



Unlocking Climate Risk Insurance: The Role of Public Development Banks

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ABOUT CLIMATE POLICY INITIATIVE

CPI is an analysis and advisory organization with deep expertise in finance and policy. Our mission is to help governments, businesses, and financial institutions drive economic growth while addressing climate change. CPI has offices in Austria, Brazil, India, Indonesia, South Africa, the United Kingdom, and the United States.



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EXECUTIVE SUMMARY

As climate-related risks rise and investment needs grow, insurance can support economic resilience and unlock much-needed finance in emerging markets and developing economies (EMDEs). Climate-related insurance coverage for physical assets can support economic resilience and rapid reconstruction in the event of climate-induced or accelerated hazards, such as cyclones, flooding, and drought. This protection is needed across the spectrum, from smallholder farms to major infrastructure assets. In addition—though not explored in this report—insuring against general hazards and financial risks faced by climate-related projects could spur capital to markets and sectors that private investors currently perceive as high risk.

However, insurance products protecting physical assets from climate risks remain limited, and coverage for financial risks remains largely underdeveloped in EMDEs. This creates an opportunity for public development banks (PDBs) to co-develop and scale such products.

PDBs are uniquely positioned to help overcome structural and market barriers to insurance access. While these banks can't underwrite insurance products directly, they can act as partners and intermediaries for private insurers, facilitating the deployment and co-development of innovative insurance solutions and integrating them into their own operations.

This paper explores the different types of partnerships that PDBs can pursue with private insurers to increase coverage that supports climate goals in EMDEs. Broadly, these partnerships include co-developing insurance solutions, bundling insurance with other financial instruments, providing technical assistance and capacity-building support, and knowledge-sharing initiatives. The study focuses on the following types of PDBs, each with complementary roles to help scale insurance solutions that strengthen climate resilience and crowd in more private capital for action:

- **National development banks (NDBs)** operate primarily at the country level, with a domestic mandate to support national development priorities. These banks can support local market development and co-develop context-specific insurance solutions.
- **Regional development banks (RDBs)** operate across a group of neighboring countries within a specific region. RDBs can strengthen data availability, regulatory coordination, and risk pooling across their countries of operation, thereby creating an enabling environment for insurance products.
- **Multilateral development banks (MDBs)** that contribute to the annual *Joint Report on Multilateral Development Banks' Climate Finance* and have aligned their methodologies for tracking climate finance. MDBs provide catalytic capital, credit enhancement, and global risk-transfer mechanisms to foster insurance markets.

These PDBs' roles in expanding insurance solutions vary across countries, depending on economic size, institutional capacity, and risk profile. Smaller and more climate-vulnerable countries, where risks are highly correlated and losses are large relative to GDP, may rely more on RDBs or regional risk pools for financial support and technical capacity. By contrast, larger and more diversified emerging markets can structure and scale insurance solutions through their NDBs. This paper focuses on strengthening the capacity and roles of NDBs and RDBs in leveraging insurance instruments, while recognizing the complementary financial and technical

support role of MDBs. While the primary focus is on PDBs, we also recognize the role of bilateral development financial institutions (DFIs) in expanding insurance solutions in EMDEs. Examples of these broader efforts are included in Section 3, Box 3.

Action has never been more urgent, as physical climate risks materialize ever more frequently and with more severity, and as the need for investments in climate projects grows.

RECOMMENDATIONS

Our analysis has yielded the following recommendations to enable PDB partnerships with insurers to achieve the objectives of mitigating financial risks for physical climate hazards. These recommendations are distilled from findings across the report and focus on actions PDBs can take, while recognizing that many of these actions will require collaboration with key stakeholders across the insurance ecosystem. Many of these enabling actors are listed in greater detail in the recommendations section on the paper.

	NDBs	RDBs	MDBs
Key strengths	Trusted financial intermediary, leveraging concessional financing, local knowledge and networks, and close ties with national and local governments to strengthen local insurance markets	Multi-country reach and regional mandates enabling cross-border coordination, risk pooling, and shared data infrastructure	Operate at a systems level, using their global reach and balance sheets to deliver catalytic impact by opening insurance markets through risk-transfer mechanisms and catalytic capital
Build an enabling environment for local and regional insurance markets	Convene domestic stakeholders to strengthen regulatory frameworks, coordinate climate risk data collection, and build and retain local capacity	Develop interoperable regional data hubs and standardized climate risk models	Facilitate multi-year climate-adaptive insurance and policy frameworks and strengthen data systems to standardize climate risk databases across regions
Co-development and co-investment for insurance solutions	Co-develop locally tailored insurance solutions aligned with sector-specific risk profiles and integrate insurance into loans, guarantees, and credit lines for domestic borrowers and projects	Drive regional coordination on insurance product design and risk-pooling arrangements, while leveraging private insurance to expand lending capacity for climate projects	Use strong credit ratings, guarantees, and risk-transfer mechanisms to scale insurance-linked securities and embed insurance into climate and development finance
Provide targeted subsidies alongside technical assistance	Design targeted premium subsidies with clear sunset clauses, including enabling smaller farmers access to affordable agriculture insurance	Establish, finance, or scale regional risk pools to reduce risk correlations and premiums, and attract reinsurance	Provide credit enhancement and blended finance arrangements to support national insurance markets
Increase education and awareness on insurance solutions	Educate public-sector decision-makers on climate risks and the design and procurement of insurance solutions to address them	Provide technical assistance to NDBs and national governments to structure insurance-compatible projects, and coordinate market actors	Offer long-term technical assistance and capacity building to NDBs and RDBs, focused on insurance knowledge transfer, structured peer learning and institutional strengthening

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1. INTRODUCTION

1.1 EMDEs' NEED FOR CLIMATE-RELATED INSURANCE

Insurance has two critical roles in the climate finance ecosystem. First, it can support financial resilience and physical recovery among households, businesses, and governments in the event of climate-related disasters. Second, it can help manage risks associated with investments in climate resilience and the low-carbon transition, thereby incentivizing climate finance. These roles are summarized in Box 1.

Box 1. Role of insurance in relation to climate finance

Insurance is a financial arrangement in which an individual or entity pays a premium to transfer the risk of potential loss to an insurer, which compensates the insured party for covered losses under specified conditions. Insurance is part of a broader national climate financing toolkit available to governments, in which pre-arranged risk financing is approved in advance of climate disasters, with defined conditions that trigger rapid disbursements.

Insurance against physical climate risks can help households, businesses, and governments recover and rebuild after climate-related disasters. Such insurance can support financial stability and boost access to credit, while also incentivizing investments in adaptation, particularly through timely, predictable payouts.

In addition, bundling loans for climate projects with physical climate risk insurance can unlock more favorable capital terms, making such investments more attractive to private financiers (African Insurance Organization, 2025). Such actions can preserve fiscal space to improve prospects for long-term growth and ultimately mobilize investments in mitigation and adaptation projects to achieve the targets of Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs).

Finally, a range of more general insurance products can also attract private finance for climate projects in EMDEs by helping to manage various investment risks.

Table 1. Key roles of insurance in relation to climate finance

Role of insurance	Physical climate risk coverage protecting general assets and investments	General hazard coverage protecting climate-related investments
Objective	Manage physical climate risks such as hurricanes, droughts, cyclones, floods, and fires, that cause financial and human losses	Manage and transfer financial (credit, liquidity, and market risks) and non-financial risks (such as earthquakes or legal liability) to de-risk and scale investment in climate-related projects
Example products	Sovereign disaster risk insurance, parametric insurance, agri-insurance, microinsurance	Credit insurance, construction and operational risk cover, revenue or performance insurance, political risk insurance
Example	Sovereign parametric insurance providing rapid post-disaster liquidity by making a payout to the national government after floods or cyclones at a pre-determined level of severity.	Credit insurance that de-risks private investment in renewable energy infrastructure in perceived high-risk or underserved markets by making a payout in the event of a borrower default.

Source: CPI

This paper focuses on the role of public development banks (PDBs) in supporting the availability and adoption of physical climate risk coverage for general investments (e.g. in agriculture, road, buildings and other infrastructure) in EMDEs. This analysis draws upon desk research, case studies, inputs from FiCS Lab insurance working group members, and over 20 in-depth interviews with PDBs, insurers, policymakers, and secretariat members of public-private insurance forums.

