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POLYCRISIS RESILIENCE SERIES · RESEARCH REPORT

Polycrisis Resilience 2026

Capacity, clustering and the recovery gap across 166 countries



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EXECUTIVE SUMMARY

Executive Summary

The capacity to absorb compounding crises is concentrated in the same countries that need it least, and the 2020 to 2023 shocks were felt less in the first blow than in the slow, unequal recovery that followed.

Between 2020 and 2026 the world absorbed a pandemic, the sharpest commodity-price shock in half a century, the warmest years on record, a surge in armed conflict and a debt squeeze across the developing world. These were not separate events. Each one travelled through food, energy, finance, health and politics, and each arrived before societies had recovered from the last. This report asks a practical question about that experience: **which capacities let countries withstand, recover from and reduce their vulnerability to crises that compound, and where are those capacities missing?**

To answer it, the report builds a **Polycrisis Resilience Capacity score** for 166 countries that together hold 8.0 billion people. The score combines sixteen public indicators into five capacities: fiscal and financial buffers, social protection and health, institutions, infrastructure and digital access, and exposure to imported food and fuel. It then tests whether those capacities shaped what actually happened to growth, inflation and life expectancy between 2020 and 2024. All data are public, chiefly the World Bank's World Development Indicators and Worldwide Governance Indicators, the EM-DAT disaster database, and IMF commodity prices (World Bank, 2026; World Bank, 2025a; CRED, 2025; IMF, 2026a).

0.81	1.7 bn	63%	49%
share of cross-country variation in resilience capacity explained by income alone (R^2)	people in 50 countries where at least three of five capacities are in the global bottom third	of low-income countries were further below their pre-2020 growth path in 2024 than in 2020; 28% of high-income countries	of 2005–2024 disaster deaths occurred in the lowest-capacity third of countries, home to 23% of people

Principal findings

- **Resilience capacity is steeply sorted by income.** The composite score averages 22 in low-income countries and 70 in high-income countries on a 0 to 100 percentile scale, and income per person explains 81 per cent of its variation (Section 4). The gaps are widest in infrastructure (a score of 9 against 74) and social protection (15 against 81); fiscal buffers are thin almost everywhere.
- **Thin buffers travel together.** Thirty per cent of countries are in the bottom third on at least three of the five capacities, against 21 per cent if weaknesses were independent. These 50 countries hold 1.7 billion people; 38 of them are in Sub-Saharan Africa (Section 5). A country

that is weak in one buffer usually has no other buffer to fall back on, which is the defining condition of polycrisis vulnerability.

- **The shocks of 2020 to 2023 were felt in recovery more than in impact.** Low-income countries' output fell less below trend in 2020 than that of richer countries, but their gap kept widening afterwards: by 2024, 63 per cent of low-income countries were further below their pre-2020 path than in 2020, against 28 per cent of high-income countries, which recovered much of their initial loss. Nearly three-quarters of all countries had not regained their earlier path (Section 6).
- **Static buffers predict outcomes weakly, with one robust exception.** Conditional on income, most capacities have little measurable association with the size of the 2020 growth shock, the 2024 output gap or the 2022 inflation surge. The exception is institutional capacity: countries with more effective government and stronger rule of law lost markedly less life expectancy in 2020–21 than income peers (partial correlation 0.31, significant at the 0.1 per cent level). Larger foreign-exchange reserves were associated with smaller inflation surges.
- **Debt is closing the space to act.** Interest now absorbs more than a fifth of government revenue in 16 countries with 2.6 billion people. In upper-middle-income countries interest rose from about 6 to over 10 per cent of revenue between 2010 and 2024, while it fell in high-income countries (Section 7).

What this means for policy

The evidence points to a resilience agenda built around **recovery capacity** rather than shock prevention alone, and around **institutions and pre-arranged finance** rather than one-off buffers. Section 8 sets out ten priorities. Four carry the most weight: protect the core functions of the state during crises, because institutional capacity is the only buffer that consistently saved lives; pre-arrange disaster and shock finance so that money arrives in days, not months; build adaptive social protection that can scale automatically when shocks hit; and restore fiscal space through debt clauses and lower-cost finance, without which no other buffer can be rebuilt. Section 9 shows how existing instruments, from contingent credit to regional risk pools, can be combined into a layered financing strategy.

The report does not claim that resilience can be bought with a single investment, nor that income growth alone will deliver it. Income explains most of the variation in capacity, but some countries, such as Bhutan, Viet Nam and the Kyrgyz Republic, score well above their income peers, and several resource-rich economies score far below theirs. Capacity is shaped by policy choices, and those choices can be made before the next crisis rather than during it.

SECTION 01

A World of Compounding Crises

Since 2020, shocks have arrived faster than societies could recover from them, and each has travelled through systems that were never designed to fail together.

IN BRIEF

- A polycrisis is a situation in which crises in different systems become causally entangled, so that their combined harm exceeds the sum of the parts (Lawrence et al., 2024).
- Between 2019 and 2022 the IMF's food price index rose by two-thirds and European gas prices rose more than fifteen-fold; both remained well above 2019 levels in September 2026.
- Climate, conflict, debt and health stresses are each at or near their worst levels in decades, and they now interact in the same places.

1.1 From crisis to polycrisis

The term *polycrisis* was coined by the French theorist Edgar Morin in the 1990s to describe the interlocking problems of a planetary civilisation. It returned to wide use after 2022, when the historian Adam Tooze used it to describe a world in which "the whole is even more dangerous than the sum of the parts" (Tooze, 2022). The World Economic Forum's Global Risks Report has since organised its annual survey around interconnected risks, and its 2025 edition ranked state-based armed conflict as the most severe immediate risk and extreme weather as the most severe risk over ten years (World Economic Forum, 2025).

A more precise definition comes from the Cascade Institute, which describes a global polycrisis as one in which crises in multiple global systems become causally entangled in ways that significantly degrade humanity's prospects (Lawrence et al., 2022). In a peer-reviewed synthesis, Lawrence et al. (2024) identify three mechanisms of entanglement: **common causes**, in which one stress such as climate change drives crises in several systems at once; **domino effects**, in which a crisis in one system triggers a crisis in another; and **inter-systemic feedbacks**, in which crises reinforce one another in loops. Each mechanism is familiar from older work on systemic risk (Centeno et al., 2015; Helbing, 2013). What is new is their simultaneity and the speed with which they now operate across borders.

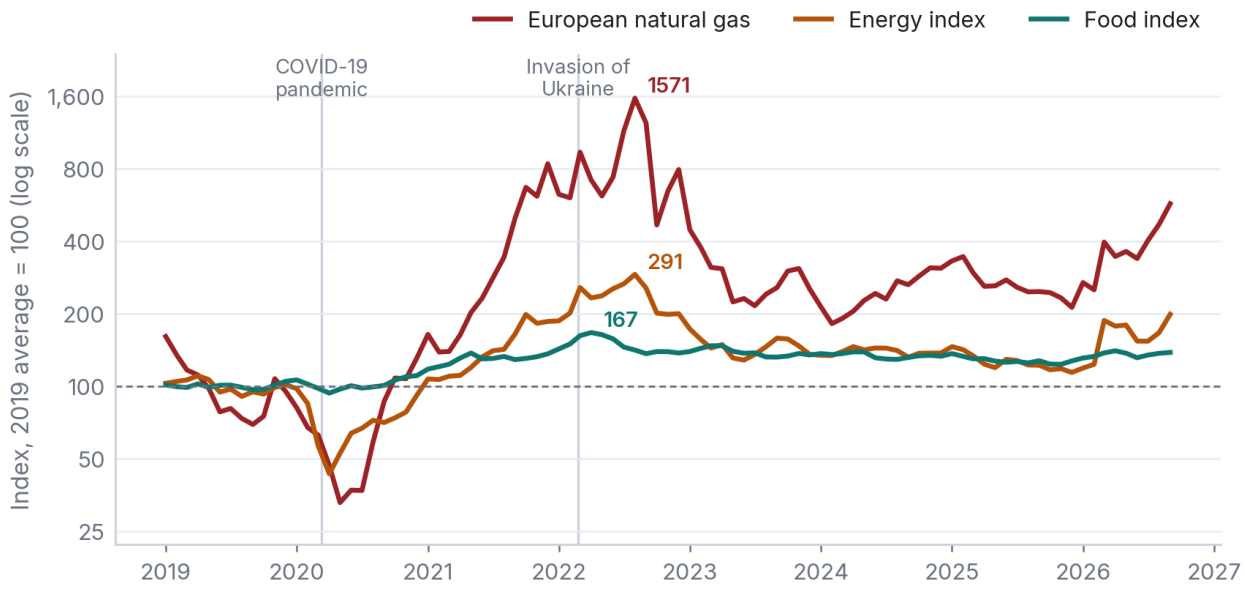
Polycrisis is therefore not simply "many crises at once". Two unrelated events that happen to coincide are a coincidence. A polycrisis exists when the events alter one another's course: when a drought raises food prices that then strain public finances already weakened by a pandemic, which in turn cut the health and social spending that would have cushioned the next shock. The distinction matters for policy, because entangled crises cannot be managed one silo at a time.

