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WHITE PAPER

# Beyond the Hard Cap

## Reducing the Social Cost of Underinsurance in Developing Economies

An integrated policy paper and research synthesis on why conventional insurance is structurally income-constrained in many lower-income markets, and what governments, regulators, donors and insurers should do differently in response

A WHITE PAPER PREPARED
BY SHORELINE ASIA

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PUBLICATION OVERVIEW

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**AT A GLANCE**

- Low insurance penetration is often structurally income-constrained, not just execution-constrained.
- The policy objective should be to reduce the social cost of underinsurance, not merely to grow premium volume.
- Layered resilience architecture is usually superior to a single-solution insurance strategy.
- Subsidy should be selective, evidence-based and targeted to the protection layer with the highest social return.



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EXECUTIVE SUMMARY

# Executive summary

**WHAT THIS PAPER ARGUES**

Insurance penetration in many developing economies is not low merely because of weak sales execution, poor awareness, or limited product innovation. It is low because household and enterprise incomes place a structural ceiling on the scale at which standard insurance can operate. The practical policy objective should therefore be to reduce the social cost of underinsurance, not simply to maximise premium volume.

The paper's core claim is that conventional insurance follows an income-linked development curve. Insurance demand usually rises slowly at low levels of GDP per capita and accelerates materially only at higher income levels. The often-cited inflection point around intermediate income levels is not a rigid law, but it is directionally important: below that level, affordability places a hard practical constraint on mass-market insurance expansion (Enz, 2000; Geneva Association, 2014).

Once that hard cap is recognised, low insurance penetration should be treated as a national resilience problem rather than merely an insurance-sector weakness. Uninsured losses do not disappear. They are shifted onto households, firms, kinship networks, SACCOs, burial societies, NGOs, donors, and the state. The result is a broad social cost of underinsurance expressed through distress sales, reduced consumption, delayed treatment, enterprise failure, emergency fiscal spending, humanitarian burden, and slower macroeconomic recovery.

The paper therefore proposes a policy shift: governments should measure the full social cost of underinsurance, identify which loss layers are best borne by households, markets, government, or donors, and subsidise protection only where the avoided social cost exceeds the full fiscal and

| Policy message | Implication |
|---|---|
| Stop treating premium growth as the main objective | Use reduction in the social cost of underinsurance as the central policy metric. |
| Distinguish affordability from take-up | Do not use awareness campaigns to solve what is fundamentally an income constraint. |
| Subsidise with discipline | Proceed only where avoided household, fiscal, NGO, and macro losses exceed subsidy and administration cost. |
| Build layers, not a single solution | Use savings and community mechanisms for small losses, targeted insurance for insurable middle layers, and sovereign or donor-backed finance for catastrophic layers. |
| Invest in public goods | Data, claims infrastructure, digital payments, fraud control, and supervisory capability can reduce premiums and improve credibility more sustainably than blunt premium support. |
| Start where costs are highest and most measurable | In Kenya and similar markets, practical starting points include agriculture and livestock, low-income health and funeral risk, informal SME interruption, and flood exposure. |


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**STRATEGIC QUESTIONS TO CONSIDER**

- How should governments redefine low insurance penetration as a resilience problem?
- Which loss layers should be absorbed by households, by insurance, and by the state?
- When is subsidy justified, and when is it better to invest in public goods or sovereign mechanisms?

administrative cost of intervention. This creates a more disciplined and more realistic resilience architecture than a simple aspiration to raise insurance penetration.

SECTION 01

# Why the hard cap matters

Insurance development literature has long observed an S-curve relationship between income and insurance penetration. At low levels of per-capita income, households and small firms face severe competing claims on income: food, housing, transport, school fees, medicines, and debt service. In those conditions, insurance may remain valuable but cannot easily scale as a dominant mass-market protection mechanism. As incomes rise, demand, product fit, and institutional depth improve together, allowing penetration to accelerate.

That point matters because policy discourse often implies that lower-income markets are only one product redesign, one digital channel, or one distribution push away from mass insurance adoption. That view mistakes a structural affordability problem for an execution problem. Distribution, trust, and product design matter greatly, but they do not repeal household budget constraints.

