect within the agriculture sector, and how:



What instruments are available to the country, e.g., is there a local insurance market or opportunities to arrange contingent financing?

Are the appropriate legal and regulatory frameworks in place?



What funding is available, including concessionary finance and other incentives?



What existing financial infrastructure and data are available?

Are technical partners available to help assess the risks and mix of instruments?



What capacity gaps exist across government and implementing partners, and what is needed to fill these?

HOW WILL THE FUNDS REACH THE BENEFICIARIES?

While being predicable, earlier funding for disaster response has the potential to save the lives and livelihoods of those who are vulnerable, this is not enough; plans must be in place detailing how, when, and in what form assistance will reach vulnerable people. Pre-planning for the types of expenditures and activities needed can save more lives and livelihoods than relying on ex post arrangements. In Africa, ARC's <u>Cost Benefit Analysis</u> concluded that substantial speed, cost, and targeting gains can be achieved through improved contingency planning. Thus any country taking out a parametric policy with ARC must have a contingency plan in place for how the funds will be used.

When making plans for how to use the DRF money, it is important to note that different types of risks will require different activities at different moments to support beneficiaries most effectively.

- For example, a sovereign drought insurance product can be used to provide early response, ideally three months before traditional lean-season response. Many assessments show people being food-stressed or already food-insecure at this time, so this is an ideal moment to provide an injection of cash, food, or nutrition support and help people avoid negative coping mechanisms and maintain their health and assets. This means payout funds would reach beneficiaries approximately three months after a failed harvest.
- On the other hand, a pastoral index insurance payout should reach beneficiaries as soon as possible after failed rains in order to prevent livestock death.
- For fast-onset crises, quick action immediately after a disaster will have the greatest chance of saving lives.

Contingency plans for DRF payouts can be rigid, flexible, or a combination, but they must outline the key processes needed to ensure beneficiaries receive the right support at the right time for the hazard in question. When making a contingency plan for how to use DRF money, the most important areas to consider are these:



- To ensure the right type of support is given at the right time, we need to identify which people are in need, at what moment in the crisis cycle, and what support would address their needs.
 - o We need to clearly specify how geographic areas will be prioritized, as well as the targeting process for individuals within the priority areas.



- o We then need to consider how to get this support to beneficiaries. This requires outlining processes for procuring goods and services, including distribution partners, to ensure there is no delay when a DRF instrument pays out.
- o Finally, we need to look at M&E processes and clarify what we want to demonstrate and what data are needed to measure impact.



• Having a planning document is important, but it is only one part of being truly prepared for how to spend DRF funds in a timely, efficient, and impactful way.

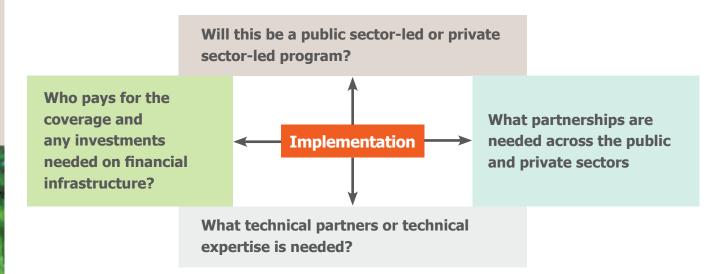


• Simulation exercises, where relevant stakeholders engage in a practice scenario of receiving a DRF payout, allow stakeholders to address the practical challenges of acting quickly and in advance in a low-pressure situation. Then when an actual payout occurs, time is not wasted.



Part 3: <u>How</u> do we implement this?

Once instruments have been scoped and designed, the next phase is to implement these instruments and programs. The implementation arrangements will likely differ by objectives, financial instruments, and delivery channels. Some key questions to consider are these:



For example, who pays the insurance premium, or who capitalizes a fund, or develops the legal and regulatory frameworks needed? Is it the farmers or beneficiaries themselves, the government, the private sector, NGOs, or development partners or development banks? The answer to this will depend on the targeted beneficiaries, the type of instruments, the competing needs and political economy across government, and the appetite of donors and development partners to fund certain instruments. If partners have similar goals to that of the program, then co-financing may be an option.

If public, which government departments will lead? If additional departments need to be set up, how will this be done and who will monitor this?

(e.g., insurers, MFIs, banks, intermediaries, and extension agents)? What role do development partners, donors, and NGOs/ CSOs play?

Possible examples include risk modeling data and capacity, capital markets expertise, payment providers, and M&E experts.

One potential implementation arrangement is a public and private arrangement. The roles that the public sector, private sector, and development agencies play during implementation should complement one another. The best partnerships are able to leverage the expertise and resources of the different agencies toward implementation of the financial protection scheme.

