Understanding Climate and Disaster Risk Finance and Insurance Solutions in the Asia Pacific

Countries in the Asia Pacific region are the most disaster-prone in the world. While they have made significant progress in reducing poverty and building human capital, these gains are vulnerable to setbacks due to compounding hazards, global market fluctuations and negative coping strategies when disasters occur.

Climate and weather extremes have a disproportionate impact on poor and vulnerable communities that historically have contributed the least to the climate crisis, exacerbating inequalities and limiting opportunities. The diversity of risks and hazards faced by countries in the region underscores the critical role of pre-arranged financing linked to people-centred approaches to better reach shock-affected populations at the right time with the right type of assistance.

Climate and Disaster Risk Finance and Insurance (CDRFI) involves planning in advance the financial mechanisms, policies and systems to respond efficiently to the adverse impacts of natural hazards and climate shocks, with the aim of reducing the economic and human cost of disasters. This disaster risk management

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approach enables governments to combine different financial instruments that release finance to protect against climate-related hazards, such as tropical cyclones and droughts, of varying frequency and severity. Examples of CDRFI instruments include contingency funds, contingent credit and insurance to name a few, all of which can be released when a specific pre-identified trigger condition is met.

The United Nations World Food Programme (WFP) is one of the leading UN agencies promoting the use of CDRFI to respond before, during and after weather- and climate-related disasters with a focus on getting risk finance out to the people who need it most. WFP is a key partner to governments globally with its extensive portfolio supporting micro- and meso-level instruments to better manage climate risks and reduce vulnerabilities. It is also a pioneer in supporting innovative macro-level approaches, such as purchasing macro insurance in nine African countries through the African Risk Capacity (ARC) risk pool, linking social protection to parametric macro insurance policies purchased from the Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC)[1] and implementing Anticipatory Action,[2] which relies on pre-arranged finance and actions to deliver cash or in-kind assistance to people before the impact of a shock occurs.

To gain a deeper understanding of the role of CDRFI in the **Asia-Pacific region**,[3] WFP undertook a study to explore the challenges and opportunities associated with the use of various macro-level instruments to support government disaster response strategies. This brief summarises the key findings and recommendations of the study.

What is Climate and Disaster Risk Financing and Insurance (CDRFI)?

CDRFI includes pre-arranged financial mechanisms that protect individuals, businesses and governments from the financial impacts of specific risks from climate-related disasters that can also help drive improvements in disaster risk reduction, early warning systems, preparedness and response. While definitions of CDRFI can vary, they generally highlight its essential elements: pre-arranged finance, specifically tailored to shocks, and the use of objective triggers for releasing financial resources.

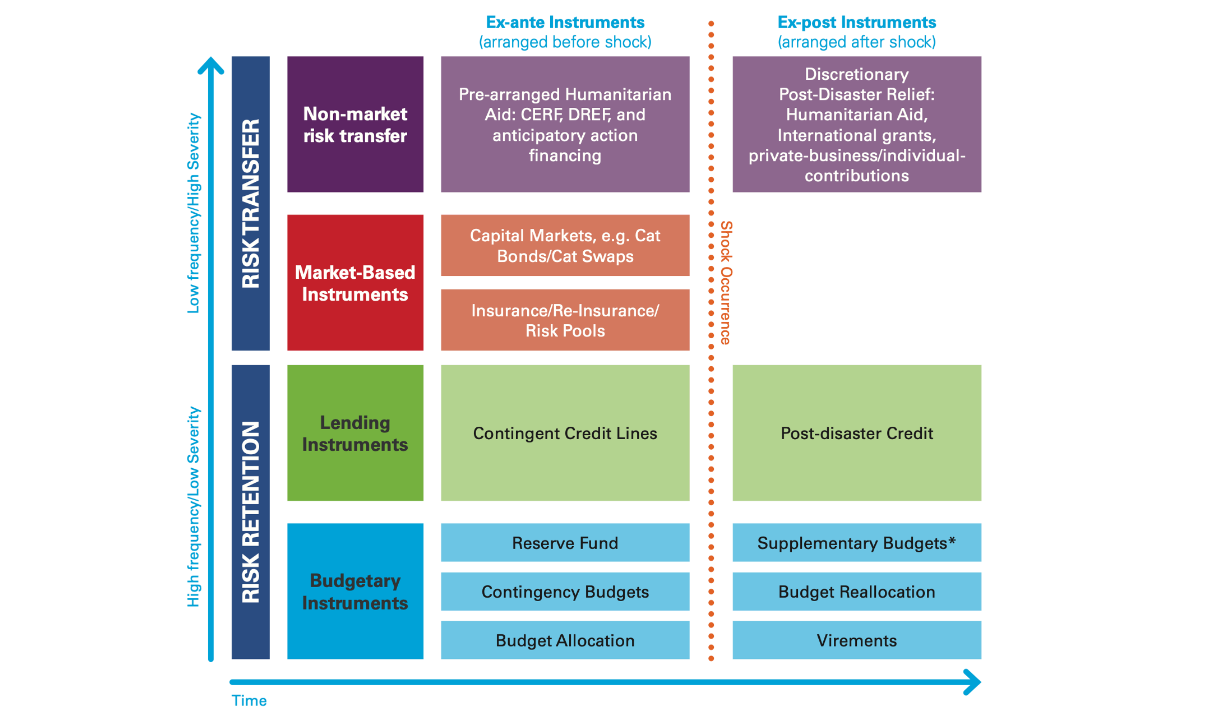
1 More information on WFP-supported macro insurance programmes that include ARC and CCRIF SPC can be found in **"Climate Risk Protection for Vulnerable Communities and Countries"**.