This does not mean insurance has no role. It means the role must be designed around economic reality. In lower-income and lower-middle-income economies, conventional insurance is important but bounded. Public policy should therefore be judged by whether it reduces the economic and social damage caused by underinsurance, not by whether it can quickly reproduce the insurance structure of much richer markets. social damage caused by underinsurance, not by whether it can quickly reproduce the insurance structure of much richer markets.

**A DISCIPLINED WAY TO STATE THE THESIS**

The practical ceiling on conventional insurance is shaped by income, institutions, data quality, distribution economics, and trust. The crucial point is not that these other factors are irrelevant, but that low purchasing power remains the binding constraint often ignored in policy rhetoric.

SECTION 02

# From low penetration to national resilience against loss

Once underinsurance is seen through a resilience lens, the relevant loss is not the premium that was never written. It is the shock that is absorbed badly. That includes productive assets sold at distress prices, reduced nutrition, interrupted schooling, untreated illness, cancelled planting cycles, enterprise closures, slower local recovery, and heavier relief burdens on public and humanitarian systems.

The shift from an insurance-market lens to a system lens is essential. A country can have low premium penetration yet still be carrying high levels of risk through informal and often fragile mechanisms. Kinship networks, SACCOs, burial societies, community groups, suppliers, and informal lenders all become shadow insurers of last resort. When shocks become more frequent, correlated, or severe, these mechanisms can weaken or fail.

Climate change intensifies the problem. It raises the frequency and severity of shocks, erodes the capacity of communities to self-insure informally,


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and increases pressure on already stretched fiscal and humanitarian systems. The harder climate shocks become, the less credible it is to assume that ordinary retail insurance can carry the full burden of protection in poorer economies.

SECTION 03

# A quantitative framework: the social cost of underinsurance

The central quantitative contribution of this paper is to move the discussion from penetration rates alone to a wider system measure.

SCU = UL + CCL + GFC + NGC + MD - IAV

Where:

UL = direct uninsured loss

CCL = coping-cost loss

GFC = government fiscal cost

NGC = NGO and donor cost

MD = macroeconomic drag

IAV = informal absorption value

The NGO and donor term should itself be decomposed because donor-funded relief is not costless simply because it does not appear on household balance sheets.

NGC = DA + OH + DC + SE

DA = direct assistance

OH = operating and delivery overhead

DC = delay cost arising from late or partial response

SE = system effects, including the risk that repeated donor substitution delays more durable ex ante protection systems

| Component | What is being measured | Illustrative examples | Possible estimation approach |
|---|---|---|---|
| Direct uninsured loss | Shock losses not covered by insurance | Crop failure, livestock mortality, clinic bills, flood damage, shop fires | Frequency × severity × uninsured share |
| Coping-cost loss | Secondary losses caused by weak coping | Distress sales, school interruption, reduced food consumption, expensive borrowing | Household and SME survey assumptions; scenario analysis |
| Government fiscal cost | Ex post public spending triggered by shocks | Relief, agricultural support, reconstruction, health support | Budget and programme data |
| NGO and donor cost | External transfers plus delivery burden | Food aid, emergency cash, shelter, livelihood support | Programme expenditure, overhead ratios, response lags |
| Macroeconomic drag | Wider output and recovery effects | Lower SME survival, weaker local demand, delayed reinvestment | Sector modelling; macro scenario analysis |
| Informal absorption value | Loss successfully absorbed outside the state and formal insurance | Family transfers, SACCO borrowing, burial-society support | Estimate effective informal coverage and deduct it |


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A useful national dashboard should not stop at premiums-to-GDP. It should combine a coverage quantity metric, a protection-value metric, and an affordability metric. The most practical stack is: penetration and policyholder density; economic loss versus insured loss; and premium affordability expressed in relation to income or estimated willingness to pay. This allows policymakers to separate lack of availability, lack of affordability, and lack of take-up.

The wider research base provides operational anchors for this framework. Swiss Re estimated that global natural catastrophe losses reached USD 318 billion in 2024, with USD 137 billion insured, leaving a protection gap of USD 181 billion. Munich Re reported about USD 224 billion of natural disaster losses in 2025, with roughly USD 108 billion insured. For agriculture, Swiss Re's 2024 Crop Insurance Resilience Index stood at 45%, implying that more than half of global insurable crop value remained unprotected. These figures are not evidence that poor countries should imitate rich-country insurance markets faster; they are evidence that even globally, protection remains incomplete and must be handled through multiple layers.