Table 2 shows some typical roles of the major stakeholders in a public-private arrangement.

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TABLE 2: PUBLIC-PRIVATE PARTNERSHIP ROLES

Public Sector	Development Partners	Private Sector
 Owns project and mission Coordinates government departments Is responsible for all key decisions Shares in-depth knowledge on the country to assist in decision- making Makes clear who the key stakeholders are and how policies are passed Creates an enabling environment 	 Provides expertise to support government on areas where it may lack knowledge Brings in knowledge and learnings from similar programs in other countries, links up government and project to experts Coordinates with country management units to ensure efficient coordination Advises on involvement of private sector and helps to assess and design tender process Offers capacity building (on both the supply and demand side) 	 Provides additional capacity and expertise Aids in promotion of initiative/ product through marketing channels Can provide ways of reaching more beneficiaries through existing databases Supplies technical expertise and resources Offers innovative solutions and product design

This part of the framework is best expressed through case studies. Session 5 will use Kenya as a case study to demonstrate how some of these public-private partnerships work in practice; speakers from the Government of Kenya will talk about their experiences and challenges.

Part 4: Monitoring and evaluation

An M&E framework should be designed in unison with designing the program and assessed over time to ensure the impact is as expected and lessons can be incorporated into the program going forward.

Working through this framework is not something that is done once at the start of a program. Rather, the key questions should be reconsidered so that the design of the program can evolve. Module 5 will cover this element of the framework in detail.

Key takeaways from this session

- When governments are prepared, it is easier to implement quick, timely, and high-quality interventions.
- One size does not fit all. It is unlikely that one instrument will meet all objectives, and a risk-layering approach is optimal.
- Design of instruments and getting the right mix of instruments is important. Instruments at the macro, meso, and micro levels can be considered when building solutions to meet the needs of different beneficiaries.
- Contingency plans outline the key processes needed to ensure beneficiaries receive the right support at the right time. Practical exercises like simulations can turn planning documents into true preparedness, by working out any challenges in advance of a crisis.
- Financial protection schemes require review over time to ensure impact has been met and learnings can be taken on board. Building M&E into the operational framework is vital for this step.

Abbreviations

Cat DDO	Catastrophe Deferred Drawdown Option
CSO	Civil Society Organization
DRF	Disaster Risk Financing
DRFA	Disaster Risk Financing for Agriculture
FDRF	Fundamentals of Disaster Risk Financing
M&E	Monitoring and Evaluation
MFI	Microfinance Institution
NGO	Non Governmental Organization



Work Sheet 4 – Structuring a Financial Protection Scheme for Agriculture

Test your knowledge and record your insights through this easy, DIY work sheet!

Activity 1: Identify which of the following statements are true or false.

#	Statement	True	False
1.	Expectation of financial support from the government in the face of a disaster for purposes of response, reconstruction, and recovery is a form of contingent liability to the government.		
2.	To ensure the project is demand driven, it is advisable to involve individuals, groups, and organizations who will be affected by your project ahead of time.		
3.	When considering policy objectives of the DRFA program, it is not necessary to map out the potential beneficiaries of the program.		
4.	A single DRF instrument can often provide all the financial protection needed by various beneficiaries, and a mix of instruments is not required.		
5.	Arranging for risk financing instruments before an event occurs (ex ante) as part of the annual budgeting cycle helps create the discipline to plan and builds resilience into policy objectives.		
6.	Having a range of risk financing instruments in the overall DRFA program can mitigate basis risk presented by parametric products.		

Activity 2: Take a look at the following sovereign risk finance instruments and identify which of the instruments are ex ante (arranged before event occurs) and which are ex post (arranged after event occurs).

#	Sovereign risk finance instrument	Ex ante	Ex post
1.	Contingency fund		
2.	Contingent credit		
3.	Risk transfer		
4.	International assistance		

Activity 3: Various roles of major stakeholders (public and private) in building DRF for agriculture are listed below. Can you link the roles to the stakeholders?

#	Roles	Public	Development partners	Private
1.	Owns the project/mission			
2.	Advises on involvement of private sector and helps to assess and design tender process			
3.	Aids in promotion of initiative/product through marketing channels			
4.	Offers innovative solutions and product design			
5.	Provides capacity building (on both the supply and demand side)			
6.	Is responsible for all key decisions			

Activity 4: Can you identify three financial instruments used by your government to build resilience against shocks in the agriculture industry? Include why these instruments may have been selected.

#	Financial instruments used by your government	Reasons why these instruments may have been selected
1.		
2.		
3.		

Activity 5: Reflections

[1] These are my top-two takeaways from this fact sheet.

[2] Here are two concepts or ideas that I would like more information about.