2 Anticipatory actions (AAs) are pre-defined interventions in the form of assistance taken ahead of a forecast extreme weather event to reduce its impact on vulnerable populations, save lives and protect livelihoods. For an action to be considered 'anticipatory', decisions are made based on based on forecasts and the assistance should reach beneficiaries or at-risk communities before the impact of the hazard. The essential components of an AA system are: forecast triggers and thresholds; pre-agreed anticipatory action plans; and pre-arranged financing (WFP 2023a).

3 WFP is supporting the Asia Pacific region through its **Regional Bureau in Bangkok and 17 Country Offices**.

Advocates for CDRFI promote its use of proactive risk management based on probabilistic risk models that are used to determine the potential financial impacts, location and frequency of climate-related disasters. This informs both anticipatory measures implemented before a shock (*ex-ante*) and reactive early responses mobilised after a shock is observed (*ex-post*). CDRFI instruments include contingency budgets, reserve funds, contingent credit and risk transfer solutions, such as insurance, as illustrated in the figure below.

Source: *Authors, based on Costella et al., 2021; World Bank, 2014; and Longhurst et al, 2021*



** Supplementary Budgets are funded by borrowing, tax increase, etc.*

Different instruments are suitable for different levels of risk severity and frequency. As no single financial instrument can efficiently cover all types of risk, financial protection strategies include a ‘risk layering approach’ combining both risk transfer and risk retention instruments. For example, a reserve fund can activate financing for minor storms or localised disasters, while insurance covers more severe occurrences of the same hazard.

Due to WFP’s focus on supporting food-insecure people, its priority is to ensure CDRFI tools benefit the most vulnerable communities, which can be strengthened by linking CDRFI with nationally led social protection systems.

Overview of macro-level CDRFI instruments

Market-based, macro-level CDRFI is at a comparatively early stage in Asia Pacific compared to other regions (with one or two notable country exceptions), despite countries' high vulnerability to weather- and climate-related disasters. Most funding for disaster response across the region is provided post-disaster, typically using budget reallocations, emergency borrowing and humanitarian aid. However, the sector is developing rapidly with a wide range of instruments that could potentially be arranged in advance of a shock.

Contingency Funds are disaster response funds arranged in advance and typically set aside to be used in times of need. These funds vary in how flexible and easily accessible they are. Several governments, including those in Pakistan, Bangladesh, the Philippines, Indonesia, Fiji and the Lao People's Democratic Republic (Lao PDR) maintain dedicated disaster funds and contingency budgets. However, challenges, such as underfunding and bureaucratic hurdles persist. Efforts are underway to improve flexibility and accessibility, in the Philippines, for example, where a draft policy will allow access to government contingency funds ahead of crises for anticipatory actions, which are focused on predictable extreme weather events.