1.2 Six years of overlapping shocks

The period since 2020 has offered an unusually clear demonstration of crisis entanglement. COVID-19 caused an estimated 14.9 million excess deaths in 2020 and 2021 alone (Msemburi et al., 2023) and the deepest global recession since the Second World War. Before recovery was complete, supply bottlenecks and the Russian invasion of Ukraine in February 2022 triggered a commodity-price shock. Figure 1 shows the scale: measured against the 2019 average, the IMF food price index peaked at 167 in April 2022, the energy index at 291 and the European natural gas price at 1,571, more than fifteen times its pre-pandemic level (IMF, 2026a; IMF, 2026b).

Figure 1 Food and energy prices rose far above their pre-pandemic levels and have not returned

Monthly global price indices, 2019 average = 100, logarithmic scale



Source: International Monetary Fund primary commodity prices, retrieved from FRED (IMF, 2026a); monthly, January 2019 to September 2026, rebased to the 2019 average. Calculations by H Heuristics.

Prices fell back from their 2022 peaks but did not return to where they started. In September 2026 the food index stood at 138 and the energy index at 199, and European gas prices were still more than five times their 2019 average. For import-dependent economies, those levels translate directly into larger import bills, wider current-account deficits, pressure on currencies and higher domestic inflation. Interest rates rose across the world in response, raising the cost of the debt that many governments had taken on to fight the pandemic.

Meanwhile, the physical climate continued to shift. The World Meteorological Organization confirmed 2024 as the warmest year on record, about 1.55°C above the pre-industrial average (WMO, 2025), and the Copernicus Climate Change Service found it to be the first calendar year above 1.5°C in its ERA5 record (Copernicus Climate Change Service, 2025). Floods in Pakistan in 2022 alone caused more than US$30 billion in damage and economic losses (Government of Pakistan et al., 2022). Armed conflict also intensified: the Uppsala Conflict Data Program recorded the highest number of state-based conflicts since 1946 in 2024 (UCDP, 2025), and forced displacement reached 123 million people by the end of that year (UNHCR, 2025).

Table 1 Major interacting shocks, 2020–2026, and the channels through which they compounded

Shock	Primary system	Main transmission channels	Where harm concentrated
COVID-19 pandemic (2020–22)	Health	Lockdowns cut output and remittances; public debt rose; schooling and health services were disrupted	Informal workers, urban poor, countries with little fiscal space
Commodity-price shock (2021–23)	Energy, food	Import bills, inflation, currency pressure, fertiliser costs, food insecurity	Net importers of food and fuel with low reserves
Global monetary tightening (2022–24)	Finance	Higher borrowing costs, capital outflows, debt distress	Frontier markets and highly indebted governments
Record heat and extreme weather (2023–24)	Climate	Crop losses, flood and storm damage, heat stress on labour and health	Agrarian economies and dense low-lying cities
Conflict escalation (2022–26)	Governance, security	Trade disruption, displacement, aid diversion, regional spillovers	Fragile states and their neighbours
Digital and infrastructure outages	Technology	Single points of failure in software and power systems, as in the 2024 CrowdStrike outage	Highly digitised services everywhere

Source: H Heuristics synthesis of sources cited in the text.

1.3 Why the stresses now interact

Three structural changes explain why shocks now compound more readily than in earlier decades. The first is **tighter coupling**. Global supply chains, financial markets and digital platforms transmit disturbances faster and further than before. The July 2024 CrowdStrike software failure, which disabled about 8.5 million Windows devices worldwide, grounded flights and disrupted hospitals and banks within hours (Weston, 2024). The February 2021 winter storm in Texas showed the same logic in physical infrastructure: frozen gas supply and generation failures cascaded into one of the largest blackouts in United States history (FERC and NERC, 2021).

The second is **eroding planetary buffers**. The 2025 Planetary Health Check found that seven of nine planetary boundaries have been crossed, up from six in the previous assessment (Planetary Boundaries Science, 2025; Richardson et al., 2023). As the Earth system moves further from the stable conditions of the Holocene, climate and ecological stresses become more frequent common causes of crises in food, water, health and migration. The IPCC estimates that 3.3 to 3.6 billion people live in contexts that are highly vulnerable to climate change (IPCC, 2023).

The third is **depleted policy buffers**. Governments entered the 2020s with higher debt than in previous decades and spent heavily to contain the pandemic. Global public debt reached US$102 trillion in 2024, and 3.4 billion people now live in countries that spend more on interest payments than on either health or education (UNCTAD, 2025). Long-term growth prospects in developing economies have also weakened (Kose and Ohnsorge, 2024). When a new shock arrives, many governments simply have less room to respond than they did a decade ago, which turns an ordinary disaster into a lasting setback.

SECTION 02

Defining Polycrisis Resilience

Resilience to a polycrisis is not the sum of resilience to each hazard. It is the capacity to keep essential functions working when several systems fail at once, and to emerge less vulnerable than before.

IN BRIEF

- H Heuristics defines Polycrisis Resilience as the capacity to withstand, adapt to, recover from and reduce vulnerability to multiple interacting and compounding crises.
- The concept extends disaster, climate and economic resilience by focusing on interactions between systems and on reducing vulnerability, not only bouncing back.
- It implies four functions, three scales and five measurable capacities, which Section 4 turns into a country scorecard.

The resilience literature is large and fragmented. Ecologists define resilience as the ability of a system to absorb disturbance and still persist (Holling, 1973); later work added adaptability and transformability, the capacity to change course when persistence is no longer possible (Walker et al., 2004). Disaster-risk practice, codified in the Sendai Framework, emphasises reducing exposure and vulnerability before hazards strike (UNDRR, 2015). Economists study how quickly output recovers after shocks, and find that many losses are never made up (Cerra and Saxena, 2008). Each tradition captures part of the problem; none was designed for crises that interact.

Polycrisis Resilience

The capacity of individuals, communities, societies, economies, institutions and interconnected systems to withstand, adapt to, recover from and reduce vulnerability to multiple interacting and compounding crises. It concerns the ability to maintain essential functions, manage systemic disruptions, adapt to changing conditions and strengthen long-term stability in a world of interconnected global risks.

Definition from the H Heuristics Polycrisis Resilience series, a concept developed by Hunter Hughes (H Heuristics, 2026).

2.1 Four functions of resilience

The definition names four things a resilient system does. They operate over different time horizons, and each requires different capacities. **Withstanding** means absorbing the first blow without losing essential functions: hospitals stay open, payments clear, food reaches markets. **Adapting** means changing practices, assets or institutions as conditions shift, during a crisis and between crises. **Recovering** means returning to, or surpassing, the previous path of welfare and output. **Reducing vulnerability** means emerging from each crisis with lower exposure and sensitivity to the next, rather than accumulating losses.

The fourth function is what distinguishes Polycrisis Resilience from narrower ideas of robustness. A society that recovers fully from every shock but never reduces its exposure is resilient

only until the shocks arrive faster than it can recover, which is precisely the condition that a polycrisis creates. The 2020 to 2023 experience, analysed in Section 6, suggests that many countries are already in that position.

Table 2 The four functions of Polycrisis Resilience and the capacities they draw on

Function	Time horizon	What it requires	Illustrative indicator
Withstand	Hours to weeks	Redundant infrastructure, emergency reserves, effective early warning, continuity of government	Electricity access and reliability; reserves in months of imports
Adapt	Weeks to years	Flexible institutions, information systems, social protection that can scale, adaptive planning	Government effectiveness; social protection coverage
Recover	Months to a decade	Fiscal space, access to finance, functioning markets, reconstruction capacity	Interest as a share of revenue; GDP relative to trend
Reduce vulnerability	Years to decades	Structural transformation, diversification, human development, lower import dependence	Food and fuel import shares; child mortality

2.2 How the concept relates to its neighbours

Polycrisis Resilience borrows from several established concepts but differs from each in scope or emphasis. Table 3 summarises the relationships. Two differences stand out. First, the unit of concern is the **interaction** between systems, not the hazard; a country can be well prepared for floods and still be devastated by a flood that arrives during a currency crisis. Second, the objective includes **reducing vulnerability over time**, which links resilience to long-run development rather than treating it as emergency management.