This topic is increasingly important, given the rising severity of climate hazards and the limited understanding of insurance and the available products to address them. According to the International Disaster Database (EM-DAT), global economic losses from natural hazards reached record highs in 2024, severely impacting developing countries. Furthermore, between 2019 and 2023, economic losses from natural hazards exceeded 5% of GDP in 12 countries and in some cases exceeded 20-50% (World Bank, 2025c).

1.2 THE CLIMATE-RELATED INSURANCE ECOSYSTEM IN EMDEs

This section maps the ecosystem of climate-related indemnity and parametric insurance in EMDEs, outlining the availability of such coverage and its effectiveness as an enabler of climate finance. It also examines how insurance fits within sovereign disaster risk financing strategies.

EMDEs face barriers to accessing climate-related insurance. Private insurance against physical climate risks is limited in the most climate-vulnerable areas. Tailored financial insurance solutions for climate investments can also be challenging and costly to obtain.

Insurance uptake lags other sovereign risk mitigation tools in EMDEs, such as credit lines, guarantees, and climate-resilient debt clauses. For example, in 2023, insurance and catastrophe bonds represented less than 30% of pre-arranged risk finance mechanisms used in EMDEs, while contingent disaster loans and grants accounted for 68% (CGD, 2024).

Coverage of physical climate risks is inadequate in both advanced economies and EMDEs. Having a large protection gap—the difference between insured and uninsured losses—lowers economies' financial ability to recover from disasters. In 2024, reinsurance broker Gallagher Re estimated that only 37% of the USD 417 billion in losses from natural disasters globally were insured (for both climate and other events).¹ The situation is particularly acute in EMDEs: OECD data for 2023 indicates that total insurance premiums written accounted for approximately 12% of GDP in advanced economies but only 2% in EMDEs (OECD, 2024).

The protection gap may worsen as climate vulnerabilities increase. More frequent and severe extreme weather events are prompting insurers to retreat from certain high-risk areas, widening the global insurance protection gap, particularly in EMDEs. As weather-related damages increase, insurers and reinsurers raise premiums, limit coverage, or withdraw from high-risk areas. For example, global insurance and reinsurance brokerage Howden (2024) projects that insurance premiums for natural catastrophes will increase by 50% by 2030, reaching USD 200-250 billion. Additionally, reinsurance products are often not well-suited to EMDE markets. Common risk models do not always cater to their contexts due to a lack of data and

¹ Due to limited data on the protection gap for climate risks alone, this analysis relies on broader statistics that include all natural disasters.

insurance market development. These gaps constrain insurers' ability to design and tailor climate-related insurance products to the specific needs and risk profiles of EMDE policyholders (FSI and BIS, 2025).

Access to insurance coverage is challenging at the national (sovereign) level. Climate insurance can provide coverage to rebuild public infrastructure and finance post-disaster relief efforts. Sovereign insurance is particularly suitable when potential post-disaster financing needs are large relative to the size of the economy, fiscal space, or the government's capacity to issue debt, making self-insurance infeasible. In EMDEs, insurance access is constrained by weak or absent enabling policy frameworks and underdeveloped insurance markets as compared with advanced economies (NAIC, 2024). Some governments have accessed parametric insurance through regional risk pools, which diversify exposures across multiple countries to lower costs (see Case Study 2), but EMDE governments may still perceive premiums as high.

At the subnational and private entity level, a lack of physical climate risk insurance places the financial burden of climate-related losses on national governments. Stakeholders interviewed for this paper noted that this public backstop creates a major contingent liability for national governments, which can exacerbate debt-related challenges.

1.3 PRODUCTS SUITED TO ADDRESSING PHYSICAL CLIMATE RISKS IN EMDEs

Insurance can be broadly divided into two types, based on how losses are assessed and payouts are triggered:

- **Indemnity insurance** is a contractual obligation by an insurer to compensate the insured party for actual losses incurred following a detailed damage assessment, requiring a complex claims verification process before funds are disbursed (IAIS, 2025).
- **Parametric insurance** provides rapid and automatic pre-agreed payouts triggered by predetermined measurable events and thresholds (e.g., rainfall, wind speed, earthquake magnitude), with disbursements from as short as 24 hours to 30 days, compared to several months or years for traditional indemnity insurance (CPI, 2026). Parametric insurance has been provided at the micro (household), meso (MSME), and macro (sovereign) levels.

These characteristics have important implications for speed, verification, and applicability across different levels of coverage.

While both indemnity and parametric insurance are widely used in advanced economies, parametric insurance holds the most transformative potential in EMDEs. In these countries, indemnity insurance is less frequently available for acute or rapid-onset climate events, and traditional loss data is scarce. Additionally, parametric insurance involves lower administration costs and reduces the risk of moral hazard (IAIS, 2025). However, parametric products introduce basis risk, where payouts may not always match actual losses (WEF, 2021). Identifying whether climate risks are acute or slow-onset is important for determining where insurance may be most appropriate, as discussed in Box 2.

Box 2. Assessing acute versus slow-onset physical risks

Physical climate risks consist of acute and slow-onset disasters, each with distinct impacts that require tailored approaches. Acute or sudden-onset events—such as hurricanes, floods, or wildfires—can be mitigated by parametric insurance payouts, which provide rapid liquidity following such disasters. Slow-onset events—such as rising temperatures or desertification—are better addressed through anticipatory financing mechanisms and resilience-building efforts than through insurance alone. For example, mechanisms such as the UNFCCC Loss and Damage Fund can strategically channel grants through blended finance structures, mobilizing additional capital to support vulnerable countries facing climate losses (Center for Disaster Protection, 2022). While the potential role of insurance in addressing slow-onset events warrants further discussion, this is beyond the scope of this paper.

National-level insurance schemes and products form an important part of the disaster risk financing toolkit, but often face structural and market constraints. These insurance schemes are typically designed and financed by a single country, such as government-run catastrophe- or flood-response programs that offer both parametric and indemnity-style coverage based on assessed losses. These include programs that insure domestic assets directly through domestic insurance markets or state-driven insurance funds. Such schemes can be constrained by highly concentrated or correlated risk exposures, small capital bases, and the difficulty of accessing international reinsurance on affordable terms, especially in EMDEs where risk information and market capacity are weak (IAIS, 2025). By contrast, regional risk pools can diversify risks across countries and provide sovereign catastrophe insurance and parametric solutions that allow governments to access rapid financing for disaster response. This approach can complement national-level insurance schemes, lowering the cost of risk transfer, improving access to international reinsurance and capital markets, and providing faster liquidity following disasters (CPI, 2026).

Several micro-level climate insurance schemes have been piloted across EMDEs, but few have been deployed at scale, and geographical coverage is limited. Parametric microinsurance instruments aimed at addressing climate-related risks in the agriculture and livestock sectors across Kenya, Ethiopia, India, China, and Mexico have yet to scale beyond the pilot stage (Colombia CCDR, 2023; ODI, 2017). The insurance market in Ethiopia, for example, remains largely undeveloped, with microinsurance, parametric insurance, and agricultural insurance products mostly unavailable (Ethiopia CCDR, 2023). Interviewed stakeholders noted that bundling credit and insurance products is common at the micro level in Africa, and lenders are more comfortable accelerating agricultural loans when credit guarantees and insurance are bundled to provide near 100% portfolio coverage.

Overall, climate-related disaster risk insurance products have limited availability in EMDEs. Addressing this gap is particularly urgent in many small island developing states (SIDS), where most public infrastructure remains uninsured, parametric insurance products are generally unavailable, and many governments have yet to issue supporting policies and regulatory frameworks (Maldives CCDR, 2024). Given the small scale and underdeveloped nature of insurance markets in SIDS, regional risk-pooling mechanisms are likely to be a more viable option than domestic insurance products.

For the scope of this analysis, microinsurance,² parametric insurance, sovereign risk pools, and catastrophe bonds are classified as insurance instruments. A detailed list of climate risk insurance instruments commonly used in EMDEs is provided in Table 1 of the Annex.