Microinsurance evidence is similarly important. Coverage has reached hundreds of millions of people globally, but the same literature shows that microinsurance remains a partial layer rather than a universal substitute for broader social protection. Progress in outreach should therefore be read as proof that small-ticket protection can help, not as proof that conventional insurance can soon dominate low-income protection systems.

SECTION 04

# When subsidy is justified

A stronger public-policy test is required than the usual assumption that more insurance is automatically better. Subsidy should be used only where it produces measurable net social value. In practical terms, the question is whether the intervention reduces household loss, fiscal volatility, humanitarian burden, and macroeconomic scarring by more than it costs to finance and administer.

$$NPV(policy) = (AHL + AGL + ANL + AMD) - (S + AC + L + D)$$

Where avoided household loss, avoided government loss, avoided NGO or donor loss, and avoided macro drag are set against subsidy cost, administration cost, leakage, and distortion.

| Observed problem | Likely binding constraint | Preferred policy response |
|---|---|---|
| Cover is absent or insurers withdraw | Pricing difficulty, correlation, poor data, weak reinsurance capacity | Invest in exposure data, modelling, public reinsurance layers, parametric structures, or public compensation arrangements. |
| Cover exists but is unaffordable | Income constraint; high technical rates; high frictional costs | Targeted subsidy, risk reduction investment, or meso/macro protection rather than retail cover. |
| Cover is affordable but uptake is low | Trust, salience, claims experience, distribution failure, weak consumer protection | Improve claims performance, conduct standards, communication, and distribution design. |

This diagnostic matters because policy failure often comes from treating all underinsurance as if it had the same cause. Awareness campaigns cannot solve unaffordability. Premium subsidy cannot solve poor claims credibility. Public catastrophe pools cannot solve weak household demand for routine small-value products. The intervention must match the constraint.

A HARDER RULE FOR MINISTERS AND REGULATORS

Do not subsidise insurance in general. Subsidise the protection layer that delivers the highest net social return. In many cases that will mean supporting catastrophe layers, public goods, risk reduction, and fast-disbursing meso or sovereign


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mechanisms before subsidising routine retail premiums.

SECTION 05

# A layered resilience architecture

The appropriate response is not to abandon insurance. It is to reposition insurance inside a broader, layered resilience architecture designed around what prevailing income levels realistically permit.

| Risk layer | Typical characteristics | Most suitable instruments | Public-policy role |
|---|---|---|---|
| Layer 1: frequent, low-severity losses | High frequency; lower severity; often better managed close to the household or enterprise | Savings, emergency funds, community support, SACCOs, burial societies, revolving funds | Strengthen financial inclusion, savings vehicles, and household shock absorbers rather than forcing full formal insurance. |
| Layer 2: medium-severity, insurable losses | Material but manageable shocks where data and verification are workable | Targeted indemnity, index, or parametric products; bundled cover; embedded distribution | Use proportionate regulation, bounded subsidy, and conduct oversight to make products usable and credible. |
| Layer 3: catastrophic or highly correlated losses | Losses too severe or too correlated for routine retail | Sovereign pools, contingent credit, reinsurance | Treat as fiscal-risk management and pre-arranged |
| | markets to bear alone | , catastrophe bonds, donor-backed contingency facilities | disaster finance, not as a retail sales problem. |

This approach aligns with how international institutions increasingly frame protection gaps. The IMF treats financial protection as one pillar within a broader resilience strategy. OECD distinguishes among social insurance, public-private schemes, and compensation arrangements depending on insurability and affordability. IAIS frames natural catastrophe protection gaps as a systemic problem with implications that reach beyond insurance markets into real-economy and financial-stability channels.

The architecture also fits the strongest international case studies. Mongolia's livestock programme used a genuinely layered design. Mexico's CADENA showed how government-purchased meso or macro cover can be more realistic than pushing retail policies to very poor producers. The Philippines demonstrated that proportionate regulation can widen inclusive-insurance channels. ARC underscored the value of sovereign pre-arranged finance. R4 showed that for poorer households, insurance often works better when bundled with savings, risk reduction, and social-protection mechanisms.

SECTION 06


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# Kenya as an applied starting point

Kenya is a useful applied case because it combines relatively advanced financial infrastructure with substantial underinsurance, climate exposure, strong informal protection traditions, and repeated interaction between households, government, and donors after shocks. The country therefore illustrates both the limits of retail insurance and the opportunity to design a more coherent resilience architecture.