Table 3 Polycrisis Resilience compared with related concepts

Concept	Core question	What Polycrisis Resilience adds
Disaster risk reduction	How can losses from natural and technological hazards be reduced?	Interactions with economic, political and health shocks; non-hazard crises such as debt
Climate resilience and adaptation	How can societies cope with a changing climate?	Climate as one driver among several; cascades into finance and governance
Economic resilience	How fast does output recover after shocks?	Non-economic functions (health, food, security) and the distribution of losses
Systemic risk	How do failures propagate through networks?	A normative goal: maintaining essential functions and reducing vulnerability
Compound and cascading events	How do hazards combine physically?	Social and institutional amplifiers, not only physical coincidence (Zscheischler et al., 2018)
Human security and development	Are people free from want and fear?	Explicit focus on shocks and their compounding, measured through buffers

2.3 Three scales and five capacities

Resilience operates at different scales. Households rely on savings, social networks and transfers; communities on local services and infrastructure; states on fiscal buffers, institutions and national systems. Global institutions provide the final layer: emergency liquidity, pooled insurance, humanitarian response and trade rules that keep food and medicine moving. A shock that overwhelms one scale is passed up to the next. The analysis in this report focuses on the national scale, because that is where data are most comparable and where most public decisions about buffers are made, but it treats the household and global scales as essential context.

At the national scale, the four functions draw on five broad capacities. **Fiscal and financial capacity** determines whether a government can spend when a crisis hits. **Social protection and health capacity** determines whether households are cushioned and whether the health system keeps working. **Institutional capacity** determines whether public decisions are effective, trusted and lawful under pressure. **Infrastructure and digital capacity** determines whether power, water and communications survive and whether help can be delivered. **External exposure**, measured inversely by dependence on imported food and fuel, determines how strongly global price shocks are transmitted into the domestic economy. Section 4 measures each of the five.

2.4 Resilience for whom?

Resilience is not distributed evenly within societies, and a national score can conceal who bears the losses. During the pandemic and the price shock, informal workers, women, migrants, displaced people and the urban poor absorbed a disproportionate share of income losses, while those with savings, formal jobs and assets recovered quickly. Disasters push an estimated 26 million people into extreme poverty each year because poor households cannot smooth consumption or rebuild assets (Hallegatte et al., 2017). A society can therefore appear resilient on aggregate measures while a large minority falls into poverty traps from which recovery takes a generation.

For this reason the concept of Polycrisis Resilience includes reducing vulnerability, not only restoring averages. Policies that protect the most exposed, such as social protection that scales up in a crisis, are not separate from resilience; they are among its most important components, and they shape whether a country's recovery is shared or narrow.

METHOD NOTE

Why not a single resilience index?

Composite indices simplify, and every simplification hides choices about weights and indicators. This report publishes the five capacities separately as well as a composite, uses only public data and simple percentile averages, and reports how the results change when indicators are dropped (Appendix). The composite is a summary device, not a measure of a single underlying quantity.

Readers should also note that capacity is not the same as outcome. A country can have strong buffers and still suffer a severe shock, or weak buffers and be lucky. Section 6 tests how far capacities predicted outcomes in 2020 to 2024, and finds that the link is weaker than is often assumed.

SECTION 03

How Crises Compound

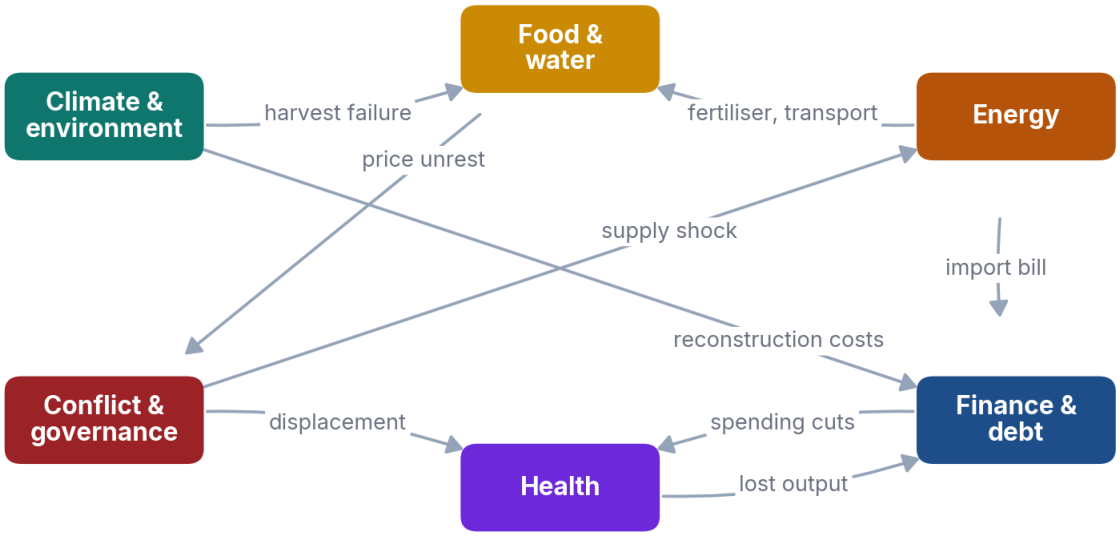
Crises spread through a small number of channels, and the same weaknesses amplify harm in every one of them.

IN BRIEF

- Shocks are transmitted between systems through prices, public budgets, supply chains, health and displacement.
- Four amplifiers recur across cases: thin fiscal buffers, dependence on imported essentials, weak institutions and gaps in infrastructure.
- Pakistan in 2022 and Sri Lanka in 2022 show how a single weakness can turn a manageable shock into a national crisis.

If crises were independent, resilience could be managed system by system. They are not. Figure 2 maps the main channels through which shocks have moved between six systems since 2020. The map is deliberately simple: each arrow represents a channel documented in the literature and in the cases below, not an estimated effect size. Its purpose is to show that a small number of channels carry most of the harm, and that the same domestic weaknesses magnify harm in all of them.

Figure 2 Six systems, nine transmission channels and four shared amplifiers



Shared amplifiers in every channel: thin fiscal buffers · import dependence · weak institutions · infrastructure gaps

Source: H Heuristics, drawing on Lawrence et al. (2024), Helbing (2013) and the cases in this section. Conceptual diagram; arrows indicate documented channels, not effect sizes.

3.1 Five channels of transmission

Prices. Global price shocks are the fastest channel. When energy prices rise, so do the costs of fertiliser, transport and food processing; when food prices rise, poor households, which spend a large share of their budgets on food, cut consumption of other essentials. The 2022 price spike pushed the number of people facing acute food insecurity sharply higher, and the Global Report on Food Crises counted 295 million people in acute food insecurity across 53 countries in 2024 (FSIN and GNAFC, 2025). Hunger more broadly affected about 673 million people (FAO et al., 2025).

Public budgets. Almost every crisis ends up on a government balance sheet. Pandemics raise health spending and cut tax revenue; disasters require reconstruction; price shocks lead to subsidies; higher interest rates raise debt service. Because budgets link every sector, a fiscal squeeze caused by one crisis reduces the capacity to respond to all the others. This is the most important channel for long-run harm, and Section 7 examines it in detail.

Supply chains and infrastructure. Concentrated production and tightly coupled networks transmit physical disruptions. Port closures, grid failures and software outages propagate along supply chains, and losses can far exceed the direct damage. The World Bank estimates that infrastructure disruptions cost households and firms in low- and middle-income countries between US$391 billion and US$647 billion a year (Hallegatte et al., 2019).

Health. Ill health is both a consequence and a cause of other crises. Pandemics disrupt economies; economic crises and conflict cut health spending, disrupt vaccination and raise malnutrition, which in turn increases vulnerability to the next disease outbreak.

Displacement and conflict. Disasters and economic collapse can trigger unrest, and conflict destroys infrastructure, displaces people and disrupts trade. Forced displacement passed 120 million people in 2024, the highest level on record (UNHCR, 2025). Conflict also diverts aid and public spending from development to emergency response.

3.2 Four amplifiers

Across these channels, four domestic conditions repeatedly determine whether a shock becomes a crisis. **Thin fiscal buffers** prevent governments from spending counter-cyclically. **Dependence on imported essentials**, especially food and fuel, transmits global price shocks directly into household budgets and the balance of payments. **Weak institutions** slow decisions, erode trust and allow resources to be diverted. **Infrastructure gaps** leave people without power, water, communications or roads when they are needed most. These are the capacities that Section 4 measures. The two cases below show how they interact.

CASE

Pakistan, 2022: a flood that became a fiscal crisis

Monsoon floods between June and October 2022 submerged about a third of Pakistan, killed more than 1,700 people and affected 33 million. The post-disaster needs assessment put damage at US$14.9 billion and economic losses at US$15.2 billion, with reconstruction needs of more than US$16 billion (Government of Pakistan et al., 2022).

The floods struck an economy already under strain from the global price shock, with low reserves and heavy debt service. Food and fuel import bills rose, the currency weakened and inflation surged: by our measure, Pakistan's peak inflation in 2022–23 was 27 percentage points above its 2015–19 median. In 2024 its GDP was still about 10 per cent below its pre-2020 trend. The flood did not cause these pressures, but it converged with them, and each made the other harder to manage.

CASE

Sri Lanka, 2022: when the buffers ran out

Sri Lanka entered 2022 with a fiscal deficit widened by tax cuts, a tourism sector devastated by the 2019 Easter bombings and the pandemic, and foreign-exchange reserves that had fallen to a few weeks of imports. When global food and fuel prices rose, the country could not pay for essential imports. Shortages of fuel, medicine and cooking gas followed, and in April 2022 the government suspended payments on its external debt.