1.4 KEY ACTORS IN THE EMDE INSURANCE ECOSYSTEM

The design and implementation of insurance products rely on a broad ecosystem of stakeholders. PDBs, regulators, local insurers, reinsurers, international donors, and sovereign risk pools each play a distinct role. See Annex Table 2 for a detailed list of insurance actors and their roles.

International public financial institutions have been a typical source of insurance for EMDEs. Convergence (2023) reports that only 7% of insurance and guarantee products in EMDEs have been provided by private insurers, largely due to smaller ticket sizes of insurable projects, limited risk capacity of private insurers, and possible underreporting of private-sector deals. PDBs have deployed insurance solutions in EMDEs to share risks and thereby enable increased lending (including for climate projects). Governments and private entities also use insurance to protect against physical damage to property or other assets (IFC, 2025). MDBs have generally served as facilitators rather than direct insurers, supporting the development of climate insurance instruments. MDB-supported instruments include regional risk pools like the Caribbean Catastrophe Risk Insurance Facility (CCRIF), as well as catastrophe bonds through premium subsidies, technical assistance, and financial support (Center for Disaster Protection, 2024).

² Individual or microinsurance products are tailored for low-income individuals or communities, often providing coverage for health, agriculture, or disaster-related risks with affordable premiums.

2. BARRIERS TO INSURANCE ACCESS AND UPTAKE IN EMDEs

Stakeholder interviews and a literature review identified the following barriers to the adoption and scaling of insurance in EMDEs to protect against physical climate risks.

1. Lack of a well-developed, credible pipeline of insurable projects

EMDEs typically have highly fragmented and unstructured demand for insurance coverage of physical climate risks. A lack of developed pipelines of well-structured, insurable projects with large ticket sizes limits risk diversification and reduces the commercial viability of underwriting climate risks. To be insurable, a risk must typically be predictable, feature a measurable loss, and be transferable.

The insurability challenge is especially acute in SIDS, where project developers often lack the capacity, capital, and information needed to prepare projects for insurance underwriting.

Asset-level data is needed to quantify and price physical climate risks. In addition, physical climate risks are highly correlated across SIDS due to their small geographic areas, limiting national-level insurers' ability to diversify exposure, particularly in the absence of a functioning reinsurance market to absorb potential losses (ADB, 2024).

Irregular incomes in informal sectors such as smallholder agriculture and micro-enterprises lead to unstructured insurance demand and uptake. This makes it difficult for insurers to assess, price, and pool risks. Although these sectors are frequently exposed to climate disasters and other systemic risks, they typically operate outside formal financial systems, making it difficult for insurers to effectively reach customers or aggregate risk. These project pipeline challenges constrain insurers' ability to diversify their portfolios, resulting in overexposure to a narrow set of risks (Ghosh et al., 2020).

2. Lack of local capital base and underdeveloped insurance markets

Insurers in EMDEs often lack the capital base required to underwrite climate risks, which could drastically affect their solvency (Geneva Association, 2018). Insurance experts interviewed noted that while technical capacity development is needed, capital to deploy insurance products is more consequential. The challenge is largely one of scale: while local insurers can underwrite smaller climate-related risk exposures, they often lack the capital and risk appetite to underwrite larger exposures, such as for infrastructure projects, on their own, requiring partnerships with global insurers and reinsurers. For example, in Pacific Island countries, a limited number of local private insurers struggle to underwrite climate risks at the scale needed for large infrastructure investments (ADB, 2024).

EMDE-based insurers often need to partner with global (re)insurers. Local insurers rely on global reinsurers — primarily in Europe — for their greater capacity and diversified risk portfolios, while global reinsurers rely on local entities' country knowledge and relationships. Local insurers (e.g., SURA in Colombia) sell policies, underwrite risk, and pay claims in domestic markets, interfacing with households and businesses, while global reinsurers (e.g., Swiss Re) take on

risk from local insurers, absorb catastrophic and correlated losses, provide pricing and climate models, and stabilize local insurance markets after shocks.

However, there are insufficient regulatory incentives to support such collaborations. In some EMDEs, regulations designed to support domestic markets can inadvertently restrict foreign participation by imposing stringent local underwriting and retention requirements. Stakeholders interviewed also noted that, in some cases, local insurers serve as fronting agents for international partners to navigate compliance hurdles without a meaningful transfer of technical capabilities. This further entrenches the structural gap between global expertise and local implementation (Geneva Association, 2025).

3. Outdated and fragmented regulatory frameworks

Outdated regulations can make the approval process for non-traditional insurance products burdensome, hindering innovation. In many EMDEs, fragmented and overlapping regulatory requirements increase complexity and constrain insurance innovation and the development of tailored climate-related insurance solutions. Additionally, some insurance regulators lack relevant technical expertise, visibility into how global reinsurers affect local markets, institutional incentives, or political momentum to drive regulatory reforms and public-sector engagement to support such insurance mechanisms (Geneva Association, 2018; FSI, 2025).

In many jurisdictions, each new product must undergo a separate approval process, often evaluated as a standalone offering rather than within a broader policy framework. This results in administrative delays and unnecessary burdens for insurers. Our interviewees noted that standardized regulatory pathways are needed to support the institutionalization of alternative insurance models. Without these, new products can be relegated to short-lived pilots rather than being embedded into national financial risk-management strategies. For example, parametric insurance is often defined outside the traditional legal definition of insurance, thereby creating uncertainty regarding its regulatory treatment (FSI, 2024).

4. Poorly designed public subsidies

Public subsidies are important for increasing insurance uptake in EMDEs, but should be designed to maintain appropriate risk pricing and behavioral incentives. Subsidizing premiums can drive adoption of parametric insurance for low-income and vulnerable communities. However, high or open-ended subsidies can undermine long-term risk management by distorting incentives for both insurers and policyholders.

When governments cover most of the premium, insurers have little incentive to engage beneficiaries in managing their risk exposure. Instead of encouraging risk-reducing behavior, such as climate-resilient construction or business practices, insurers may absorb the residual premium themselves to maximize enrollment and capture public subsidies.

In addition, premium subsidies without sunset clauses can entrench maladaptive behaviors over time. For example, in some advanced economies, subsidized wildfire or flood insurance has inadvertently encouraged continued development in high-risk areas. While premium subsidies remain a vital tool, they must support insurance products with rigorous risk pricing that are appropriately tailored to underlying risks (Cato Institute, 2015).

5. Data gaps

Insufficient data collection, poor digitization, and limited interoperability among data systems hinder the development of insurance markets in low-income settings. Governments must collect and share sufficient climate risk data to enable insurers to tailor and price products effectively, particularly for parametric insurance (FSI, 2024). In many low-income settings, data on hazard exposure, asset vulnerability, and historical losses are often non-existent, poorly digitized, or stored in inaccessible formats (Allianz, 2016). One interviewee noted that underuse of existing data collection tools and reliance on obsolete data infrastructure compounds the challenge, with actors adopting different methodologies and assumptions for their risk models, hindering coordination between governments and development actors.

3. UNIQUE POSITIONING OF PDBs TO EXPAND INSURANCE IN EMDEs

Public development banks (PDBs) play a key role in overcoming the barriers outlined in Section 2 and facilitating greater insurance use in EMDEs. These banks' public policy mandates and local knowledge can complement private insurers' technical and financial capacities for risk management, helping make coverage more widely available (CPI, 2024). In addition, PDBs can integrate insurance offerings into their climate finance activities to support the development of local insurance markets, build resilience, and crowd in private capital across sectors.

The PDB landscape comprises three broad tiers: national development banks (NDBs),³ regional development banks (RDBs),⁴ and multilateral development banks (MDBs),⁵ each with diverse objectives, varied capabilities, and geographic scope (CPI, 2024). PDBs have the mandates and strategic alignment to reach target beneficiaries, and can serve as financial intermediaries by partnering with private insurers and development finance institutions (DFIs)⁶ to scale insurance solutions (see Box 3 below for details of how DFIs can support insurance). This is particularly true for NDBs, which are often the primary public financial institutions in these markets. Acting at the national level, NDBs can directly shape the design, integration, and use of insurance instruments at subnational and local levels.