Contingent Credit refers to pre-arranged, low-interest loans such as the World Bank's Catastrophe Deferred Drawdown Options (CAT DDOs)[4] and the Asian Development Bank's Contingent Disaster Finance (CDF). These serve as a crucial source of funding that can be drawn down very quickly following a disaster, can be triggered by a government's declaration of a state of emergency and offer substantial financial support after a disaster. CAT DDOs and CDF both require prior actions or policy reforms to be in place as a condition of the loan – for example, the development of a DRF strategy or legislation that allows for acceptance of contingent credit. This means they could also provide an opportunity for more people-centred approaches. The Pacific region, including countries like Fiji, has shown a higher uptake of contingent credit compared to Asian nations.

Insurance and Risk Transfer Instruments contribute significantly to the disaster risk management framework. An upfront, usually annual, premium is paid to an insurance provider, who in return commits to provide a payout if a disaster materializes. This is an example of 'risk transfer', as the responsibility for providing funds to cover impacts is transferred to a third party. These encompass sovereign risk insurance, or macro insurance, that can be purchased from regional risk pools like the Pacific Catastrophe Risk Insurance Company (PCRIC) and Southeast Asia Disaster Risk Insurance Facility (SEADRIF). These instruments play a crucial role in transferring risk and providing financial support in the aftermath of disasters but are relatively smaller and less established in Asia Pacific than in other regions. **Catastrophe (CAT) bonds** are another type of risk transfer instrument that have been used in the region to protect against climate hazards, such as tropical cyclones. Bonds are sold to a wide range of investors and, if the crisis occurs, the invested money becomes available for emergency response. Depending on the severity of the crisis, the investors subsequently lose a portion of their money and interest payments. If the disaster does not occur in the agreed timeframe, the investors get their money back, plus an additional payment.

There are global initiatives, such as the **Global Shield against Climate Risks**, that aim to increase uptake of CDRFI and link it to people-centred programmes, with a focus on increasing adoption of risk transfer and insurance instruments. Humanitarian

4 *"Contingency budgets and reserve funds are specific budget lines or funds created by governments and non-government actors with pre-allocated resources that can be triggered under specific circumstances."* WFP, 2023, Linking disaster risk financing with social protection: an overview of concepts and considerations.

organizations are starting to use CDRFI to cover their own operations and assets from climate risk, including coverage for some countries in the Asia-Pacific region, where there are a growing number of recent examples of global initiatives taking this approach. However, as with all commercial financial products in this sector, careful analysis is needed to determine cost effectiveness and trade-offs, in addition, these products should be designed to be timely, efficient and combined with contingency planning, to ensure they are helping assistance to reach those who need it, when they need it.

> **The Global Shield against Climate Risks**
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> The Global Shield is an initiative of the Vulnerable Twenty Group (V20) together with the Group of Seven (G7) and other supporting countries to provide and facilitate more effective and efficient pre-arranged financial protection against climate- and disaster-related risks for vulnerable people and countries. It is linked to the broader Loss and Damage dialogue under the UNFCCC Conference of Parties (COP) process.

The implementation and support of CDRFI instruments involves a diverse array of stakeholders. National governments, international finance institutions, various United Nations agencies and NGO consortia are actively participating in these initiatives, underscoring the importance of a comprehensive and proactive approach to disaster risk management. Despite advancements in disaster risk financing (DRF), challenges such as underfunding, bureaucratic hurdles and limited uptake of certain instruments persist. Efforts are being made to enhance accessibility, embed anticipatory actions and increase the overall effectiveness of these instruments.

Navigating the CDRFI Landscape in countries of the region

To understand the diverse landscape of disaster risk management in the Asia-Pacific region, it is important to delve into the experiences of some of the countries that both introduced CDRFI and are Global Shield "Pathfinder" countries,[5] to understand the strategies they are employing to expand the use of CDRFI, including trying to link it to people-centred delivery and build resilience of people and systems to shocks:

1. BANGLADESH

As a low-lying delta region highly vulnerable to cyclones and floods, the Government of Bangladesh is designing a multi-faceted approach that integrates risk finance into existing frameworks, systems and programmes. Despite acute financial constraints after the Covid-19 pandemic, the government actively engaged in replenishing contingency funds and exploring linkages between CDRFI and social protection. The UN in Bangladesh along with the UN Office for the Coordination of Humanitarian Affairs (OCHA) has developed a Central Emergency Response Fund (CERF) Anticipatory Action Framework for floods, which was activated in 2024 ahead of Cyclone Remal's anticipated landfall in the southern coastal regions of Bangladesh, providing financing for WFP to disburse anticipatory cash to 30,000 families (benefiting 150,000 people). The Anticipatory Action Framework continues to be implemented in Bangladesh and scaled-up to include new geographic locations and hazards. WFP is currently supporting the Ministry of Disaster Management and Relief, Ministry of Women and Children's Affairs and Ministry of Social Welfare to channel

5 The first and second cohort of countries that will engage in the Global Shield In-Country Process – called Pathfinder countries – include Bangladesh, Costa Rica, The Gambia, Ghana, Jamaica, Madagascar, Malawi, The Pacific, Pakistan, The Philippines, Rwanda and Senegal.

financing released for anticipatory actions to social protection beneficiaries.