In our data, Sri Lanka's inflation surge was 46 percentage points above its pre-pandemic median, and its 2024 output was about 20 per cent below its pre-2020 trend, among the largest gaps of any country. Sri Lanka scored reasonably on social protection and institutions, but its fiscal and financial capacity score was just 15 out of 100, among the lowest of any country. A single thin buffer, at the wrong moment, was enough.

3.3 Why recovery, not impact, is the critical phase

Most attention in a crisis goes to the first blow: the death toll, the immediate damage, the fall in output. Yet the evidence on long-run costs points to recovery as the decisive phase. Output losses after financial and political crises tend to be persistent rather than temporary (Cerra and Saxena, 2008). Tropical cyclones reduce national incomes for more than a decade, with no evidence of a rebound (Hsiang and Jina, 2014). Disasters push an estimated 26 million people into extreme poverty each year, and welfare losses are far larger than asset losses because poor households cannot smooth consumption (Hallegatte et al., 2017). Countries whose institutions manage social conflict well recover faster from external shocks (Rodrik, 1999).

The implication is that buffers matter less for how far an economy falls than for how quickly, and how completely, it climbs back. A country that falls far but recovers fully loses less over a decade than one that falls a little and never recovers. Section 6 shows that this pattern describes the 2020 to 2024 experience of much of the developing world.

SECTION 04

Measuring Resilience Capacity

A five-capacity scorecard for 166 countries shows how unevenly the world's buffers against compounding crises are distributed.

IN BRIEF

- The Polycrisis Resilience Capacity score averages percentile ranks on sixteen indicators grouped into five capacities.
- Low-income countries average 22 and high-income countries 70 on a 0 to 100 scale; income explains 81 per cent of the variation.
- Infrastructure and social protection show the steepest income gradients; fiscal buffers are thin across all income groups.

4.1 Building the scorecard

The scorecard translates the five capacities of Section 2 into sixteen indicators drawn from public sources (Table 4). Each indicator is converted to a percentile rank across countries, so that 0 is the weakest and 100 the strongest; indicators for which a higher value signals greater vulnerability, such as interest payments or food import dependence, are reversed. A capacity score is the mean of its indicators' percentiles, and the composite **Polycrisis Resilience Capacity score** is the mean of the five capacity scores. We use the most recent observation from 2016 onward, so that the score reflects capacity on the eve of, or during, the 2020 to 2023 shocks.

Countries are included if they have at least four of the five capacities. That yields 166 countries with 8.0 billion people, about 98 per cent of the world's population. Social protection coverage, from the World Bank's ASPIRE database, is the sparsest indicator, available for 81 countries; capacities are computed when most of their indicators are present. The Appendix describes the treatment of missing data and the sensitivity checks.

4.2 A steep income gradient

Figure 3 shows the average score for each capacity by World Bank income group. The pattern is unambiguous: every capacity rises with income, and the composite score climbs from 22 in low-income countries to 34 in lower-middle-income, 51 in upper-middle-income and 70 in high-income countries. The steepest gradients are in infrastructure and digital access, where low-income countries score 9 against 74 in high-income countries, and in social protection and health, where they score 15 against 81. In the median low-income country, 42 per cent of people have electricity and 20 per cent use the internet.

The exception is fiscal and financial capacity, where the gradient is shallow: 42 in low-income countries against 55 in high-income countries. This is not because poor countries have ample fiscal space. It reflects the fact that many richer countries have also run down their buffers. High-income countries pay less interest relative to revenue (a median of 3.9 per cent, against 7.6 to 9.4 per cent in the other groups), but they hold fewer months of imports in reserves, and several

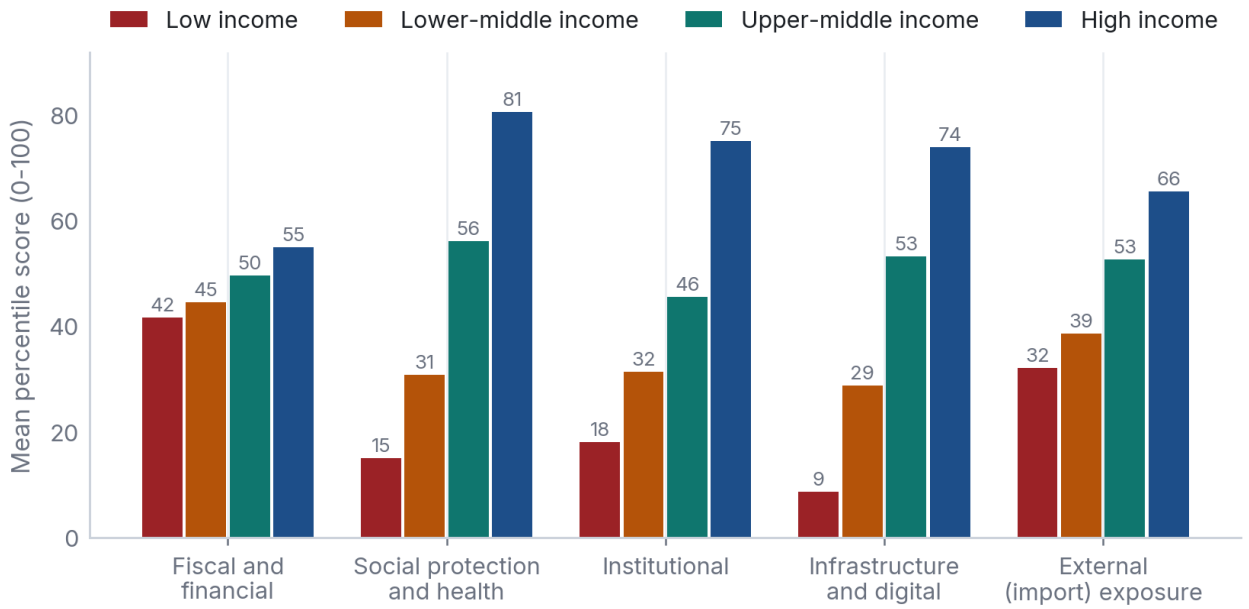
Table 4 The five capacities and their indicators

Capacity	Indicators (direction)	Why it matters for polycrisis
Fiscal and financial	Interest payments, % of revenue (–); government revenue, % of GDP (+); total reserves, months of imports (+); external debt service, % of exports (–)	Ability to spend counter-cyclically and pay for essential imports during a shock
Social protection and health	Under-five mortality (–); population covered by social protection (+); account ownership (+); prevalence of undernourishment (–)	Whether households are cushioned and can receive support quickly
Institutional	Government effectiveness (+); rule of law (+); political stability and absence of violence (+)	Quality, legitimacy and continuity of public decisions under stress
Infrastructure and digital	Access to electricity (+); internet users (+); basic drinking water (+)	Survival of essential services and capacity to deliver aid and information
External exposure	Food imports, % of merchandise imports (–); fuel imports, % of merchandise imports (–)	Strength of transmission of global price shocks into the domestic economy

Source: World Bank World Development Indicators and Worldwide Governance Indicators (World Bank, 2026; World Bank, 2025a). (+) higher is more resilient; (–) reversed before ranking.

Figure 3 Every capacity rises with income, but fiscal buffers are thin everywhere

Mean capacity score by World Bank income group (percentile scale, 0 = weakest, 100 = strongest)



Source: H Heuristics Polycrisis Resilience Capacity scorecard, 166 countries; World Bank data (World Bank, 2026; World Bank, 2025a). Unweighted means of country scores within each income group.

