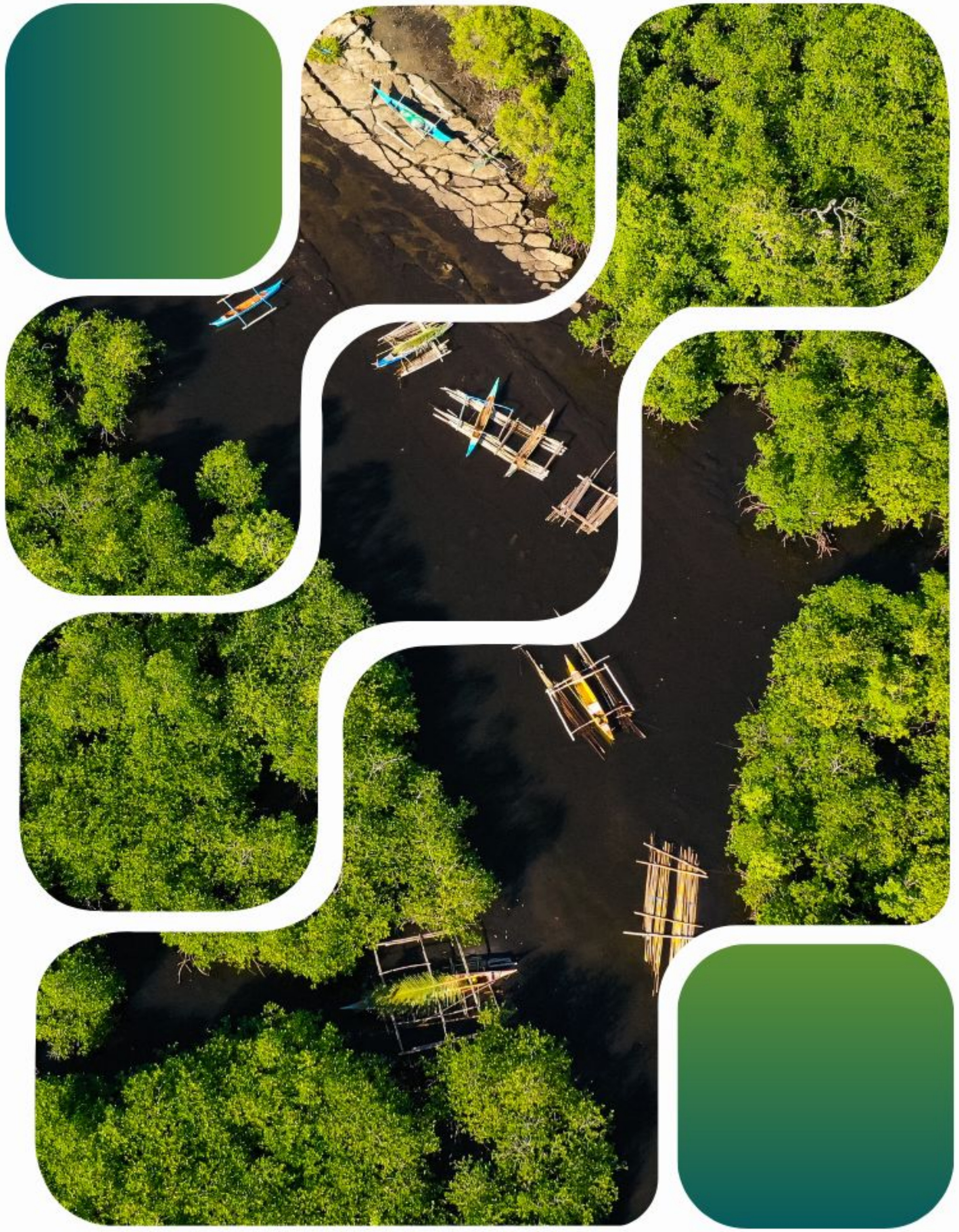


Climate and Disaster -Resilient Budgeting

The Imperatives and the Challenges

2nd PAGBA Convention 2026
Sept 3, 2026
Bohol Tropics Resort, Tagbilaran City

Director Elenida Basug
DENR Climate Change Service

Building Resilience in Philippines

Video from Global Facility for Disaster Reduction and Recovery (GFDRR) YouTube Page