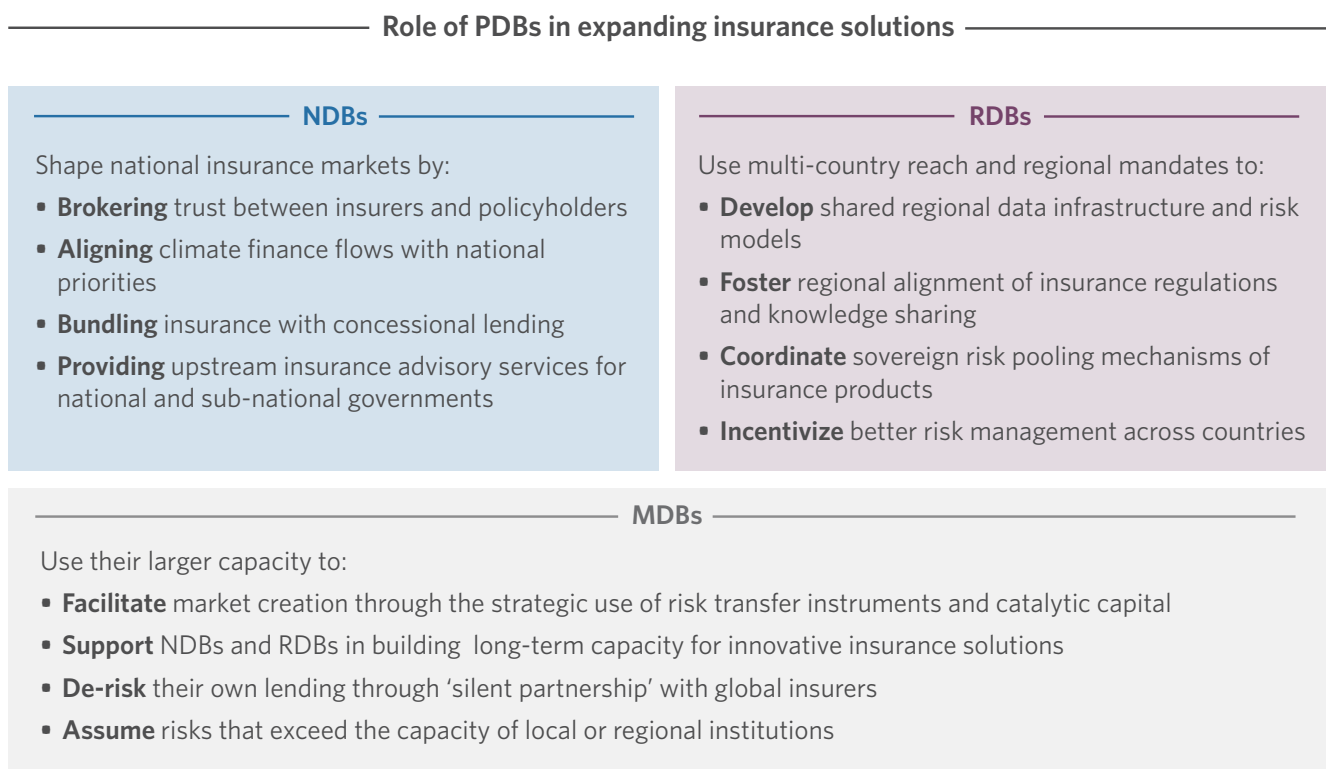
Each type of PDB—NDBs, RDBs, and MDBs—plays a distinct yet complementary role in strengthening the insurance ecosystem and scaling insurance solutions in EMDEs, as summarized in Figure 1. NDBs and RDBs focus on domestic and regional market development, where they can create direct and immediate impacts by strengthening local insurance markets, supporting policy and regulatory implementation, and working closely with domestic financial institutions and borrowers. Meanwhile, MDBs operate at a systems level, using their global reach and larger balance sheets to open markets through risk-transfer mechanisms and the deployment of catalytic capital.

³ This is a representative list of NDBs in EMDEs, including Uganda Development Bank, NAFIN (Mexico's development bank), and India's National Bank for Agriculture and Rural Development (NABARD).

⁴ This is a representative list of RDBs in EMDEs, including the Caribbean Development Bank, the West African Development Bank (BOAD), and the Development Bank of Latin America (CAF).

⁵ This includes the African Development Bank (AfDB), Asian Development Bank (ADB), Asian Infrastructure Investment Bank (AIIB), Council of Europe Development Bank (CEB), European Bank for Reconstruction and Development (EBRD), European Investment Bank (EIB), Inter-American Development Bank (IDBG), Islamic Development Bank (IsDB), New Development Bank (NDB), and the World Bank Group (WBG).

⁶ Bilateral DFIs are public institutions funded and backed by a single government to support development in other countries, such as Agence Française de Développement (AFD), KfW, and British International Investment (BII).

Figure 1. Broad roles of PDBs in expanding insurance solutions

Source: CPI

While roles may overlap across different types of PDBs, this section highlights their key strengths in addressing the barriers discussed in Section 2.

3.1 NATIONAL DEVELOPMENT BANKS

NDBs can serve as effective financial intermediaries between insurers, the insured, and policymakers, leveraging their concessional financing, local knowledge and networks, and close ties with national and local governments.

3.1.1 CONVENING AND CAPACITY BUILDING

NDBs' combination of institutional access and sectoral knowledge enables them to convene, advise, and support enabling conditions for insurance uptake in EMDEs.

NDBs can bring together ministries, regulators, insurers, and public entities to align understanding of climate risks and the role of insurance in managing them. By creating a shared evidence base and common framing across institutions, NDBs can reduce fragmentation and build buy-in for insurance within national approaches to fiscal risk management, social protection, and disaster preparedness.

Building on this convening role, these banks can also provide upstream advisory to ministries and public entities on the design and procurement of insurance coverage for public infrastructure. This may include sharing knowledge on climate-related hazards, public infrastructure damage, and service-disruption risks faced by state-owned utilities and local

governments. NDBs can act as trusted advisers on fiscal risks stemming from climate-related disasters, social protection, and disaster preparedness, linking these to practical insurance solutions tailored to country contexts. For example, the Brazilian Development Bank (BNDES) has played a key role in convening institutional actors to align financial and climate resilience priorities and explore risk-sharing mechanisms, including through the Brazil Climate and Ecological Transformation Investment Platform (BIP), where BNDES serves as the platform's secretariat (Ministry of Finance, Brazil, 2025).

NDBs can also create enabling conditions for the long-term development of the insurance market. The banks can accelerate and scale action by coordinating data collection and transparent monitoring of key indicators, such as insurance uptake and coverage gaps, while supporting the mainstreaming of insurance into national investment strategies. By tracking these metrics, NDBs can identify barriers and inform policy adjustments to effectively meet the needs of target populations.

3.1.2 CO-DEVELOPING LOCAL INSURANCE SOLUTIONS

NDBs' deep understanding of national priorities, local contexts, and sector-specific needs enables them to identify opportunities to provide insurance for climate-sensitive sectors, such as agriculture, health, energy, and infrastructure. These banks can catalyze insurer participation in risk portfolios by subsidizing premiums, providing first-loss guarantees, or offering co-insurance arrangements to reduce insurers' upfront risk exposure. Such NDB presence in deals or policies can cultivate trust. Where relevant, NDBs financing infrastructure and priority sectors in EMDEs can co-develop insurance solutions with insurers to align credit structures with sector-specific risks. In parallel, NDBs can develop a pipeline of bankable projects, supported by concessional project-preparation assistance from MDBs, in collaboration with national governments (CPI, 2025a). In this context, "bankable projects" refer to investments that incorporate insurance solutions, such as climate risk coverage or credit insurance, to enhance financial viability and attract private investors.

Case study 1 demonstrates how NDBs, in partnership with development partners and central banks, can expand access to climate insurance for vulnerable populations in high-risk regions.

Case study 1: Pacific Insurance and Climate Adaptation Program

- **Region:** Pacific Islands
- **Risk type:** Physical climate risk - rapid-onset events such as cyclones and heavy rainfall
- **Insurance type:** Parametric microinsurance
- **Barriers addressed:** Lack of knowledge of insurance instruments and high premium cost

The Pacific Insurance and Climate Adaptation Program (PICAP), the Fiji Development Bank (FDB), the Reserve Bank of Fiji (RBF), and the Tonga Development Bank (TDB) have pioneered solutions that provide households, small businesses, and communities with immediate cash relief after extreme weather events such as cyclones and heavy rainfall (UNCDF, 2025). As well as lowering premium costs and enhancing outreach to underserved communities, the program has strengthened local capacity to understand, deliver, manage, and use climate insurance products by integrating parametric microinsurance into lending systems, regulatory frameworks, and community networks.