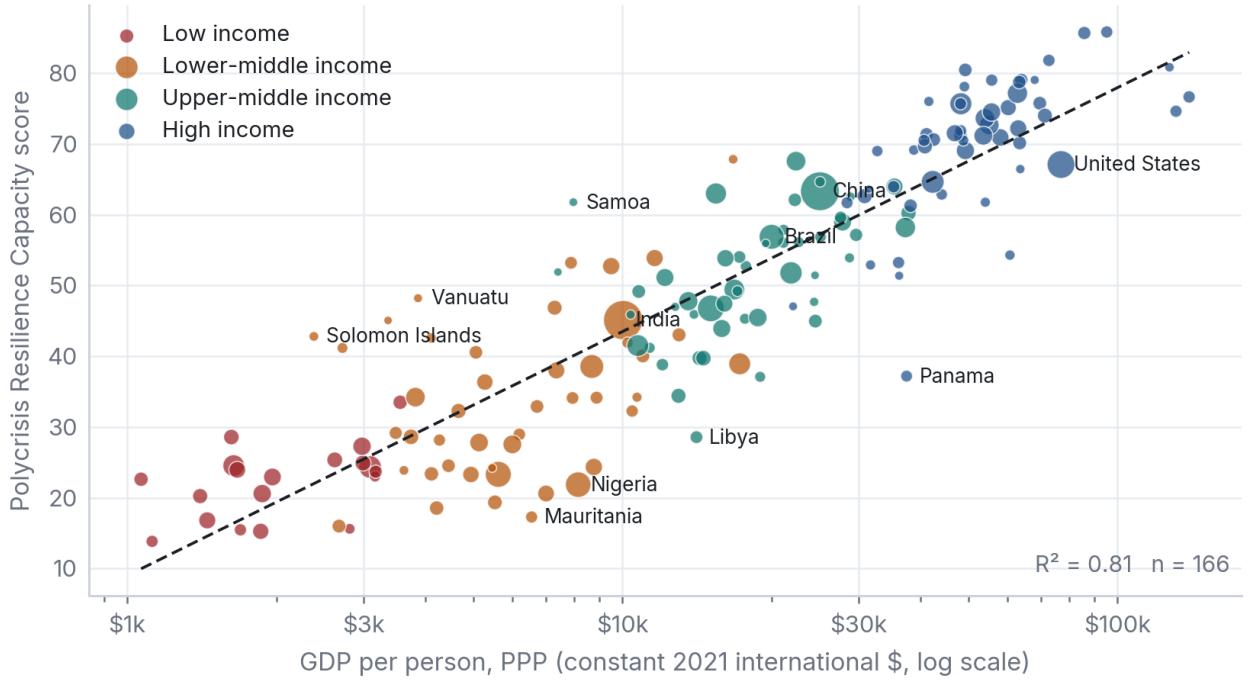
large economies carry high debt. The world entered the polycrisis era with fiscal buffers that were thin almost everywhere, and thinnest where other capacities were also weak.

Income explains a great deal, but not everything. Figure 4 plots the composite score against income per person. The fitted line accounts for 81 per cent of the variation, yet countries at the same income level can differ by twenty points or more. The largest positive outliers include Bhutan, the Kyrgyz Republic, Viet Nam and several Pacific island states, which combine relatively strong institutions and social provision with modest incomes. The largest negative outliers are

dominated by resource-rich economies, including Libya, Angola, Gabon, Nigeria and Bahrain, whose incomes have outrun their institutions and public services. Capacity follows policy as well as prosperity.

Figure 4 Income explains most of the variation in resilience capacity, but not all of it

Composite Polycrisis Resilience Capacity score against GDP per person, 166 countries



Source: H Heuristics scorecard; GDP per person from World Bank WDI (World Bank, 2026). Bubble size proportional to the square root of population. Labels mark the three largest positive and negative residuals and selected large economies.

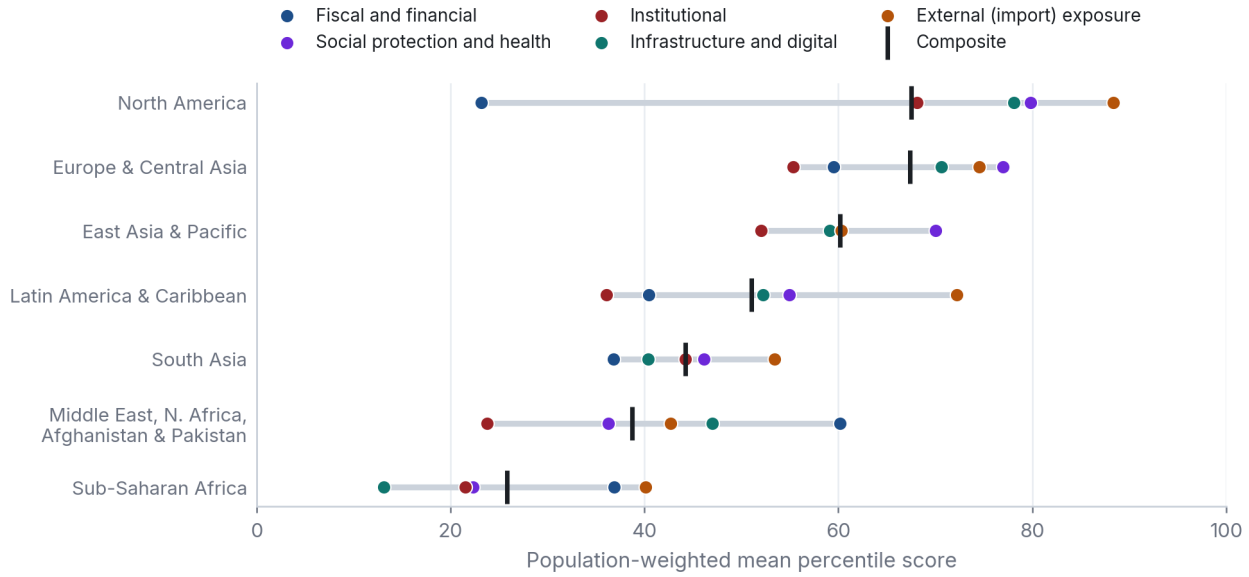
4.3 Regional profiles

Regional averages, weighted by population, reveal different shapes of vulnerability (Figure 5). Sub-Saharan Africa has the lowest composite score and is weak on almost every capacity, with infrastructure and digital access the weakest of all. South Asia's profile is flatter: its institutional and infrastructure scores are moderate, but fiscal buffers are thin. The Middle East and North Africa region combines relatively strong fiscal capacity in oil exporters with very weak institutional scores in conflict-affected states, which gives it a wide spread across capacities. In North America the composite is high, but fiscal capacity is low, reflecting high public debt and modest reserves relative to imports.

The capacities are also strongly related to one another. Across countries, the average correlation between pairs of capacities is 0.55. Social protection and infrastructure are the most closely linked (0.89), followed by social protection and institutions (0.82). Fiscal capacity is the most independent, with correlations of 0.23 to 0.44 with the others. That independence is important: it means fiscal buffers are a separate policy lever, which can be strengthened or depleted regardless of a country's broader level of development, as Sri Lanka's experience illustrates.

Figure 5 Regions differ in the shape, not only the level, of their resilience capacity

Population-weighted mean capacity scores by World Bank region; the bar shows the range across the five capacities



Source: H Heuristics scorecard; World Bank regional classification. Population-weighted means; missing capacities filled with the regional mean for weighting only.

4.4 What the scorecard does not capture

Any scorecard built from national averages leaves out much of what determines resilience in practice. Four omissions matter most. The first is **distribution within countries**. A country with high average electricity access can still leave its poorest regions in the dark, and national social protection coverage says little about whether informal workers, migrants or displaced people are reached. Sub-national and household data would sharpen the picture considerably, and the research agenda in Section 10 returns to this point.

The second is **mobilisation speed**. The indicators describe stocks: reserves held, people covered, institutions rated. They do not measure how quickly those stocks can be turned into action, which, as Section 6 shows, may matter more than their size. The third is **informal and social resilience**: kinship networks, community organisations, religious institutions and diaspora remittances absorb a large share of shocks in many low-income countries, and none appears in official statistics. The fourth is **external support**. Small states with strong ties to donors, regional organisations or a large neighbour can draw on capacity that is not their own, which partly explains the high scores of several Pacific island states relative to their incomes.

These omissions cut in different directions. Distributional gaps and slow mobilisation mean the scorecard probably overstates usable capacity in many middle-income countries, while informal resilience means it may understate the coping capacity of some poorer societies. The scores should therefore be read as a map of formal, national buffers: the layer that public policy can most directly build, and the layer on which households and communities fall back when their own resources are exhausted.

SECTION 05

Why Thin Buffers Travel Together

Weakness in one capacity is rarely offset by strength in another. The countries most exposed to compounding crises are those where every buffer is thin at once.

IN BRIEF

- 50 countries, home to 1.7 billion people, are in the global bottom third on at least three of five capacities.
- That is 30 per cent of countries, against 21 per cent expected if weaknesses were unrelated: thin buffers cluster.
- Thirty-eight of the 50 are in Sub-Saharan Africa; the largest by population are Pakistan, Nigeria and Ethiopia.

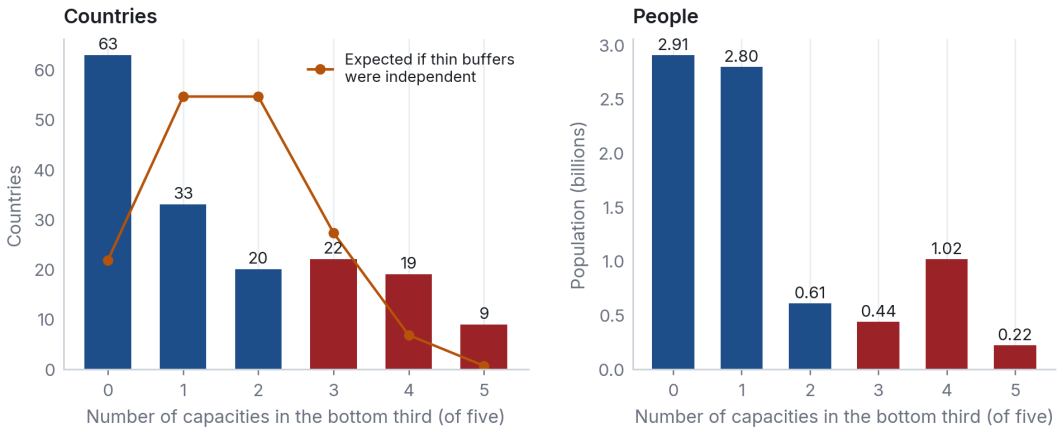
A polycrisis is dangerous because crises interact. The corresponding danger on the capacity side is that weaknesses interact: a government with little fiscal space, weak institutions and patchy infrastructure cannot use one buffer to compensate for the absence of another. To measure this, we count for each country how many of its five capacities fall in the global bottom third. A country with no thin buffers has at least moderate capacity everywhere; a country with five is weak across the board.