The first practical rule is to start where the cost of underinsurance is both high and measurable. Agriculture and livestock are an obvious priority because climate exposure is material, policy precedent already exists, and the social cost can be modelled through yield, livestock mortality, fiscal support, and food-security spillovers. Informal health and funeral risk are also strong candidates because households already reveal willingness to pay for these risks through community and informal mechanisms, even where formal cover remains patchy.

Micro and small enterprise stock loss and interruption risk should also be prioritised. These firms are often too small to self-insure meaningfully yet too important to local labour markets and household incomes to ignore. Urban and peri-urban flood exposure is another priority because recovery delays generate both private loss and visible fiscal strain.

| Priority area | Why it matters | What to test first |
|---|---|---|
| Agriculture and livestock | High shock exposure; existing policy base; measurable fiscal and food-security spillovers | Layered pilots combining data infrastructure, bounded subsidy, and meso/macro protection. |
| Low-income health and funeral risk | Households already devote scarce resources to these risks; major welfare consequences when shocks hit | Simple products, claims-speed standards, and integration with trusted payment or community channels. |
| Informal SME interruption and stock risk | Enterprise failure has knock-on effects on jobs, school fees, and local demand | Bundled cover linked to merchant data, digital payments, or working-capital ecosystems. |
| Low-income flood risk | Recurring losses combine household damage, health impacts, and public clean-up costs | Pre-arranged community-level or municipal risk-finance pilots tied to adaptation and relocation logic where relevant. |

SECTION 07

# Implementation roadmap

The implementation sequence should be staged, evidence-led, and explicitly tied to measurable reductions in the social cost of underinsurance. The aim is to move from diagnosis to pilots and then to institutionalisation without pretending that a single subsidy or product launch can solve a structural income constraint.

| Phase | Indicative timing | Core activities | Main outputs |
|---|---|---|---|
| 1. Diagnostic and design | 0–6 months | Create an inter-agency taskforce; agree on risk-layering logic; define the SCU model; map existing government and donor spending that substitutes for missing protection. | Concept note; governance structure; baseline SCU framework; priority-sector shortlist. |


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| Phase | Indicative timing | Core activities | Main outputs |
|---|---|---|---|
| 2. Data build and pilot design | 6–12 months | Compile first dashboard; agree data-sharing protocols; design one agriculture/live stock pilot and one non-agriculture pilot; define subsidy gate and M&E framework. | Dashboard v1; pilot design papers; subsidy rule; monitoring framework. |
| 3. Pilot launch | 12–24 months | Launch tightly bounded pilots with clear eligibility, claims standards, and explicit measurement of household, fiscal, and NGO cost reduction. | Operational pilots; quarterly reporting; early avoided-cost estimates. |
| 4. Evaluation and redesign | 24–36 months | Test additionality, leakage, affordability, claims performance, and whether coping losses and relief burdens actually fall. | Independent evaluation; redesign recommendations; regulatory and budget adjustments. |
| 5. Scale-up and institutionalisation | 36–60 months | Embed successful instruments in a standing resilience-finance architecture linked to climate adaptation, fiscal planning, and social-protection systems. | Recurring reporting cycle; donor interface; scaled programmes; annual SCU reporting. |

SECTION 08

# What governments should do differently now

First, they should stop quietly assuming that conventional insurance can soon become the dominant protection mechanism for the whole population in lower-income markets. That assumption distorts strategy, overstretches subsidy, and leads to disappointment when take-up stays weak.

Second, they should institutionalise a national measurement framework for the social cost of underinsurance. Once households, ministries, regulators, donors, and development partners are looking at the same loss architecture, policy choices become more disciplined and more comparable.

Third, they should treat NGO and donor spending as part of the current cost of weak protection systems. Repeated emergency transfers, food aid, shelter support, and livelihood restoration are not evidence that risk is being solved. They are evidence that it is being financed late and often inefficiently.

Fourth, they should allocate public money more intelligently: less emphasis on undifferentiated premium support and more on public goods, risk reduction, pre-arranged catastrophe finance, and carefully bounded subsidies tied to measurable avoided costs.