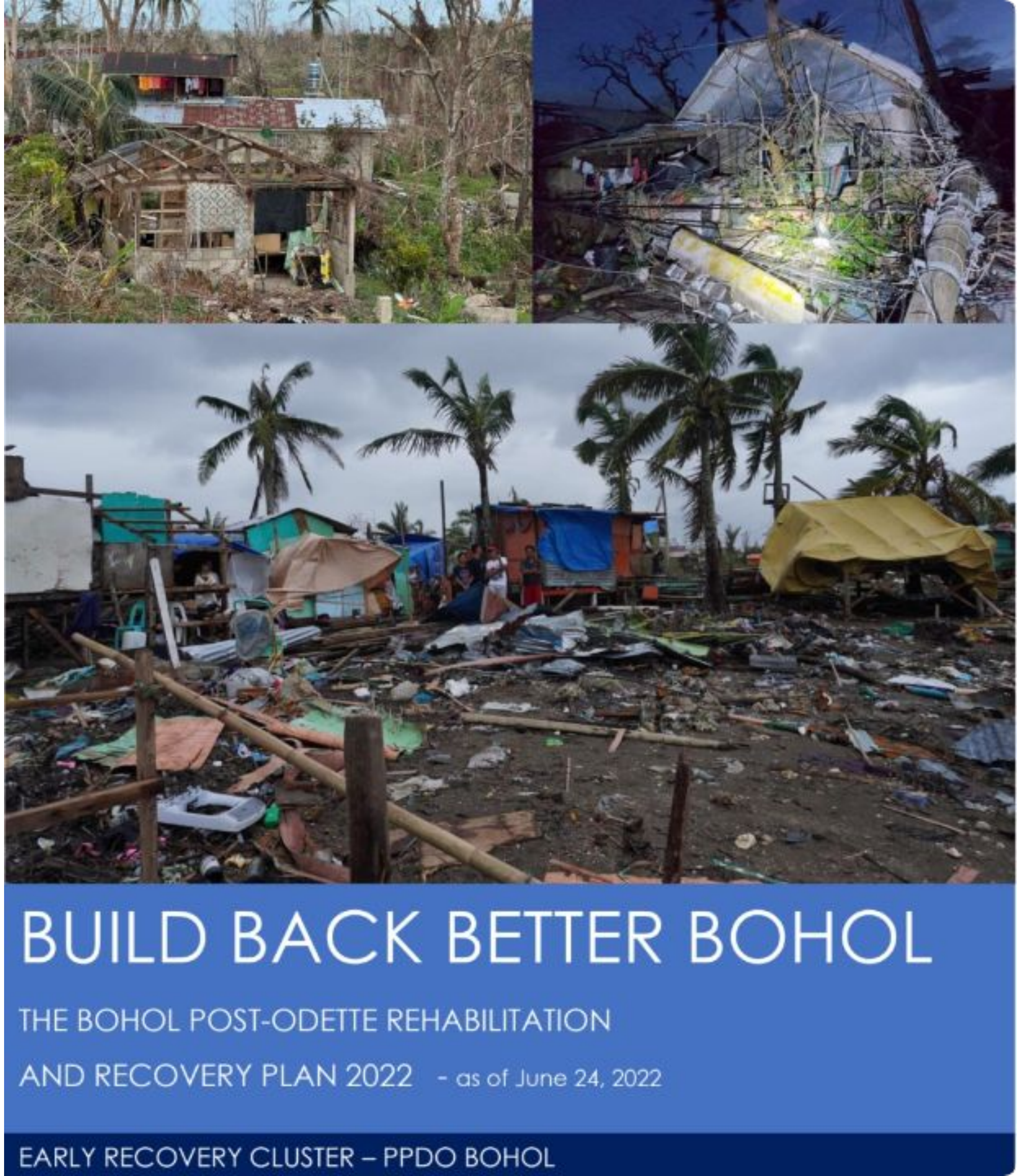
Bohol: A Living Testament

Resilience in Action

Bohol is the perfect, poignant backdrop for our conversation today on resilient budgeting.