The PICAP is implemented by the United Nations Capital Development Fund (UNCDF) as the lead agency, supported by the United Nations Development Programme (UNDP), and the United Nations University – Institute for Environment and Human Security (UNU-EHS), was launched in December 2020 and commenced implementation from January 2021.

Participation by various PDBs and central banks broadened access and delivery of parametric microinsurance in recipient countries:

- **Fiji Development Bank:** In 2022, under the PICAP, New Zealand and Pacific insurance company Tower Insurance launched a parametric insurance product that pays out within 10 days of a qualifying cyclone or heavy rainfall (Tower Insurance, 2025). The model integrates with FDB's SME lending, making insurance coverage compulsory for borrowers. This approach supports uptake and enables scalability through bundled loans. An affordable annual policy premium of FJD 75 (USD 34) to FJD 95 (USD 43) is bundled into loan repayments.
- **Reserve Bank of Fiji:** The RBF partnered with underwriters Sun Insurance and Tower Insurance to create a parametric microinsurance product triggered by cyclones and heavy rainfall. Through its FinTech Regulatory Sandbox, RBF facilitated live product testing and established a three-member parametric insurance team to oversee implementation. The product is delivered through RBF's collaborations with the various farmers' councils and associations which extend access to vulnerable communities by pooling members, building trust, and facilitating last-mile delivery. The RBF also partnered with Fiji's Ministry of Women, Children and Social Protection to cover premiums for select beneficiaries. RBF adds value through its convening power with ministries, its influence on the regulatory framework, and its leadership in coordinating national implementation.
- **Tonga Development Bank:** In 2022, Tonga introduced a parametric microinsurance product with support from PICAP to protect farmers, fishers, and MSMEs from tropical cyclones (UNCDF, 2023). Developed in partnership with FijiCare and Tower Insurance, wind-speed thresholds trigger payouts, removing the need for loss assessments and enabling faster relief (Tower Insurance, 2025)⁷. The TDB is a trusted community-based aggregator. Leveraging its dual commercial and development mandate, TDB leads outreach, digital onboarding, and education for underserved groups, particularly in agriculture and fisheries. Its close ties with local communities help make the product accessible, trusted, and scalable, demonstrating how PDBs can anchor climate insurance models in vulnerable economies.
- **UNCDF has developed the Insurance Guarantee & Financing facility:** a blended finance architecture to support local insurers and insurance aggregators to scale successful pilots. Premium pre-financing through concessional loans or portfolio guarantee will be structured to increase demand for parametric insurance, while insurance guarantees will support local insurers to increase their risk retention levels and reduce transfer to reinsurance markets. UNCDF has already completed a transaction and provided the FDB with a first-loss portfolio guarantee of USD 150,000 that will enable the bank to use its own liquidity to provide premium financing loans to its SME borrowers, significantly increasing the number of businesses covered under parametric insurance (676 beneficiaries had been covered for the year ended Dec 2025).

⁷ FijiCare offered the parametric insurance only in the first year and Tower Insurance is now the primary underwriter.

3.2 REGIONAL DEVELOPMENT BANKS

RDBs' multi-country reach and mandates for regional integration position them to strengthen climate hazard and disaster preparedness by developing shared regional data infrastructure and harmonized regulatory frameworks for climate insurance. They also support capacity development for governments, regulators, insurers, and subnational agencies on risk assessment, actuarial analysis, product design, and financial management, as well as coordination of sovereign risk-pooling mechanisms by convening member governments and aligning financial contributions, trigger definitions, and payout protocols across countries (CPI, 2024). RDBs can also scale fragmented national pilots of insurance products into cohesive regional ecosystems that attract investment, lower costs, and enhance collective resilience across borders.

3.2.1 REGIONAL INTEGRATION AND MARKET COORDINATION

RDBs are uniquely positioned to foster cross-border coordination, support integration of insurance product design, and financial arrangements for risk pooling. Such actions can address the regional fragmentation that limits the scaling of insurance solutions. RDBs can serve as market coordinators and establish, finance, or scale regional risk pools—such as the African Risk Capacity (ARC), the Pacific Catastrophe Risk Insurance Company (PCRIC), and the CCRIF (see Case Study 2 below)—which can reduce risk correlations and premiums and attract reinsurance. In doing so, they help to create regional markets for risk transfer that can be integrated into broader development lending through contingent credit lines, policy-based financing, and investments that embed disaster risk financing within national and regional development strategies.

3.2.2 TECHNICAL ASSISTANCE AND ADVISORY SUPPORT

RDBs can also provide technical assistance to both national governments and NDBs, leveraging their established technical expertise (CPI, 2024). This helps them to structure bankable, insurance-compatible projects and advise on regulatory reforms that connect domestic actors with international capital and technical know-how. Through these efforts, RDBs can facilitate the transition from fragmented pilots to integrated, financially sustainable, development-aligned regional insurance ecosystems.

3.2.3 DEVELOPING AND LEVERAGING REGIONAL DATA INFRASTRUCTURE

RDBs can partner with regional risk pools such as the Caribbean and Central America Catastrophe Risk Insurance Facility (CCRIF SPC) to develop interoperable, regional data hubs and partnerships that support the design and standardization of risk models (CPI, 2025b). RDBs can help improve the availability and accessibility of high-quality risk data by investing in infrastructure for data collection and digitization, thereby enabling the design, aggregation, and updating of climate-exposure and loss models to support the growth of local insurance markets. Stakeholders interviewed noted that increasing the availability of localized data supports the effective design and pricing of insurance products, thereby enhancing the likelihood of uptake.

Case Study 2 demonstrates how regional risk pools like CCRIF provide NDBs and RDBs with high-quality, region-specific risk data that strengthens risk assessments. By aggregating hazard, exposure, and vulnerability data across 35 members and multiple sectors, CCRIF enables RDBs to leverage its risk intelligence and supports the design of scalable financial instruments.

Case Study 2: Caribbean and Central America Catastrophe Risk Insurance Facility (CCRIF SPC)

- **Region:** Caribbean and Central America
- **Risk type:** Physical climate risk – rapid-onset events such as tropical cyclones, excess rainfall and fluvial flooding, and earthquakes
- **Insurance type:** Parametric
- **Barrier addressed:** Non-availability of country-specific risk data, limited access to rapid post-disaster liquidity

The CCRIF SPC is the first multi-country, multi-peril risk pool, established in 2007 with technical leadership of the World Bank and grants from the Government of Japan. It provides rapid-disbursing parametric insurance to help governments and utility providers manage the fiscal impacts of natural disasters and climate-related hazards. The CCRIF SPC members comprise: 19 Caribbean and 4 Central American governments, 4 electric and 7 water utilities, and 1 tourist attraction. The CCRIF SPC has evolved from a sovereign risk pool to a multi-sector resilience mechanism, supporting services and sectors exposed to climate and seismic risks.

Effective disaster risk financing requires region-specific data. Global catastrophe models often lack the granularity needed for SIDS, resulting in mis-calibrated risk assessments that can prevent the triggering of policies. The CCRIF SPC addressed this by developing bespoke parametric models tailored to the Caribbean and Central America, incorporating localized hazard, exposure, and vulnerability data to improve precision. CCRIF models now include tropical cyclones, earthquakes, excess rainfall, drought, COAST for fisheries, electric and water utilities, fluvial floods and livelihood protection.

The Caribbean Development Bank (CDB) uses region-specific CCRIF information in its analytics to design contingent financing instruments.⁸ These include climate-resilient debt clauses (CRDCs), which allow countries to suspend loan repayments following a climate-related disaster, freeing funds for response and recovery. Barbados, Grenada, and The Bahamas have adopted CRDCs, demonstrating how RDBs and risk pools can use region-specific data and risk-transfer to boost resilience. Risk pools and RDBs are complementary, not duplicative: CCRIF provides intelligence, while CDB translates this into financial instruments.