The government is also tapping into global partnerships to bolster its CDRFI endeavours. For example, the World Bank's Global Risk Financing Facility (GRiF) has a legacy insurance project in Bangladesh and in 2022, it approved a US$9 million grant specifically allocated for flood insurance. Humanitarian organizations are also supporting CDRFI within Bangladesh, for instance, the UNICEF Today & Tomorrow programme that was announced in 2022 provides parametric insurance coverage for cyclones channelled to UNICEF programmes in eight countries including Bangladesh, exemplifying the growing trend of leveraging parametric insurance to cover cyclones and an innovative user case for CDRFI to support children in the aftermath of disasters.

2. THE PHILIPPINES

The Philippines has an advanced approach to risk layering, with multiple risk financing mechanisms being employed to address the effects of different shocks. There are previous experiences using risk transfer instruments for disaster risk management, with the World Bank supporting the government with the Philippines Parametric Catastrophe Risk Insurance Programme Pilot from 2017 to 2019. This involved supporting the government to buy earthquake and typhoon parametric insurance. In 2019, the country was the first Asian government to integrate a catastrophe bond (CAT Bonds),[6] with parametric triggers for earthquakes and typhoons based on modelled loss. They ended in 2022 and the government has decided not to proceed with another CAT bond and has shifted priorities to asset protection through insurance policies. The Philippines is also a member of SEADRIF, but to date has never purchased a policy from this risk pool. The Philippines has benefited from contingent credit mechanisms, with the country now on its fourth CAT DDO, and the ADB has a CDF available.

The government is also working with humanitarian organizations and global partnerships to strengthen its disaster response framework and links to CDRFI. For example, OCHA has a CERF anticipatory action pilot framework in the country covering typhoons which is now in its third year. The country's anticipatory action funding comes predominantly from the humanitarian sector but there is scope for greater sustainability and scalability if entities

6 *"Catastrophe bonds allow entities exposed to natural disaster risk, to transfer a portion of that risk to bond investors. Catastrophe bonds work in a similar manner to insurance, paying out when a disaster event meets certain pre-defined criteria (e.g., a specified earthquake magnitude)."* World Bank, Capital at Risk Notes – World Bank Treasury.

such as climate funds and development partners invest. At present, the Green Climate Fund is strengthening capacities of multi-hazard, impact-based forecasting and early warning systems which can enable more effective delivery of Anticipatory Action by the government. The World Bank is also supporting attempts to pre-arrange funds for social protection programmes in the country.

At the policy level, WFP Philippines has been leading the technical discussions and coordination with the government and other partners to support the institutionalization of Anticipatory Action within the national DRRM system. Together with the Office of Civil Defense (OCD) and the Department of Budget and Management (DBM), WFP co-leads the "Policy, Financing, and Institutionalization" Thematic Group under the broader Anticipatory Action Technical Working Group. A key milestone achievement is that OCD has prepared a draft policy on the "Declaration of State of Imminent Disaster", which will allow national and local government authorities to access government funding to implement anticipatory actions to reduce potential impacts of extreme weather events on the most vulnerable populations, validated by the Pre-Disaster Risk Assessment. This landmark law, if passed, will allow access to funds before the declaration of a state of calamity, provide for institutionalized pre-disaster response mechanisms, such as prepositioning and distribution of goods and resources, and strengthen pre-emptive evacuation and other mitigation measures at the local level. The current draft bill has been submitted to the Congress at the end of 2023 and requires further advocacy for approval.