Having weathered the catastrophic 2013 earthquake and the devastation of Super Typhoon Odette, **Bohol stands as a living testament to both natural heritage and the profound strength of Filipino bounce-back capacity.**

We gather here not merely to talk about cold numbers on spreadsheets, but to address what those numbers represent: human safety, community survival, and sustainable development.



Presentation Road Map

I. The Imperatives

Why climate resilience must drive our fiscal ledgers, the new paradigm of risk reduction, and economic return on adaptation.

II. The Challenges

Overcoming institutional silos, LGU technical capacity gaps, and paper compliance in Climate Change Expenditure Tagging (CCET).

III. Convergence & Action

Scaling Program Convergence Budgeting-Risk Resiliency Program, implementing Green Assessment and Recovery Framework and Climate Resilient Localized Urban Greening Plan, and sector-specific calls to action for PAGBA, NGAs, LGUs, and Corporate partners.

Photo source:
pia.gov.ph/news/intermittent-rains-cause-flooding-in-metro-manila/

World Risk Index Ranking

#1

Flooding brought by the Southwest Monsoon (*Habagat*), enhanced by Typhoon Goring (August 2023)

The Philippine Climate Reality

Global Climate Vulnerability

The Philippines consistently ranks among the most vulnerable countries globally on the World Risk Index.

This is no longer a localized advisory or an abstract problem for the next generation. It is a present-day fiscal reality directly impacting our Gross Domestic Product and public infrastructure today in 2026.

Death of the Reactive Paradigm

Old Reactive Model

Treats disasters as unpredicted, random interruptions. Creates development plans, budgets them, and crosses fingers. Realigns funds post-disaster away from healthcare, education, and infrastructure to pay for emergency relief.

New Resilient Paradigm

Deliberately spends funds ex-ante to prevent disasters or ensure rapid recovery within hours. Applies a climate lens to every line item. Treats structural resilience as a massive long-term money-saver.

MODULE I

The Imperatives: Why Resilience Must Drive Our Ledger

Moving from Reactive Calamity Response to Proactive Risk Reduction

Climate Change as a Risk Multiplier

Magnifies Socioeconomic Vulnerabilities:
Climate change amplifies poverty, food insecurity, fragile housing, and poor urban drainage tenfold.

Erodes Economic Gains:
Extreme El Niño events and Category 5 typhoons erase years of hard-won Gross Domestic Product growth in a matter of hours.

The Opportunity Cost of Losses:
Every single peso lost to a preventable climate disaster is a peso stolen from a child's classroom, a hospital bed, or a rural farm-to-market road.

The Economic Return on Adaptation

₱1 : ₱7

Return on Prevention

Proactive Investments Save Money

Global data consistently prove that every single peso invested in proactive climate adaptation and risk mitigation saves **₱4 to ₱7** in emergency response, structural recovery, and economic rehabilitation later on.

Resilient budgeting is quite simply smart, compassionate, and hyper-efficient public governance.

Navigating Core Fiscal Trade-Offs

Trade-Off Dimension	Ex-Post Approach (Traditional)	Ex-Ante Resilient Approach (New)
1. **Calamity Funds vs Infra**	Depletes Quick Response Fund/National Disaster Risk Reduction Management Fund, delays capital projects.	Builds resilient assets that survive extreme events.
2. **Parametric Insurance**	Relies solely on delayed post-disaster budget realignment.	Leverages pre-arranged risk transfer and CAT bonds.
3. **Sovereign Debt Shock**	Post-disaster debt spikes squeeze fiscal space.	Protects Gross Domestic Product and maintains stable sovereign credit ratings.
4. **LGU Devolution**	National govt absorbs 100% of unmanaged local liabilities.	Localized risk-reduction protects municipal revenue.