3.2.4 LEVERAGING INSURANCE TO INCREASE LENDING CAPACITY

RDBs can also make greater use of private insurance to extend their own lending capacity for climate projects. Our interviewees noted that RDBs could adopt the silent participant model commonly used by MDBs, in which private insurers absorb a defined portion of risk on MDB loans (or other assets) in exchange for a share of the associated interest or fee revenue, increasing the MDBs' capital efficiency. So far, this model has only been adopted by MDBs, but it can be extended to RDBs (and potentially NDBs) to increase financing for climate projects in higher-risk markets. MDBs can also expand their unfunded risk participations⁹ with national and regional institutions, thereby enhancing their financing capacity.

⁸ Contingent financing instruments provide funding when a specific event or condition is met.

⁹ The participating institution does not disburse cash but instead shares credit or project risk with other financiers through guarantees or risk-sharing agreements, thereby providing a de-risking partnership rather than direct funding.

3.3 MULTILATERAL DEVELOPMENT BANKS

MDBs can provide financial capacity, risk-sharing instruments, and technical expertise to support NDBs, RDBs, and national ministries to scale insurance solutions. Support can range from developing insurance regulatory and supervisory frameworks to deepening local insurance markets by de-risking private insurer market entry, diversifying risk exposures, and facilitating insurance-linked securities to mobilize private capital. Such actions can enable NDBs and RDBs to design, implement, and scale context-specific insurance solutions that build resilience and stabilize vulnerable markets.

3.3.1 CREDIT ENHANCEMENT

MDBs with strong credit ratings and flexibility within their internal policies and capital adequacy frameworks can spearhead blended finance arrangements and provide credit enhancements to support national insurance markets. Blended finance models distribute risks between public and private actors, which can help private insurers to participate in high-risk sectors and regions. For example, MDBs can support NDB and RDB initiatives by offering long-term capital, premium subsidies, or contingent credit lines to cover specific layers of risk, while private insurers or reinsurers handle residual losses. Case study 3 provides an example of how MDBs can partner with private insurers to mobilize greater financing for climate projects.

Case Study 3: ADB Master Framework Program for Financial Institutions

- **Region:** Asia Pacific
- **Risk addressed:** Credit risk
- **Insurance type:** Credit insurance
- **Barrier addressed:** Lack of financial resources for climate finance due to higher credit risk

The Asian Development Bank (ADB) Master Framework Program for Financial Institutions 2025, demonstrates a mechanism that NDBs can adopt to scale up lending, expand financing capacity, and attract private co-financing for climate and development projects (ADB, 2025). ADB partnered with insurers to cover portions of its loan portfolio, thereby freeing up capital and mobilizing private investment for sustainable infrastructure.

ADB's partnership with ten leading global insurers is an example of innovative risk-sharing to expand lending for climate and sustainable infrastructure in EMDEs. Signed at ADB's Annual Meeting in May 2025, the *Master Framework Agreement for Sustainable Infrastructure* enables the ADB to transfer credit risk from its loan portfolio to insurers' balance sheets, thereby freeing up capital and mobilizing up to USD 2.75 billion of private capital to support its lending (ADB, 2025). This additional lending capacity was enabled by participating insurers' absorption of a portion of ADB's credit risk and expanded its capacity to extend new loans.

This program builds on ADB's 2022 Master Framework Program for Financial Institutions, which allowed the bank to mobilize co-financing by obtaining private insurance coverage for a portion of its loans to commercial and non-bank financial institutions. Recognizing the growing demand for climate-related projects and internal policy shifts, the ADB approached the insurance market in late 2023 to expand the model to the climate-aligned infrastructure sectors, including renewable energy, sustainable transport, green data centers, power, public infrastructure, and telecoms (ADB, 2025).

The arrangement streamlines underwriting, reduces transaction costs, shortens loan gestation periods, and helps the ADB advance its 2030 climate finance goals by enabling it to lend more without overextending its balance sheet.

3.3.2 SCALING INSURANCE-LINKED SECURITY ISSUANCE

Where appropriate, MDBs can leverage their strong credit ratings to assume risks that RDBs and NDBs cannot. This is particularly relevant in regions prone to severe catastrophic events and unfavorable portfolio loss ratios, such as SIDS.¹⁰ Case Study 4 illustrates how MDBs can issue catastrophe bonds (CAT Bonds) or insurance-linked securities to expand insurance access, stabilize project portfolios, and build resilience to climate-related shocks.

Case study 4: Jamaica Catastrophe Bonds

- **Region:** Caribbean
- **Risk:** Hurricane
- **Insurance type:** Parametric CAT Bond
- **Barrier addressed:** Lack of national/regional institutional capacity and resources to issue catastrophe bonds

The Jamaica CAT Bonds are an example of how an MDB can offer insurance-linked financial securities to strengthen institutional capacity for responding to catastrophic risk. The CAT Bond issued in 2024 by the World Bank to the Government of Jamaica provides USD 150 million in financial protection for four hurricane seasons. The bond strengthens Jamaica's financial resilience by ensuring rapid, predetermined rules-based payouts after hurricanes, reducing the fiscal burden on public resources and enabling quicker disaster response (World Bank, 2024).

Payouts are determined using a parametric "CAT-in-a-grid" model, which tracks the path and intensity of named storms crossing designated grid boxes over Jamaica.¹¹ Each box has a threshold for the storm's central pressure, with a minimum payout triggered once a certain threshold is exceeded. Jamaica pays the coverage premium at terms achieved by the World Bank in structuring the CAT bond, which is paid to the CAT bond vehicle and ultimately remunerates capital market investors, rather than a traditional private insurer, for assuming catastrophe risk. In addition to issuing this bond, the World Bank managed the structuring, documentation, marketing, and execution of the transaction, leveraging its reputation, broad investor base, and bond-issuance systems, including the capital-at-risk notes program (World Bank, 2025).

¹⁰ Portfolio loss ratios indicate the total claims paid by an insurer relative to the total premiums collected in a portfolio, indicating the profitability and risk profile of the insurance book.

¹¹ The "CAT-in-a-grid" model is a parametric insurance trigger for CAT bonds, designed to reduce basis risk by using a grid of multiple geographic "boxes." It analyzes a tropical cyclone's track and intensity (e.g., wind speed) within these cells to determine a payout based on pre-agreed conditions, offering a more sophisticated and potentially more accurate payout than simpler models.

The current issuance follows Jamaica's positive experience with earlier donor-funded premiums (by the UK, Germany and the US through a trust fund) for the CAT bonds arranged by the World Bank in March 2021, which provided financial protection for three hurricane seasons. CPI interviewees noted that, having recognized the benefits of the CAT bond, Jamaica became the first island state to sponsor its own premium without donor support.

3.3.3 FACILITATING ADAPTIVE INSURANCE AND POLICY FRAMEWORKS

MDBs can support RDBs and NDBs in designing multi-year insurance and climate-aligned risk-transfer models that align with the timelines of adaptation and resilience projects. MDBs can support the design of risk frameworks by embedding multi-year insurance requirements into their infrastructure, adaptation, or nature-based investment portfolios. At the same time, leveraging tools such as contingent credit or CAT Bonds that are better suited to the slow-onset or repeated nature of climate shocks (African Development Bank et al., 2024). Additionally, MDBs can collaborate with regulators and central banks to create enabling policy environments through clearer regulatory treatment of insurance products, particularly parametric insurance, streamlined approval processes for innovative insurance designs, policy-based loans, improved access to standardized climate risk data, and premium-support policies for public entities. These measures can empower RDBs and NDBs to design and scale flexible, parametric, or multi-year insurance models that respond to evolving climate realities.

3.3.4 DEVELOPING DATA INFRASTRUCTURE AND KNOWLEDGE SHARING

MDBs can support RDBs in consolidating and standardizing climate risk databases and models across regions. By convening governments, local and global insurers, and insurtech providers pool data on hazards, exposures, and losses, MDBs can improve risk data systems, enabling more accurate pricing and the development of context-specific insurance products. Moreover, by anchoring their climate finance operations in open-access, science-based risk models, as seen in initiatives such as the Global Risk Modelling Alliance and the Global Emerging Markets Risk Database (GEMs), MDBs can set a precedent for transparent, data-informed decision-making that are well positioned to scale. This benefits private insurers by reducing data uncertainty and transaction costs, improving pricing accuracy and enabling viable entry into new and previously uninsurable markets.