3. FIJI

In the Pacific region, Fiji stands out as a key player in advancing CDRFI, emphasizing the integration of social protection within the context of anticipatory action frameworks. As in the Philippines, the government has been experimenting with various CDRFI instruments for several years. While the use of social protection under CERF Anticipatory Action remains underexplored in several countries like Nepal and the Philippines, Fiji stands out by actively incorporating social protection in its new CERF Anticipatory Action framework, making it a leader and showcasing its commitment to leveraging CDRFI to scale up social protection following climatic shocks. If activated, WFP and the Fijian Ministry of Women, Children and Social Protection will channel funds to up to 15,000 households enlisted under four social protection programmes in locations along the track of a forecasted cyclone, namely: disability allowance, family assistance, care and protection and social pension.

Challenges and opportunities for the uptake of CDRFI in the region

There are a range of common global issues that create challenges and barriers to the expansion of CDRFI that are also evident in the Asia Pacific region. Some of these barriers include:

Fiscal constraints and affordability are challenges in countries like Lao PDR and smaller Pacific Island Countries, but less relevant for stronger economies in the region. The struggle to replenish contingency funds and allocate resources for insurance premiums and debt, particularly in a post-Covid era is a shared concern. The backdrop of shrinking aid budgets, particularly from key international donors like the UK and Germany, further tightens the financial constraints, impacting the readiness of organizations offering Anticipatory Action funding or purchasing insurance policies.

A notable hurdle lies in the varying levels of **technical understanding and awareness** across governments but also within humanitarian and development agencies. While countries like the Philippines and

Indonesia, with higher financial literacy rates, actively experiment with diverse CDRFI instruments, others grapple with a need for more accessible guidance and technical support.

The **political landscape** introduces another layer of complexity as politicians are faced with having to strike a balance between long- and short-term priorities and face 'opportunity costs' when looking to invest in CDRFI. The inherent pressure to invest in activities that yield immediate tangible results often overshadow the long-term vision required for effective CDRFI implementation. This dynamic, coupled with a lack of cost-effectiveness and return on investment evidence, creates political disincentives that hamper the adoption of proactive risk financing measures. Decision-makers may also fear high-profile, public failure of CDRFI instruments such as a fund or insurance policy that does not trigger, despite widespread impacts.

Barriers specific to the region

In addition to the globally recognized challenges, some barriers exist that are specific to the Asia Pacific region. The first one is the ready availability of alternative sources of post-disaster liquidity such as reserves, revenue-raising measures, and humanitarian aid, which reduces governments' willingness to go through the additional measures and upfront commitment of pre-arranging disaster finance. While these alternatives provide swift liquidity, they lack the comprehensive benefits that CDRFI promises, including improved risk ownership, accountability and better-targeted responses.

Additionally, certain governments hold the perception that CDRFI initiatives are part of a global donor-driven agenda that risks setting up parallel systems, might lack financially sustainability in the medium term, or aren't driven by the capacities and needs of governments in the region.

There are also barriers that are specific to various types of CDRFI, such as anticipatory action and insurance. For anticipatory action, this includes a lack of robust evidence for policy makers, fears over the accuracy of data and forecasts that could lead to mechanisms activating at the wrong time, and governments preferring flexibility to decide when and how to address potential hazards.

Challenges specific to insurance include questions over the return on investment rationale (for example, paying premiums over multiple years without guaranteed payouts), the lack of reliable hazard data and modelling in the region, as well as availability of other forms of finance such as government bonds or contingent loans that are easier to access for governments, and over reliance on bilateral aid assistance during an emergency that disincentivizes governments from managing disaster risks.

Distinct challenges remain in terms of getting resources out to people affected by shocks. Some countries in the region lack robust, large-scale social protection or other people-centred programmes, hindering the scalability of the linkage with CDRFI. The need for public financial management, policy and regulatory reforms can slow down the integration process. There are also financial constraints preventing long-term investments in CDRFI, to move instruments beyond pilot schemes. Furthermore, encouraging collaboration between relevant ministries, such as Finance, Social Welfare and Disaster Risk Management, can prove time intensive due to competing priorities and incentives, terminology and political economy factors.

Opportunities in Asia Pacific

Despite these challenges, the Asia-Pacific region is highly conducive for the expansion of CDRFI and linkages to systems and programmes that support vulnerable and shock-affected communities.

Many countries in the Asia Pacific region have both the financial literacy and capacity to engage in developing CDRFI instruments, and the digital infrastructure to enable fast and secure payments to people in need, pre- or post-shock. They also benefit from a strong commercial insurance sector.