MODULE II

Quantifying Risk & Social Equity

Welfare-Adjusted Metrics & The Results-Based Climate Budgeting Framework

Standardized Resilience Metrics

Average Annual Loss (AAL)

A forward-looking, probabilistic metric that calculates the expected long-term average financial loss per year from specific climate hazards (floods, typhoons, droughts).

Key Benefit:
Additive and scalable across municipalities, provinces, and national agency portfolios.

Aggregate Exceedance Probability (AEP)

Measures the probability that total accumulated losses in a single year will exceed a specific threshold (e.g., 10-year, 50-year, or 100-year return period events).

Key Benefit:
Sizes tail-risk events to calibrate risk transfer and catastrophe bonds.

Welfare-Adjusted AAL (W-AAL)

31% vs 9%

Disproportionate Poor Loss

Correcting the Asset Bias

Standard AAL measures only destroyed physical property value. A ₱10,000 loss is recorded identically for a wealthy property owner and a subsistence farmer.

The World Bank Unbreakable Model shows the poorest income quintile bears only **9%** of asset losses but absorbs **31%** of total wellbeing losses. W-AAL applies a welfare multiplier (up to 6.9x) to protect vulnerable households.

National Baseline Architecture

Governance Tier	AAL Baseline Method	Sector Focus & Metrics
Level 1: National	AIR Cat Model (₱176.8B/yr Asset AAL; ₱267B/yr W-AAL)	Philippine Development Plan Ch. 15, National Adaptation Plan, Nationally Determined Contributions 75% target (2.21% unconditional)
Level 2: Sector / Program Convergence Budgeting- Risk Resiliency Program	Departmental Pro-Ration & Convergence Screening	Agri (₱18-23B), Infra (₱100-115B), Ecosystems (₱10-17B)
Level 3: Provincial / LGU	Rolled-Down Provincial Profiles & Provincial Climate Risk Diagnostics Tool	PCCAP, Provincial Development Physical Framework Plan, Investmen Portfolio for Risk Resilience, Municipal Local Climate Change Action Plan
Level 4: Project Programs, Activities and Projects	Project Stock × Sector AAL × Effectiveness Rate	Specific asset AAL reduction (₱M/yr) & tCO_2e avoided

Risk Disparity: Asset vs. Welfare

Top Asset AAL Provinces

- **NCR:** ₱57.9 Billion/yr (32.7% of national total)
- **Laguna:** 8.1% of national asset AAL
- **Cavite:** 6.8% of national asset AAL
- **Rizal:** 6.1% of national asset AAL

Driven by concentrated high-value urban infrastructure.

Top Welfare-Adjusted (W-AAL) Priorities

Eastern Samar & Leyte:
Typhoon Haiyan/Odette corridor

BARMM (Maguindanao & Lanao del Sur):
High poverty & flood/conflict compound risk

Sorsogon, Masbate, Dinagat:
High poverty & extreme hazard exposure

Prioritized under Gender, Equity, and Social Inclusion (GESI) criteria.

The Two-Document Policy Strategy

Document 1:
PCRD (Climate-Only)

Focus:
Typhoon wind, rainfall, flood, and storm surge.

Purpose:
Standardized, low-cost climate vulnerability screening for domestic General Appropriations Act (GAA) budget formulation.

Document 2:
CDR Framework (Multi-Hazard)

Focus:
Combined Typhoon + Earthquake + Socioeconomic W-AAL.

Purpose:
Unlocks Multilateral Development Bank (MDB) co-financing, Green Climate Fund (GCF) grants, World Bank Cat DDOs, and parametric insurance.

MODULE III

The Challenges: Overcoming Institutional Inertia

Silos, Capacity Gaps, and Beyond Paper Compliance

Challenge 1: Institutional Silos

Technical & Planning Teams

Focus on flood hydrographs, hazard maps, climate projections, and carbon emission metrics. Often lack direct connection to procurement and budget ceilings.