3.3.5 LONG-TERM TECHNICAL ASSISTANCE AND CAPACITY BUILDING

MDBs can support NDBs and RDBs through technical assistance and capacity building via long-term programs focused on knowledge transfer and institutional strengthening. By providing sustained funding, expert guidance, and outreach to global insurers, MDBs can help NDBs and RDBs develop technical capabilities, provide information on local insurance markets, develop robust risk assessment and insurance frameworks, and adopt best practices for climate-aligned investments. These programs facilitate continuous learning, support the development of innovative insurance products, and strengthen institutional capacity to design and scale financially sustainable solutions—ultimately enabling NDBs and RDBs to expand insurance access (CPI, 2025a).

Alongside MDBs, bilateral DFIs can reinforce these efforts to expand risk-transfer solutions in EMDEs, as illustrated in Box 3.

Box 3. Contributions of bilateral DFIs in expanding risk-transfer solutions in EMDEs

Bilateral DFIs, such as Agence Française de Développement (AFD) and KfW, complement the role of PDBs in expanding insurance solutions in EMDEs by providing concessional capital, donor-backed technical assistance, and early-stage market support to partner with private insurers. Here are two such examples:

I. Agence Française de Développement (AFD)

The Integrated Disaster Risk Management Alliance (IDRIMA) was established in 2024 through a partnership between AFD and the Insurance Development Forum. The alliance provides technical support, climate risk assessment, risk financing and risk-transfer solutions to help sovereigns, subnational municipalities, public utilities, and public banks in EMDEs address climate risks. For example, IDRIMA is currently financing technical assistance for risk analysis, index design, and product structuring to develop a parametric flood insurance product for Cape Town that would provide rapid liquidity following extreme rainfall events (AFD, IDF, and Marsh McLennan, 2025).

II. KfW

In 2024, KfW partnered with the West African Development Bank (BOAD) to pilot shock-resilient loans in Benin, Côte d'Ivoire, Senegal, and Togo, combining sovereign lending with parametric climate risk insurance. BOAD paired its sovereign loans, refinanced by KfW, with insurance developed with Munich Re and the African Risk Capacity pool. When a predefined climate event occurs, the insurance component covers loan repayment for a set period, freeing up liquidity for immediate response and protecting the creditworthiness of the sovereign borrower. This partnership illustrates how RDBs and bilateral DFIs can jointly design and implement tailored insurance-linked financing solutions that support rapid recovery and strengthen fiscal resilience to climate shocks (KfW, 2024).

4. RECOMMENDATIONS AND FURTHER RESEARCH AREAS

4.1 RECOMMENDATIONS

This section aims to guide key stakeholders on enabling PDB partnerships with insurers to boost coverage in EMDEs. PDBs, governments, credit rating agencies, international organizations, and regulators must collaborate on knowledge sharing, market de-risking, and the development of local insurance markets to expand insurance solutions beyond isolated projects and products and support long-term sustainability and scalability.

Products covering climate risks must align with different risk profiles and balance short-term relief with long-term resilience. In addition, actors will need to adapt their approaches to local regulatory contexts, the broader regulatory environment, cost structures, institutional capacity, and risk appetite.

1. Build an enabling environment to strengthen local and regional insurance markets

Local insurance markets require supportive regulation, strong stakeholder engagement, capacity building, and reliable data infrastructure. PDBs are well positioned to convene other diverse actors needed to achieve these goals, particularly through the following actions:

- **Convene domestic stakeholders to strengthen regulatory frameworks and coordination**—NDBs should act as trusted conveners, periodically bringing together public and private actors, including **insurers and policymakers**, to identify barriers and solutions, align national and regional risk-transfer strategies, enable innovative insurance products, streamline approval processes, and reduce information silos (Krutham, 2024).
- **Build and retain local technical capacity**—**Governments, NDBs, RDBs, and MDBs** should invest in training, education, and career pathways within NDBs, to strengthen insurance-related expertise including skills in climate and catastrophe modeling, actuarial and financial analysis, underwriting and pricing, and data management.
- **Improve public financial planning**—**NDBs, RDBs, national ministries, and insurers** should position insurance as a fiscal risk-management tool that transfers high-impact risks, stabilizes budgets through predictable premiums, and reduces reliance on costly emergency borrowing, thereby strengthening overall fiscal sustainability and resilience.
- **Modernize data systems, integrating climate risk**—**Governments, MDBs and RDBs** should accelerate the transition from physical to digital climate risk data and promote interoperability to improve pricing, efficiency, and decision-making as disaster risks intensify, especially as historical data may not be enough as the intensity and frequency of such disasters increase.
- **Create regulatory sandboxes**—**In addition, regulators and central banks** can establish and promote regulatory sandboxes at the market-scoping stage to allow insurers to test underwriting and pricing models and incorporate regulatory feedback to foster local market development, as demonstrated through Fiji's PICAP program.

2. Promote co-development and co-investment for insurance solutions

PDBs, along with national ministries, play a key role in unlocking new insurance markets by addressing barriers to entry and facilitating connections among global insurers and communities, particularly through the following actions:

- **Expand the co-development of insurance solutions—NDBs, RDBs, bilateral DFIs, insurers, and public-private platforms** such as the Insurance Development Forum and the InsuResilience Solution Fund have collaborated to co-develop and co-fund insurance-enabling financial structures, including for parametric insurance solutions targeting climate-vulnerable farmers in Ecuador (IDF, 2026). Building on these efforts, stakeholders should expand these models to other regions.
- **Bundle insurance and financial instrument models—national ministries, NDBs, insurers and bilateral DFIs** should expand models such as the KfW-BOAD partnership, which bundles loans and insurance (known as shock-resilient loans) for sovereign member country borrowers in West Africa (KfW, 2024). This collaboration can encourage favorable regulatory frameworks, enabling sandbox approaches to test, replicate, and scale insurance products more quickly (Krutham, 2024).

3. Provide targeted subsidies alongside technical assistance for insurance products.

Targeted subsidies are essential for the viability of insurance solutions, at both the sovereign level and at the micro level for smallholder farmers and small enterprises. Maintaining targeted subsidies may be more cost-effective than the long-term economic and humanitarian consequences of widespread uninsured losses. This recommendation can be achieved through the following actions:

- **Design targeted premium subsidies with clear sunset clauses—National ministries and donors such as MDBs** should provide time-bound premium subsidies paired with technical assistance to encourage uptake, build awareness, improve affordability, and demonstrate the value of timely payouts, while fostering self-reliance and avoiding maladaptive behaviors. Public subsidies may also be best used to integrate insurance products into social safety nets, which is beyond the scope of this paper.
- **Enable smallholder farmer access to affordable agricultural insurance—National ministries, NDBs and DFIs** play a critical role in subsidizing insurance in key sectors such as agriculture, where countries lack the fiscal capacity to fund these subsidies (SGP, 2022). NDBs can also provide premium financing loans at concessional rates to increase insurance uptake, with farmers repaying the loans after the harvest season (CPI stakeholder interviews, 2025).
- **Support initial sovereign-level premium financing—Donors and development partners such as MDBs** should help **national ministries** finance early-stage insurance premiums for disaster risk coverage, enabling gradual transitions to domestic financing, as demonstrated by Jamaica's CAT bond.

4. Increase education and awareness regarding insurance solutions

PDBs can educate key stakeholders, including government ministries, policymakers and credit rating agencies on insurance products and their positive impacts through the following actions:

- **Educate public-sector decision-makers on insurance**—NDBs should build awareness and trust among **national ministries, domestic insurers, policy makers and credit rating agencies** through financial literacy campaigns on insurance products, what climate and financial risks they are best suited to address and their broader impacts on a country's fiscal resilience.
- **Enable structured peer learning and knowledge exchange**—Platforms such as the Agri-PDB Platform hosted by IFAD, and the FiCS Lab Insurance Working Group, involving **NDBs, RDBs, MDBs, insurers, and policymakers**, can facilitate cross-learning on barriers, solutions, and pathways to scale insurance solutions in key sectors such as agriculture.