Finally, they should frame protection gaps not only as a social issue but also as a fiscal-risk, growth, and financial-stability issue. Uninsured losses can become contingent liabilities for the state and stress channels for banks, SMEs, and local


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economies. That is why a layered resilience architecture is better understood as an economic governance framework than as a narrow insurance policy.

CONCLUSION

# Conclusion

The central conclusion is uncomfortable but necessary. In many developing economies, conventional insurance is not merely underdeveloped; it is structurally income-constrained. That does not make insurance irrelevant. It does mean that policy should stop asking insurance to do what prevailing income levels do not yet permit.

A more credible objective is to minimise the social cost of underinsurance through a layered architecture that combines

targeted formal insurance, strengthened informal protection, bounded and evidence-based subsidy, public investment in data and delivery infrastructure, explicit recognition of NGO and donor burdens, and climate-responsive disaster-risk finance.


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The policy question is therefore not simply how to increase premium volume. It is how to reduce the total cost of shocks to households, firms, communities, NGOs, and the state. Once that becomes the objective, the architecture becomes clearer, the subsidy debate becomes more disciplined, and the role of conventional insurance becomes both more realistic and more useful.


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APPENDIX

# Appendix A. Comparative policy lessons

The cases below matter not because they can be copied mechanically, but because they show what works when policymakers stop treating conventional retail insurance as the only instrument available.

| Programme | What it demonstrates | Main lesson for policy design |
|---|---|---|
| India – PMFBY crop insurance | Large subsidy and technology can expand access quickly, but claims delays and weak service credibility can erode trust. | Scale is not success. Subsidy must sit inside a delivery system that can verify and pay credibly. |
| Mongolia – Index-Based Livestock Insurance | A genuine layered model can allocate small, medium, and catastrophic losses to different balance sheets. | For pastoral and livestock risk, layered finance is more realistic than trying to force a single retail product to do everything. |
| Mexico – CADENA | Government-purchased meso or macro protection can work better for vulnerable small producers than pushing retail cover. | For poorer groups, macro or meso layers may outperform mass retail distribution. |
| Philippines – microinsurance regulation | Proportionate regulation can create a viable low-income product space while preserving consumer protection. | Regulation matters, but it must be paired with distribution logic, claims credibility, and dispute resolution. |
| African Risk Capacity | Sovereign insurance is strongest when linked to early warning, contingency planning, and public systems. | Climate and drought response should be framed as national risk-finance architecture, not as an insurance sales issue. |
| R4 Rural Resilience Initiative | Insurance often works better when bundled with savings, risk reduction, and social protection. | For very low-income groups, insurance should usually be one part of a resilience package rather than a stand-alone offer. |


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APPENDIX

# Appendix B. Proposed national dashboard for measuring underinsurance

| Indicator | Why it matters | Possible source |
|---|---|---|
| Premiums as % of GDP | Macro diagnostic of market depth | Insurance regulator; national accounts |
| Policies or policyholders per 1,000 adults | Coverage density, not just premium volume | Regulator; FAS-style financial access reporting |
| Economic loss vs insured loss by peril | Direct measure of the protection gap | Disaster agency, treasury, reinsurer data, post-event assessments |
| Premium cost in weeks of income | Direct affordability test | Household survey data; product pricing |
| Claims payment time and rejection rate | Trust and usability signal | Insurer reporting; market-conduct supervision |
| Ex post emergency fiscal spending | Shows contingent public burden | Treasury and line-ministry budgets |
| NGO and donor response expenditure | Captures external financing burden | Cluster reports; programme accounts |
| Coping-cost proxies | Reveals welfare damage beyond direct loss | Household and SME panel surveys |
| SME survival after shocks | Tracks productive scarring | Business registries; sector surveys |
| Informal absorption value | Prevents double counting and recognises community resilience | Household surveys; SACCO/community studies |


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APPENDIX

# Appendix C. Kenya worked example: estimating the social cost of underinsurance (SCU) and a subsidy envelope

This appendix converts the core argument of the paper into a practical Kenya test case. It shows how the framework can be used to estimate a defensible floor for the social cost of underinsurance, to distinguish documented values from scenario extensions, and to translate avoided loss into a bounded subsidy envelope for specific protection layers.