Finance & Budget Officers

Focus strictly on DBM budget ceilings, quarterly disbursement rates, UACS codes, and COA procurement compliance. Often lack climate risk screening tools.

Result: If risk data do not dictate spending choices, public budgets fund VULNERABILITY instead of RESILIENCE.

Challenge 2: LGU Capacity Asymmetries

The Frontlines of Climate Change:
The real battle is not in Metro Manila air-conditioned offices, but in coastal towns of Bohol, upland farms of Cordillera, and dense urban centers.

Technical Asymmetry in Low-Income LGUs:
3rd to 6th class municipalities lack in-house technical capacity to conduct scientific Climate Change Assessments or draft bankable proposals.

The 3% Peoples' Survival Fund Approval Bottleneck:
Unlocking funds like the People's Survival Fund (PSF) remains daunting; historically only 3% of LGU adaptation proposals passed complex documentary filters.

Challenge 3:
Climate Change Expenditure Tagging Compliance

Beyond Box-Checking

While Climate Change Expenditure Tagging (CCET) successfully tracks tagged pesos, verifying structural engineering impact remains an uphill climb.

Superficial Tagging:
It is easy to tag a road or building as "climate-related" on paper. It is far harder to verify that the engineering design was altered to withstand Category 5 typhoons or 50-year flood levels.

We must shift from tagging inputs to verifying verifiable loss reduction.

Diagnostic Audit of CCAM Proposals

Identified Recurring Gap	Audit Finding (% of 27 Proposals)	Required RBCBF Fix
1. Missing Climate Design Basis	63% lack Sea Level Rise or flood hydrograph data	Mandatory Provincial Climate Rationale (M01)
2. Absence of Baseline & Monitoring Evaluation, Accountability and Learning (MEAL)	48% lack survival/adoption monitoring	Dedicated M&E Budget Line (M05)
3. Grey-Only Infrastructure	26% ignore Nature-Based alternatives	Mandatory Non-Engineering Justification (M04)
4. Untargeted Beneficiaries	22% lack Gender Equality and Social Inclusion/poverty targeting	Welfare-Adjusted AAL (W-AAL) targeting (M06)

MODULE IV

Program Convergence Budgeting (PCB-RRP)

Scaling Up Inter-Agency Resilience Investments

Evolution of the Risk Resiliency Program (RRP)

2013-2015

DBM introduces Program Budget Approach/Program Convergence Budgeting . Climate Change Adaptation and Mitigation (CCAM) Cluster adopts RRP via Resolution 2014-02.

2017-2018

Exec Order 24 reorganizes CCAM-DRR Cluster. Inclusion of 24 Priority Provinces via Regional Development Councils.

2019-2020

RRP Operations Manual & Guidance Documents launched with World Bank Technical Assistance