5.1 The clustering of weakness

If thin buffers were scattered at random, so that being weak on one capacity told us nothing about the others, about 21 per cent of countries would be thin on three or more. The observed share is 30 per cent. The clustering is just as visible at the other end of the distribution: 63 countries have no thin buffers at all, almost three times the number expected under independence (Figure 6). The world is divided not into countries with different weaknesses but into countries with few weaknesses and countries with many.

Figure 6 Thin buffers cluster: many countries are weak nowhere, and many are weak almost everywhere

Countries and people by number of capacities in the global bottom third



Source: H Heuristics scorecard; population from World Bank WDI (World Bank, 2026). Expected counts from a binomial distribution with five trials and probability one-third. Capacities with missing data are counted as not thin, so stacking is, if anything, understated.

The 50 countries with three or more thin buffers hold 1.68 billion people, 21 per cent of the population covered. Nine countries are thin on all five capacities, including Mozambique, Kenya, Côte d'Ivoire, Cameroon, Burkina Faso, Zimbabwe, the Central African Republic and Guinea-Bissau. Nineteen are thin on four, a group that includes three of the world's most populous countries: Pakistan, Nigeria and Ethiopia, which together hold more than 600 million people. The concentration is overwhelmingly African: 38 of the 50 countries are in Sub-Saharan Africa, with four in the Middle East and North Africa region, four in Latin America and the Caribbean, and four elsewhere in Asia and Europe.

Table 5 Countries with four or five capacities in the global bottom third, by population

Country	Income group	Thin capacities	Composite score	Population (millions)
Pakistan	Lower-middle	4 of 5	23	255
Nigeria	Lower-middle	4 of 5	22	238
Ethiopia	Low	4 of 5	24	135
Kenya	Lower-middle	5 of 5	28	58
Myanmar	Lower-middle	4 of 5	28	55
Sudan	Low	4 of 5	21	52
Uganda	Low	4 of 5	27	51
Afghanistan	Low	4 of 5	23	44
Angola	Lower-middle	4 of 5	24	39
Mozambique	Low	5 of 5	17	36
Madagascar	Low	4 of 5	24	33
Côte d'Ivoire	Lower-middle	5 of 5	21	33
Cameroon	Lower-middle	5 of 5	23	30
Niger	Low	4 of 5	15	28
Mali	Low	4 of 5	25	25
Burkina Faso	Low	5 of 5	25	24

Source: H Heuristics scorecard; 16 largest of the 28 countries with four or more thin capacities. Pakistan and Nigeria lack data on one capacity, which is counted as not thin.

5.2 Why weaknesses cluster

Three mechanisms explain the clustering. The first is **common causes**. Low income constrains every capacity at once: it limits tax revenue, public services, infrastructure investment and the ability to accumulate reserves. Conflict, likewise, degrades institutions, infrastructure and public finances simultaneously, which is why many of the countries with four or five thin buffers are fragile or conflict-affected.

The second is **mutual dependence**. Capacities depend on one another. Social protection systems need digital infrastructure and identification to deliver payments; infrastructure needs effective institutions to be planned, financed and maintained; fiscal capacity needs institutions that can

collect taxes. Weakness in one capacity makes it harder to build the others, so deficits reinforce one another over time.

The third is **shock-induced erosion**. Each crisis depletes buffers, and depleted buffers make the next crisis more damaging. Countries that entered 2020 with thin buffers spent them on the pandemic, then faced the price shock and the rise in interest rates with even less. This is the vicious circle at the heart of polycrisis vulnerability: compounding crises and compounding weaknesses feed one another.

> *"The world is divided not into countries with different weaknesses, but into countries with few weaknesses and countries with many."*
>
> H Heuristics analysis of 166 countries

The policy implication is uncomfortable but important. Programmes that target one capacity in isolation, such as an early-warning system without the institutions to act on its warnings, or a cash-transfer scheme without the payment infrastructure to deliver it, are likely to underperform in the countries that need them most. Building resilience in high-stacking countries requires sequenced investments across several capacities at once, with the binding constraint identified country by country.

5.3 The exceptions

Clustering is strong but not universal, and the exceptions are instructive. Among the 19 low-income countries with enough data, every one has at least three thin buffers: no low-income country has escaped the cluster. Among the 45 lower-middle-income countries, by contrast, nine have one thin buffer or none. They include Bhutan, Uzbekistan and Morocco, which have no capacity in the global bottom third, and the Kyrgyz Republic, India, Vanuatu, Kiribati, Tunisia and Bolivia, which have one.

These countries differ widely in politics and economic structure, but they share a pattern. Each has invested in at least one capacity well ahead of its income level, most often infrastructure or institutions, and that investment appears to have supported the others. Bhutan combines effective government with near-universal electricity from domestic hydropower, which also removes most of its exposure to imported fuel. Morocco and Uzbekistan have broad infrastructure coverage and moderate fiscal buffers. India's large digital public infrastructure, including near-universal identity and fast payment systems, lifts its social and infrastructure scores above those of most lower-middle-income peers.

The exceptions suggest that the cluster is not a trap from which there is no exit, but that exit requires deliberate investment in capacities that reinforce one another. They also suggest that the first step out is usually taken in infrastructure or institutions rather than in fiscal buffers, which tend to follow once growth and revenue improve. For the 50 high-stacking countries, the binding question is which capacity, if built first, would most raise the return on the others.

SECTION 06

The Recovery Gap

The shocks of 2020 to 2023 were a natural experiment in polycrisis resilience. Their clearest lesson is that poorer countries did not fall further, but they recovered less.

IN BRIEF

- In 2020 the median low-income economy fell less below its pre-pandemic trend than richer economies. After 2020 its gap widened while theirs narrowed.
- 74 per cent of countries ended 2024 below their pre-2020 growth path. The direction of travel after 2020, not the size of the first blow, is what separates income groups.
- Conditional on income, institutional capacity is the only buffer robustly associated with better outcomes: it predicted smaller losses of life expectancy.

The years from 2020 to 2023 tested every country's resilience at once. Because the pandemic, the price shock and the tightening of global finance hit almost all countries, they allow a rare comparison of how countries with different capacities fared under broadly similar pressures. We measure four outcomes, each relative to a country's own pre-pandemic baseline so that differences in normal growth or inflation do not distort the comparison.

- **Impact**: growth in 2020 minus average growth in 2015–19, in percentage points.
- **Recovery**: real GDP in 2024 relative to the level it would have reached had 2015–19 growth continued, in per cent.
- **Inflation surge**: peak annual inflation in 2022–23 minus median inflation in 2015–19, in percentage points.
- **Human cost**: the fall in life expectancy at birth between 2019 and 2021, in years.

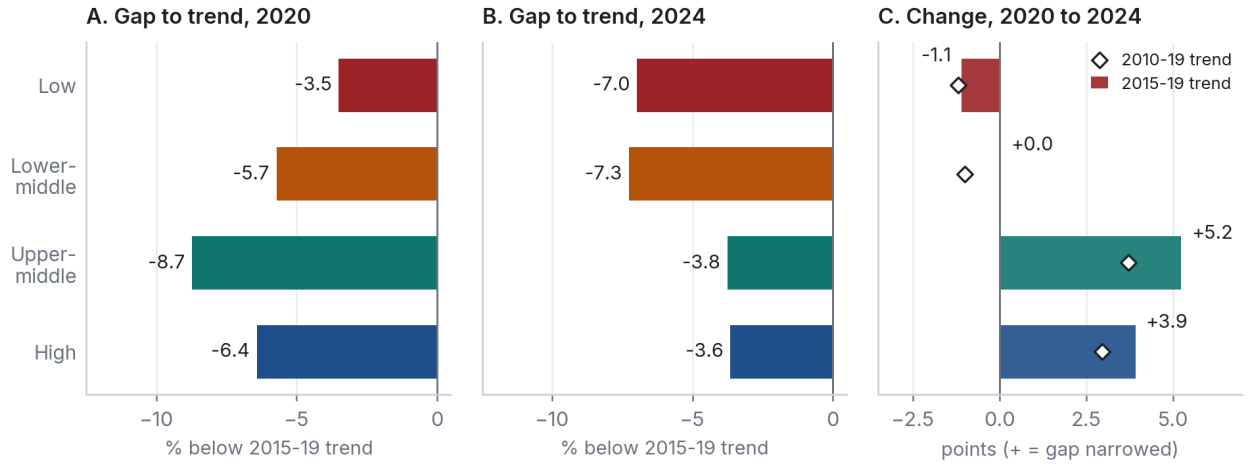
6.1 They fell less, but recovered less

The results overturn a common assumption. Poorer countries did not suffer a larger initial blow. In 2020 the median low-income economy was 3.5 per cent below the level implied by its 2015–19 growth trend, a smaller shortfall than in lower-middle-income (5.7 per cent), upper-middle-income (8.7 per cent) or high-income economies (6.4 per cent) (Figure 7, panel A). Many low-income economies are less integrated into global services and tourism, and imposed shorter or less stringent lockdowns.