**SCU = UL + CCL + GFC + NGC + MD − IAV**

**NPV(policy) = (AHL + AGL + ANL + AMD) − (S + AC + L + D)**

**Method and caveat.** This appendix applies the paper's social-cost-of-underinsurance and subsidy formulas to Kenya as a worked example. It is not a claim to a false-precision national number. The appropriate use of the framework is to establish a defensible floor, then layer scenario extensions where the evidence supports them. Kenya is suitable for this purpose because it has a strong enough public record on major climate shocks to permit a first-pass calculation, while still illustrating why a layered resilience architecture is more realistic than assuming rapid universal uptake of conventional insurance.

**1. Flood module.** Kenya's Second NDC reports KES 101.102 billion of damages and KES 86.719 billion of losses from the March–May 2024 floods, for a total economic impact of KES 187.821 billion. IRA-reported flood insurance claims rose from roughly KES 3.14 billion to at least KES 5.0 billion, providing a practical insured-loss proxy range. UNICEF reporting then identifies KES 4 billion of immediate flood response expenditure and KES 1 billion for school rehabilitation, plus documented humanitarian funding equivalent to about KES 0.85 billion. Using only documented components, the flood SCU is therefore KES 188.7–190.5 billion, or about 1.16–1.17 percent of 2024 GDP. An expanded scenario that adds a 0.3 percentage point growth hit estimated by S&P Global lifts this to KES 237.3–239.2 billion, but that should not be seen as the headline figure because of possible overlap with direct-loss measures.

**2. Drought and livestock module.** Kenya's official sources do not line up neatly. The NDC reports that the 2022–2023 drought caused losses exceeding KES 70 billion. Kenya's Adaptation Communication, however, reports that 2.5 million livestock died in 2022 alone, causing losses of more than USD 1.5 billion. Converted at the World Bank's 2024 average exchange rate, that implies approximately KES 202.2 billion. The correct presentation is therefore a conservative drought floor of KES 70 billion and a stress drought floor of KES 202.2 billion, not a false single-point estimate.

**3. Climate-SCU roll-up.** Combining the documented flood module with the conservative drought floor yields a climate-related SCU of KES 258.7–260.5 billion, equal to roughly 1.59–1.61 percent of 2024 GDP. Combining the documented flood module with the drought stress floor yields KES 390.9–


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392.8 billion, or about 2.41–2.42 percent of GDP. A non-headline upper scenario, which adds the flood macro-drag scenario and a drought donor-response funding overlay, reaches KES 515.3–517.2 billion, or about 3.18–3.19 percent of GDP.

**4. Subsidy-envelope scenarios.** The subsidy formula should be applied to particular protection layers, not to "insurance in Kenya" as one undifferentiated market. Using the conservative climate-SCU floor, a policy package that reduces SCU by 10 percent can justify a gross annual public envelope of KES 25.9–26.1 billion; 15 percent supports KES 38.8–39.1 billion; and 20 percent supports KES 51.7–52.1 billion. Using the higher climate case, the corresponding ceilings are KES 39.1–39.3 billion, KES 58.6–58.9 billion, and KES 78.2–78.6 billion. If 15 percent of the gross envelope is lost to administration, leakage, and distortion, the direct subsidy pot is lower, but the conclusion remains unchanged: carefully targeted subsidy can be justified where whole-of-system losses fall by more than policy costs.

**Scope note.** This worked example is deliberately partial. It does not yet include health shocks, funeral costs, SME interruption outside climate events, or a robust household coping-cost estimate. It should therefore be read as a climate-focused SCU floor rather than a complete national underinsurance account.

**Interpretation.** Even the conservative Kenya estimate suggests a climate-related underinsurance burden of roughly 1.6 percent of GDP. That is already large enough to justify a layered resilience architecture: targeted subsidy where measurable loss reduction can be demonstrated; public investment in data, verification, claims rails, parametric triggers, and early warning; stronger county response systems; and bounded, evidence-based state backstops. The policy objective should not be to force conventional retail insurance to do the whole job, but to reduce the total social cost of shocks at the lowest sustainable public cost.

**Source note.** Figures in this appendix draw primarily from Kenya's Second Nationally Determined Contribution (for the 2024 floods and the 2022–2023 drought), IRA-reported 2024 flood claims, UNICEF Kenya flood situation reporting for immediate public and humanitarian response costs, World Bank 2024 GDP and exchange-rate data, S&P Global's estimate of the flood-related growth drag, and World Bank material on Kenya's crop and livestock insurance programmes.


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