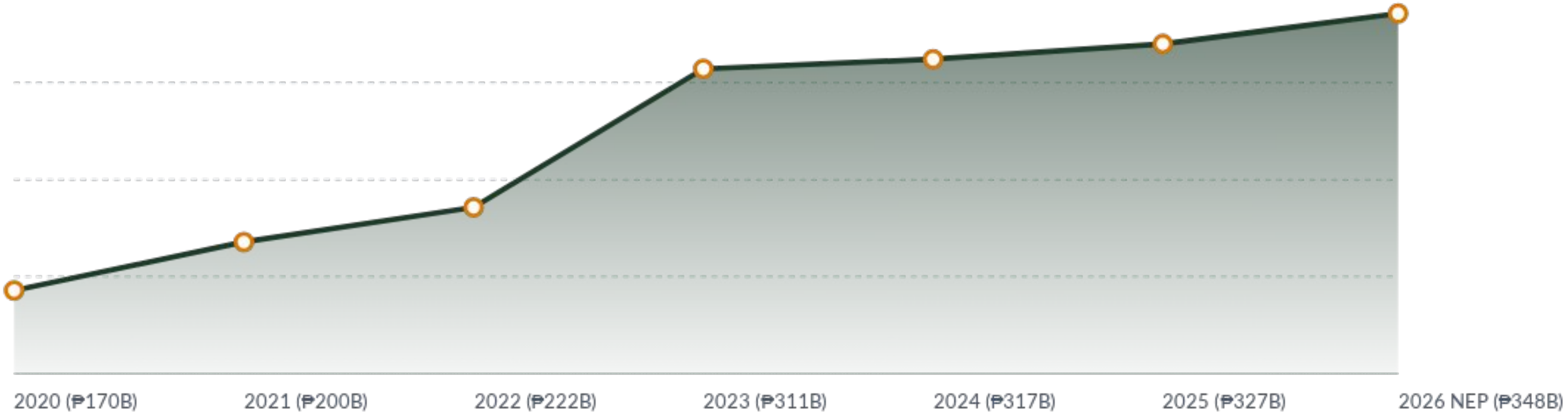
2021-2025

₱1.38 Trillion approved under General Appropriations Act across 23 cluster agencies.

2026+ National Expenditure Program

₱348.27 Billion approved in FY 2026 National Expenditure Program; scaling Provincial Climate Risk Diagnostics & Results Based Climate Budgeting Framework tools.

Program Convergence Budgeting-
Risk Resiliency Program Budget Growth (2020-2026)



PCB-RRP convergence allocations have more than doubled from ₱170 Billion in 2020 to ₱348.27 Billion in the FY 2026 National Expenditure Program (NEP).

PCB-RRP Core Outcome Areas

1. Adaptive Capacities

Reduced climate-affected families, resilient livelihoods, biodiversity-friendly enterprises, and community-level adaptation technology access.

2. Natural Resources

Protected watersheds, water quality compliance, denuded forest rehabilitation, and effective management of coastal/marine protected areas.

3. Resilient Infra

Protective flood structures built to DPWH standards, retrofitted public buildings, and reduced flood-prone areas in major river basins.

4. Knowledge & Capacity

Localized Vulnerability Risk Assessments, climate risk data uploaded to Philippine Geoportal, permanent LGU DRRM officers, and LCCAPs aligned with NAP and NDCIP

Provincial Climate Risk Diagnostics (PCRD)

Phase	Focus & Methodology	Target Regions & Rollout Schedule
Phase I	PCRD Overview & Initial Data Checklist Completion	R1 (Pangasinan), R2 (Cagayan), R3 (Bulacan/Pampanga), R5, R6
Phase II	Regional Climate Risk Assessment Workshops	R1, R2, R3, R4A (Quezon), R4B (Mindoro), R7 (Metro Cebu)
Phase III	Writeshop on Resilience Roadmaps & Investment Portfolio for Risk Resilience	Target Provinces across R1, R2, R3, R4A (2026-2027)

MODULE V

Ground-Level Innovations

Climate-resilient Localized Urban Greening Plan,

Green Assessment and Recovery Framework, and

Ecosystem-Based Adaptation

Localized Urban Greening (CRLUGP)

Science-Based Urban Resilience

Moves urban greening away from stand-alone tree planting toward a planning-based approach that integrates Nature-based Solutions (NbS) into local Comprehensive Land Use Plans and Comprehensive Development Plans.

Tools Used: Spatial assessment tools analyzing land surface temperature, green space per capita, and tree canopy cover.

Nationwide Expansion

Pioneered in Metro Manila (Quezon City, Manila, Pasig, Taguig, Muntinlupa). Expanded to **18 pilot cities in 2024** and **17 pilot cities in 2025** via National Knowledge Exchanges.

Convergence: Integrated with the City Biodiversity Index (CBI) with BMB for livable, biodiverse cities.

Green Assessment & Recovery (GARF)

Ecosystem Post-Disaster Evaluation:
Anchored on the Sukat ng Kalikasan framework, GARF evaluates the condition of ecosystems before and after catastrophic disasters (piloted post-Odette).