The picture reverses in recovery. After 2020, upper-middle-income and high-income economies regained much of their lost ground: their median gap to trend narrowed by 5.2 and 3.9 points respectively by 2024 (panel C). In low-income economies the gap kept widening, by a median of 1.1 points, and in lower-middle-income economies it did not close at all. By 2024, 63 per cent of low-income countries and 49 per cent of lower-middle-income countries were further below trend than in 2020, against 20 per cent of upper-middle-income and 28 per cent of high-income countries. On the 2015–19 base, the median low-income economy ended 2024 7.0 per cent below trend, roughly double the shortfall of high-income economies (3.6 per cent).

Figure 7 Poorer economies fell less in 2020, but their gap to trend widened afterwards while richer economies recovered

Real GDP relative to pre-2020 trend, median by income group



Source: World Bank WDI (World Bank, 2026); calculations by H Heuristics. Medians across 166 countries. The trend extrapolates each country's average growth over the base period from its 2019 GDP level. Panel C: bars use a 2015–19 base, diamonds a 2010–19 base.

The size of these level gaps depends on the choice of base period, and we report this openly. Using a longer 2010–19 trend, which includes the commodity boom in many developing economies and the post-2009 rebound in richer ones, the 2024 gaps are more similar across groups: 4.9 per cent for low-income, 6.9 per cent for lower-middle-income, 6.1 per cent for upper-middle-income and 5.4 per cent for high-income economies. The **direction of travel** is robust to the base: on both trends, the gap narrowed after 2020 in richer economies and widened in low-income ones. Overall, 74 per cent of countries ended 2024 below their 2015–19 path, and 35 were more than 10 per cent below.

Several forces explain the divergence. Richer countries deployed fiscal and monetary support on a scale that poorer countries could not match, and their recoveries were faster as a result. The price shock of 2022 hit food- and fuel-importing developing economies harder, and the tightening of global finance that followed raised their borrowing costs just as they needed to rebuild. For countries such as Sri Lanka (20 per cent below trend), Ethiopia (12 per cent) and Pakistan (10 per cent), the 2020 shock was compounded by later shocks before recovery could take hold. This is the signature of a polycrisis: not one deep fall, but a sequence of blows that prevents recovery.

6.2 Did capacity predict outcomes?

If buffers matter, countries with stronger capacities should have fared better. We test this by correlating each capacity with each outcome across countries. Because capacity is strongly related to income, and income could affect outcomes through many other channels, we focus on **partial rank correlations controlling for income per person**: they ask whether, among countries of similar income, those with stronger capacities did better. Figure 8 reports the results, signed so that a positive value means stronger capacity was associated with a better outcome.

The overall message is sobering. Of the 20 tests of individual capacities, only three are statistically significant at the 5 per cent level, close to the number that would arise by chance. Most associations are small, and some have the opposite sign to what theory predicts. Static buffers, mea-

Figure 8 Conditional on income, most capacities predicted 2020–24 outcomes weakly; institutions and lives are the exception

Partial rank correlation between capacity and outcome, controlling for income per person

	Fiscal	Social	Institutional	Infra.	External	Composite
2020 growth shock	+0.04	-0.03	-0.09	-0.04	+0.21**	+0.07
2024 gap to trend	-0.16	-0.15	-0.12	-0.14	+0.09	-0.14
2022-23 inflation surge	-0.11	-0.18*	+0.02	-0.03	+0.10	-0.06
Life expectancy lost 2019-21	+0.03	+0.10	+0.31**	+0.06	-0.04	+0.13

Source: H Heuristics scorecard and World Bank WDI (World Bank, 2026). Partial Spearman correlations controlling for log GDP per person; n = 136–166. Positive values (blue) mean stronger capacity was associated with a better outcome. * p < 0.05; ** p < 0.01.

sured on the eve of the crisis, did little to determine the size of the 2020 growth shock or the 2024 output gap among countries of similar income.

One result stands out. **Institutional capacity is strongly associated with smaller losses of life expectancy** in 2020–21: a partial correlation of 0.31 with a p-value below 0.001, which survives a conservative correction for multiple testing. Among countries with similar incomes, those with more effective governments, stronger rule of law and greater political stability lost less life during the pandemic. This is consistent with the view that resilience in a health crisis depends above all on the capacity to make and implement collective decisions: to procure and distribute vaccines, maintain health services, communicate risk and enforce public-health measures.

Two further results are suggestive. Countries less dependent on imported food and fuel suffered smaller growth shocks in 2020 (partial correlation 0.21, $p < 0.01$), and countries with larger foreign-exchange reserves experienced smaller inflation surges in 2022–23 (partial correlation 0.17, $p = 0.03$). Both fit the transmission channels described in Section 3. We found no significant protective association for the composite score on any outcome once income is controlled for.

CAVEAT

Reading the evidence

These are cross-country correlations, and they should be read with care. They do not identify causal effects; a capacity that appears unimportant may matter a great deal in specific settings, and the outcomes reflect policy responses as well as pre-existing buffers. Many countries' capacities were themselves changed by the crisis.

The weak associations nonetheless carry a real lesson. Buffers measured in normal times are a poor guide to performance in a polycrisis, because the decisive factors are how quickly buffers can be mobilised, whether they are replenished between shocks, and whether institutions can coordinate across systems. Capacity is necessary, but it is not sufficient: it has to be usable at speed.

6.3 Fourteen economies compared

Table 6 shows the four outcomes for fourteen large or illustrative economies, alongside their composite scores and number of thin buffers. It makes the weak predictive power of static capacity concrete. Kenya, with five thin buffers, ended 2024 close to its pre-2020 path, while the Philippines, with only one, remained 16 per cent below. Viet Nam and China, both with no thin buffers, fell well short of their very rapid pre-pandemic trends. Countries with severe inflation surges, such as Sri Lanka, Pakistan, Ethiopia and Egypt, generally also show large or growing output gaps, consistent with the role of the price and fiscal channels described in Section 3.

Table 6 Capacity and outcomes, 2020–2024, in fourteen economies

Economy	Composite score	Thin buffers	2020 shock (pp)	2024 gap to trend (%)	Inflation surge (pp)	Life exp. lost (yrs)
United States	67	1	−4.6	−0.6	6.2	2.5
China	63	0	−4.4	−8.3	0.0	−0.2
Viet Nam	63	0	−4.2	−8.6	0.5	0.1
Mexico	52	2	−9.9	−2.6	4.3	4.8
South Africa	48	0	−7.2	−3.1	2.5	4.1
Indonesia	47	0	−7.1	−7.7	0.7	2.9
India	45	1	−12.5	−7.6	2.8	3.5
Philippines	42	1	−16.1	−16.5	3.6	3.0
Sri Lanka	40	1	−8.2	−20.5	46.0	0.4
Egypt	39	2	−1.2	−4.0	20.1	2.2
Bangladesh	39	2	−3.6	−7.3	4.3	1.5
Kenya	28	5	−5.0	−1.3	1.4	1.7
Ethiopia	24	4	−2.9	−11.7	23.2	0.4
Pakistan	23	4	−6.0	−10.4	26.7	1.0

Source: H Heuristics scorecard; World Bank WDI (World Bank, 2026). Gap to trend uses the 2015–19 base. Outcome definitions as in the text.

6.4 What the recovery gap costs

A shortfall of 5 to 9 per cent of GDP relative to trend, still widening in many low-income economies, is large. For a low-income country it is equivalent to several years of normal per-person growth, and the evidence on the persistence of output losses suggests much of it will not be recovered (Cerra and Saxena, 2008). The loss falls on economies with the least capacity to absorb it, and it compounds: lower output means lower revenue, which constrains the spending needed to rebuild buffers before the next shock. In this sense the recovery gap is both a consequence of thin buffers and a cause of thinner ones.

SECTION 07

Disasters, Debt and Shrinking Fiscal Space

Climate disasters fall hardest on the countries least able to pay for them, and rising interest costs are eroding the fiscal space they would need to respond.