Many governments recognise the need for more coherent DRF strategies, combined with pre-arranged financing, to manage increasing risks and costs of disasters. There are a growing number of countries that have recently established DRF policies, such as Cambodia, Lao PDR, Indonesia, Pakistan and The Philippines, among others.

There are many sources for post-disaster liquidity in the region, however, these are mostly approaches that provide financing after a disaster. There are wider benefits that can be realized through integrating different CDRFI mechanisms, including improved risk ownership for the government; better risk awareness and analysis across stakeholders; more efficient targeting and delivery systems; and incentives to plan and prepare so that anticipatory actions and responses can be better targeted and more cost effective.

Moving CDRFI in the region beyond rapid onset hazards to also include drought. CDRFI in the region, including many anticipatory action initiatives and the insurance risk pools, primarily focus on rapid onset hazards such as floods and typhoons. Knowledge and experience on addressing drought risk could be transferred to the region by international and national actors who have extensive experience with CDRFI for drought risk with other regional insurance risk pools outside Asia. Focusing on slow-onset hazards also provides longer time horizons for planning and implementing anticipatory actions.

Global initiatives are increasing the focus on CDRFI support to Asia Pacific. In particular, the first eight 'Pathfinder' countries selected for the Global Shield against Climate Risks in-country processes include four from Asia Pacific (Bangladesh, Pacific region, Pakistan and The Philippines). There is potential to co-develop projects with these countries that address the link between CDRFI and people-centred design and delivery, including anticipatory actions and adaptive and shock responsive social protection. There is also a lot of international support for strengthening the regional sovereign insurance risk pools, PCRIC and SEADRIF.

The Way Forward

WFP's scoping work in the region identified four broad pathways that can contribute to increased use of CDRFI in Asia Pacific:

1. **Strengthening collaborations:** To focus on ensuring risk finance reaches people before during and after shocks necessitates a coordinated approach between government, especially Ministries of Finance, Ministries of Social Welfare, Hydromet agencies and Disaster Risk Management (DRM) actors. In turn, international organizations and development agencies can support through technical assistance, piloting and evidence generation and financing solutions. This requires investments in coordination and a commonly agreed vision on how CDRFI helps governments address their risk management objectives.

2. **Building on ongoing programmes and efforts:** Building out from ongoing government initiatives, programmes or prioritised geographic locations with clear government buy-in is essential, particularly given the increasingly resource-constrained environment for social sector spending. This includes meaningfully engaging sub-national government counterparts, who can be overlooked in the nationally led conversations that dominate the CDRFI agenda, but who are often required to implement decisions at local level. Some immediate pathways for action include linking CDRFI with social protection, agriculture or DRM programmes that enhance the people-centric focus of existing regional insurance risk pools. WFP collaborates with risk pools and governments to integrate contingency planning that make these instruments more people centred and

can provide funding for premium subsidies that help reduce insurance costs.

3. **The role of social protection:** The integration of CDRFI with social protection programmes presents a transformative opportunity to get more risk finance out to people affected by crises using national systems. In so doing, it provides new financing solutions whilst also offering a more sustainable and predictable platform for shock-responsive social protection delivery and help adapt social protection systems and programmes for future shocks. However, given the challenges mentioned above, there is a need for system building, Public Financial Management reform, joint contingency planning and decentralised capacity building, among other areas, to ensure effective implementation. Mechanisms are also needed to obtain the feedback of affected communities themselves, to inform future shock responsive design.

4. **Generating evidence for informed decision-making:** The lack of robust evidence remains a global challenge in promoting the uptake of CDRFI. To bridge this gap, there is a need to produce public studies in accessible formats tailored to the needs of governments in the Asia-Pacific region that focus on the cost benefit and return on investment rationale, how to improve the efficiency of people-centred delivery systems, and how risk finance can improve beneficiary outcomes. Likewise operational learning and process evaluations that provide practical insights into successful implementation.

These pathways are interconnected and need to be part of context-specific financial protection strategies with a long-term view. The agenda on linking CDRFI to people-centred systems and programmes is still in its early days for most countries in the Asia-Pacific region, but with significant experience and examples to learn from in certain countries. WFP contributes by working across the principal actors focused on DRM, social welfare, Hydromet services and finance, bringing operational experience from Asia Pacific and beyond on how to get CDRFI to affected people in a timely and accountable manner, and how to build the right kinds of capacities and evidence to achieve this aim in a sustainable manner.

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