Piloted Across 416,481 Hectares:
Successfully piloted across all 16 DENR Regional Offices in high-conservation, climate-vulnerable landscapes.

Canada-Funded Eco-DRR Project (2025-2029):
Scaling GARF into a national institutional mechanism across 9 priority incubator sites.

GARF Implementation in 9 Sites

Incubator Site / Landscape	Target Key Biodiversity Area	Status (2025-2026 Progress)
1. Ilocos Norte	Kalbario Patapat Natural Park	Stage 1 Complete; Stage 2 Nov 2026
2. Apayao	yABR Biosphere Reserve	Stage 1 Complete; Stage 2 In Progress
3. Catanduanes	Catanduanes Natural Park	Stage 1 & 2 Completed; Stage 3 2027
4. Camarines Sur	Bicol & Mt. Isarog Natural Parks	Stage 1 & 2 Completed; Stage 3 2027
5. Sorsogon / So. Leyte / Bukidnon	Bulusan, Mt. Nacolod, Mt. Kalatungan	GARF Stage 1 & 2 Localized Rollout

SPEAKER SCRIPT: Through support from the Government of Canada, GARF is being fully operationalized in 9 key biodiversity sites across the country, establishing a national mechanism for ecosystem-based disaster risk reduction.

Call to Action: To PAGBA Leadership

1. Institutionalize Training

Embed climate-resilient budgeting as a permanent, foundational module in PAGBA professional development programs. Move beyond token speeches.

2. Bridge the Strategic Divide

Create cross-sectoral workshops forcing budget officers, planning officers, and scientists to sit at the same table and speak a common risk language.

3. Champion Fiscal Shielding

Lead the public sector in viewing climate finance not as an administrative burden, but as an essential tool of fiscal risk management.

Call to Action: National Agencies

Enforce Strict Risk Screening:
Overhaul project preparation pipelines. No major national infrastructure project should receive funding without forward-looking climate risk screening.

End Superficial Tagging:
Stop treating CCET as a tedious box-checking exercise for DBM. Use CCET data to honestly audit programs and verify physical resilience.

Active PCB-RRP Convergence:
Enroll cross-agency programs under Program Convergence Budgeting to maximize impact in the 18 provinces with high exposure to climate risks under the NAP, and the 24 priority climate-vulnerable provinces.

Call to Action: Local Government Units

Fund Your LCCAPs:
Fully integrate Local Climate Change Action Plans into Comprehensive Land Use Plans (CLUPs) and Annual Investment Programs (AIPs). A climate plan without a budget line is just paper.

Prioritize Nature-Based Solutions:
Stop relying solely on expensive, gray concrete. Budget heavily for mangroves, watershed protection, and urban green spaces that manage floodwaters naturally.

Tap the People's Survival Fund:
Leverage DENR and DBM technical assistance facilities to submit bankable, science-based adaptation proposals to the PSF.

SPEAKER SCRIPT: To our Local Chief Executives, Planners, and Budget Officers: A climate plan that is not backed by a real budget line is an empty piece of paper. Invest in nature-based solutions—mangroves and watersheds are cheaper to maintain and protect lives better than concrete alone.

Call to Action: Private & Corporate

Align Capital with NAP Goals

Public funds alone cannot bridge the massive climate investment gap. Private capital, innovation, and corporate agility must directly align with the National Adaptation Plan (NAP).

True ESG Accountability

Move Environmental, Social, and Governance (ESG) strategies away from PR campaigns. Embed climate risk into core balance sheets, resilient supply chains, and public-private partnerships.

A Shared Vision for Resilience

"

We will not be judged by the sheer size of the budgets we managed, but by a simple, profound metric: Did we use our resources to make our people safe?

"

— Director Elenida Basug,
DENR Climate Change Service

Daghang Salamat!

Let us budget for a safer, greener, and unbreakable Philippines.