It is also important to recognize that insurance alone cannot address all physical climate risks, including slow-onset events, as it can set unrealistic expectations, hinder uptake, and erode trust. Therefore, countries should assess costs and risks at each level and select risk-transfer instruments aligned with their stage of disaster preparedness, where insurance is integrated into a broader comprehensive disaster risk management system to support financial and climate resilience, as well as emergency preparedness (CPI, 2025b).

4.2 POTENTIAL AREAS FOR FURTHER RESEARCH

The above analysis points to the significant potential of PDB-led insurance solutions but also reveals important gaps that will shape their effectiveness and scalability. This section identifies priority areas for further research to support policy makers, PDBs, and market actors in translating these ideas into durable impact.

1. Regulatory and policy environment for NDBs to scale insurance solutions

Research is needed on the incentives, legislation, and regulatory frameworks that NDBs require to serve as effective financial intermediaries supporting local insurance market development.

This should also explore how NDBs, MDBs, and RDBs can sequence and coordinate their efforts to build scalable, affordable and context-specific insurance instruments to make these markets accessible, financially viable, and aligned with the climate priorities of EMDEs.

2. Integrating financial instruments with national climate plans

Further research could investigate how PDBs and insurers can align risk financing with Nationally Determined Contributions and National Adaptation Plans to incentivize climate-resilient investment. Frameworks that integrate disaster risk finance into public investment planning could help strengthen how insurance instruments reinforce broader climate goals. By linking insurance products to national climate strategies, PDBs may also attract blended finance or concessional funding, amplify the impact of public capital, and mobilize additional private investment for climate resilience projects.

3. Insurance for nature and ecosystem-based adaptation

Insights are needed on how PDBs can promote insurance for natural capital, including forests, mangroves, and wetlands, all of which are critical for reducing climate risks. Research should examine how PDBs can finance such insurance products and develop metrics to value the resilience dividends that nature-based solutions provide. Linking these dividends to insurance payouts can create a positive feedback loop in which protecting ecosystems directly reduces financial risk, thereby aligning financial incentives with sustainable environmental outcomes.

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6. ANNEX

Table 1. Representative insurance products in EMDEs

The table below outlines a non-exhaustive list of common types of insurance products available and used in EMDEs.

Level	Product	Definition	Relevance to EMDEs
Micro	Agricultural Index Insurance	Payouts are based on a predefined index (rainfall, temperature, or average yield) rather than individual farm losses (as is the case for indemnity insurance).	Protects smallholder income, reduces transaction costs, and supports food security.
	Livestock Index Insurance	Indexed to forage availability or satellite-based vegetation indices for pastoralists.	Used in arid EMDE regions to protect pastoralist livelihoods.
	Credit-Linked Insurance	Insurance bundled with credit products; coverage activates on default due to climate shocks.	Improves access to finance by reducing the risk of lending to farmers and SMEs.
Meso	Mesoscale Insurance (Cooperative-Based)	Insurance purchased by a cooperative or aggregator on behalf of members, reducing costs.	Bridges micro and macro markets; critical for reaching smallholder farmers and SMEs.
Macro	Parametric Disaster Insurance	Pays out when a predefined, measurable parameter (e.g., wind speed, earthquake magnitude) exceeds a preset threshold. It works by using predetermined triggers and payout schemes to facilitate quick claims settlements.	Enables rapid liquidity post-disaster and supports fiscal resilience through sovereign risk pools such as the CCRIF.
	Sovereign Catastrophe (CAT) Bonds	CAT Bonds are high-yield debt instruments designed to transfer financial risks associated with natural disasters from insurers or governments to capital market investors.	Provides EMDE governments with contingent financing without adding debt post-disaster as they transfer financial risks associated with natural disasters, making them highly relevant to climate adaptation and loss and damage efforts.

Table 2. Insurance actors

This table summarizes the key stakeholders in the insurance ecosystem across EMDEs, providing a broad overview of their roles, noting that these may vary by region and country.

Actor	Example Organizations	Role
Local Insurance Companies	Old Mutual (Africa), Tower Insurance (Pacific Islands), Sanlam (Southern Africa)	Local insurers act as the licensed carriers of risk within EMDEs. They design and administer products, manage distribution, and provide policyholder services, though many rely heavily on reinsurance due to limited retention capacity.
Global Reinsurers	Munich Re, Swiss Re, Hannover Re, Africa Specialty Risks	Global reinsurers provide the financial backbone and technical expertise that local insurers often lack. They supply risk capacity, catastrophe modeling, and product structuring support, enabling coverage for large-scale and systemic risks.
Public Development Banks (MDBs, RDBs, and NDBs)	World Bank, AfDB, ADB, IDB, BNDES (Brazil)	PDBs play a catalytic role in setting up and developing insurance markets by deploying concessional capital, with uptake and scaling of insurance solutions driven at national and regional levels. PDBs also provide insurance premium subsidies and guarantees, support sovereign risk-transfer mechanisms, and finance public-private partnerships to expand insurance coverage.
Government & Regulatory Authorities	Ministries of Finance, Agriculture, National Insurance Commission (NAICOM, Nigeria), National Insurance Commission (IRA, Kenya)	Governments and regulators shape the enabling environment for insurance markets. They establish regulatory frameworks, enforce solvency standards, subsidize premiums, and, in some cases, directly purchase sovereign risk cover on behalf of populations.
International Donors & Development Partners	UNDP IRFF, UNCDF, Insurance Development Forum, InsuResilience Global Partnership, GIZ	Donors and development partners provide essential funding for pilot programs, premium subsidies, technical assistance, and convene public and private actors. They also invest in building institutional capacity and creating proof-of-concept models that can later be scaled commercially.
Sovereign Risk Pools	African Risk Capacity (ARC), CCRIF SPC, Pacific Catastrophe Risk Insurance Company (PCRIC), Southeast Asia Disaster Risk Insurance Facility (SEADRIF)	Multi-donor funded regional and global facilities pool risks across countries to achieve diversification and scale. They provide sovereign catastrophe insurance and parametric solutions that allow governments to access rapid financing for disaster response.
Aggregators & Cooperatives	Industry associations, farmer cooperatives, savings & credit associations (SACCOs), telecoms (e.g., Safaricom M-PESA), utilities	Aggregators serve as critical distribution channels by pooling groups of clients who would otherwise be unreachable. They reduce transaction costs for insurers, facilitate premium collection, and enhance trust in insurance products among rural and informal populations.
Technology & Data Providers (Insurtech¹²)	aWhere, GeoVille, SatSure, Pula (AgriTech)	Technology firms and data providers enable innovative product design by supplying weather, satellite, and yield data. They also facilitate digital distribution and claims processing, helping reduce costs and basis risk in parametric and microinsurance schemes.

¹² In Africa, particularly in Kenya, firms play a key role by partnering with incumbent insurers and AI to analyze data, improve risk pricing, and deliver tailored insurance solutions. Many insurtechs rely on traditional insurers for underwriting and pricing due to their financial strength and extensive (Krutham, 2024).

Actor	Example Organizations	Role
Microfinance Institutions (MFIs) & Banks	FINCA, BRAC, Grameen Bank, Equity Bank (Kenya)	MFIs and banks expand access to insurance by bundling coverage with credit and savings products. They play a vital role in reaching informal and rural clients who are excluded from traditional financial services.
NGOs & Civil Society Organizations	Oxfam, Mercy Corps, CARE, One Acre Fund	NGOs and CSOs support awareness-building and community engagement. They often provide financial literacy, and build trust in insurance among low-income households, thereby increasing uptake in underserved areas.
Credit Rating Agencies	S&P Global Ratings, Moody's, Fitch Ratings, regional agencies (e.g., GCR Ratings in Africa, CARE Ratings in India)	Credit rating agencies (CRAs) assess the financial strength and creditworthiness of insurers, reinsurers, sovereigns, and issuers of insurance-linked securities. Their ratings influence investor confidence, determine the cost of capital, and affect insurers' ability to access reinsurance and international capital markets. CRAs signal risk quality, establishing trust in new insurance instruments and attracting private investment.

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