IN BRIEF

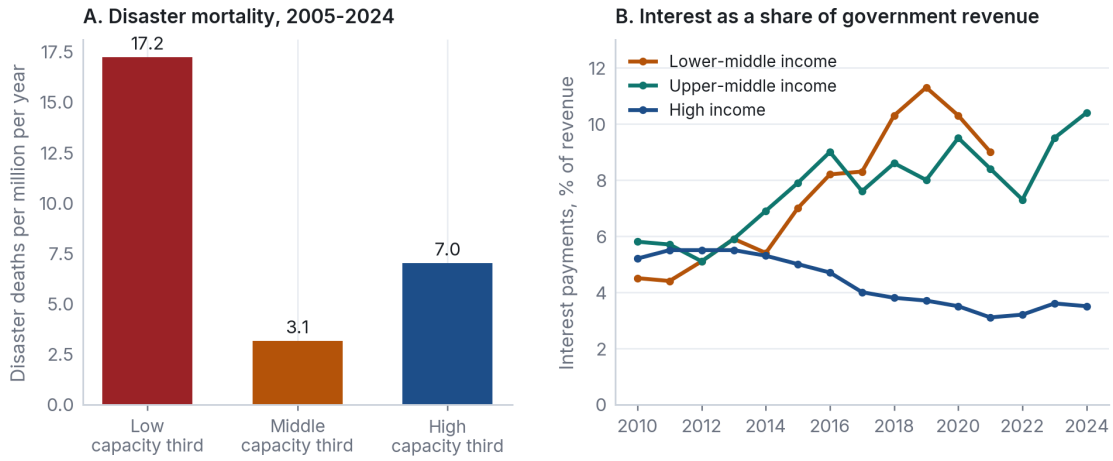
- From 2005 to 2024 the lowest-capacity third of countries suffered disaster death rates more than twice those of the highest-capacity third and five times those of the middle third.
- That third holds 23 per cent of the population but accounted for 49 per cent of disaster deaths.
- Interest absorbs more than a fifth of revenue in 16 countries with 2.6 billion people, and the burden has risen sharply in middle-income countries since 2010.

Two trends define the fiscal side of the polycrisis: disasters are becoming more costly as the climate warms and exposure grows, and many developing-country governments have less room to respond than a decade ago.

7.1 Disaster deaths follow capacity

Recorded deaths from natural disasters have fallen dramatically over the past century, largely because of better warning, preparedness and response. That progress has been uneven. Grouping countries by thirds of the resilience capacity score, we compute disaster death rates for 2005 to 2024 using EM-DAT data as published by Our World in Data (CRED, 2025; Ritchie et al., 2025). The lowest-capacity third recorded 17.2 deaths per million people per year, against 3.1 in the middle third and 7.0 in the highest third (Figure 9, panel A). The high-capacity figure is raised by heatwave deaths in Europe, which illustrates that wealth alone does not guarantee protection from new hazards.

Figure 9 Disasters kill most where capacity is lowest, while interest costs crowd out public spending



Source: Panel A, EM-DAT via Our World in Data (Ritchie et al., 2025) and H Heuristics scorecard thirds, population-weighted. Panel B, World Bank WDI income-group aggregates (World Bank, 2026); series end where aggregates are no longer published.

The lowest-capacity third holds 23 per cent of the population of the 166 countries but accounted for 50 per cent of their disaster deaths. Disaster mortality is lumpy: the 2010 Haiti earthquake alone weighs heavily in the total. But the pattern matches the global evidence: the IPCC found that between 2010 and 2020, human mortality from floods, droughts and storms was 15 times higher in highly vulnerable regions than in regions with very low vulnerability (IPCC, 2023). Countries with limited multi-hazard early-warning coverage have disaster mortality several times higher than those with comprehensive coverage (UNDRR and WMO, 2023).

Bangladesh shows what capacity can achieve. Cyclones killed an estimated 300,000 people or more in 1970 and about 138,000 in 1991. After decades of investment in early warning, shelters, embankments and community volunteers, the far stronger Cyclone Sidr in 2007 killed about 3,400 (Haque et al., 2012). The hazard did not change; the capacity to withstand it did.

7.2 The squeeze on fiscal space

Responding to disasters, and to every other crisis, requires public money. That money is increasingly committed to creditors. Panel B of Figure 9 tracks interest payments as a share of government revenue. In high-income countries the ratio fell from about 5 per cent in 2010 to 3.5 per cent in 2024, helped by a decade of low interest rates. In upper-middle-income countries it rose from 5.8 to 10.4 per cent, and in lower-middle-income countries it more than doubled between 2010 and 2019 before the aggregate series ends. Among the 141 countries with recent data, 16 spend more than a fifth of revenue on interest, and those countries are home to 2.6 billion people.

UNCTAD estimates that 3.4 billion people live in countries that spend more on interest than on either health or education, and that developing countries' net interest payments have risen far faster than their revenues (UNCTAD, 2025). Every additional dollar of interest is a dollar unavailable for adaptation, social protection or the reconstruction that follows a disaster. The fiscal squeeze is thus not a separate problem from the climate or health crisis; it is the channel through which those crises do their longest-lasting damage.

7.3 When disasters meet debt

The interaction between disasters and debt is a textbook polycrisis loop. A disaster destroys assets and output, reduces tax revenue and requires emergency spending; governments borrow to cover the gap, often at higher rates because the disaster has increased perceived risk; higher debt service then crowds out the investment in resilience that would reduce losses from the next disaster. Small island states, where one storm can destroy a large share of GDP, are especially exposed.

The UN Office for Disaster Risk Reduction estimates that, once cascading and ecosystem costs are included, disasters cost the world more than US$2.3 trillion a year, roughly ten times the direct economic losses usually reported (UNDRR, 2025). Breaking the disaster–debt loop requires two things at once: investing ahead of disasters to reduce losses, and arranging finance before they happen so that response does not depend on new borrowing at punitive rates. Section 9 discusses the instruments available.

SECTION 08

Ten Priorities for Polycrisis Resilience

The evidence favours capacities that can be mobilised quickly and replenished between shocks: institutions, pre-arranged finance, adaptive social protection and fiscal space.

IN BRIEF

- Priorities are ranked by how directly they address the weaknesses found in Sections 4 to 7, not by cost.
- Four are foundational: protecting core state functions, pre-arranging crisis finance, building adaptive social protection and restoring fiscal space.
- In countries with three or more thin buffers, investments must be sequenced across capacities rather than made one at a time.

The findings of this report suggest five design principles for a resilience agenda. First, **recovery matters as much as impact**: the decisive divergence between countries after 2020 came in the years after the first blow, so resilience policy must be judged by how fast and how completely countries return to their path. Second, **usability beats stock**: buffers measured in normal times predicted outcomes weakly, so the speed with which capacity can be mobilised matters more than its nominal size. Third, **institutions are the master capacity**: they were the only buffer robustly associated with lives saved. Fourth, **weaknesses cluster**, so isolated interventions underperform where they are most needed. Fifth, **fiscal space is the binding constraint** for most developing countries, and without it no other buffer can be rebuilt.

Table 7 translates these principles into ten priorities. Each is linked to the capacity it strengthens and the resilience function it serves.

8.1 Foundational priorities

Protect core state functions. The strongest result in this report is the association between institutional capacity and lives saved during the pandemic. Institutions cannot be built in a crisis, but their core functions can be protected during one. Governments can identify the functions that must never stop, such as health services, payment systems, civil registration and public communication, and protect their budgets, staff and data systems in advance. Cross-ministry crisis units with clear mandates help, because polycrises cut across the boundaries of every ministry.

Pre-arrange crisis finance. Money that arrives months after a disaster is worth far less than money that arrives in days. Rules-based, pre-arranged finance, agreed before the shock with clear triggers, speeds response and reduces the political temptation to delay (Clarke and Dercon, 2016). Section 9 describes how existing instruments can be layered so that small, frequent shocks are covered by budget reserves and large, rare ones by insurance and contingent credit.

Build adaptive social protection. Social protection is the main channel through which governments can cushion households, and therefore the main determinant of whether a shock becomes a poverty trap. In 2023, for the first time, more than half of the world's population, 52.4 per cent, was covered by at least one social protection benefit, but 3.8 billion people remained without any

Table 7 Ten priorities for Polycrisis Resilience

Priority	Capacity	Function	Illustrative actions
1. Protect core state functions in crises	Institutional	Withstand, adapt	Continuity-of-government plans; protected budgets for health, payments and civil registration; crisis decision units with cross-ministry mandates
2. Pre-arrange crisis finance	Fiscal	Recover	Layered strategy of reserves, contingent credit, parametric insurance and pre-agreed triggers so money arrives in days
3. Build adaptive social protection	Social	Withstand, recover	Registries covering most households; digital payments; rules that scale transfers automatically when shocks hit
4. Restore fiscal space	Fiscal	Recover, reduce	Climate-resilient debt clauses; faster restructuring; concessional and lower-cost finance; domestic revenue mobilisation
5. Early warning and anticipatory action	Institutional, infrastructure	Withstand	Universal multi-hazard early warning by 2027; forecast-based financing that releases funds before impact
6. Reduce exposure to imported essentials	External	Reduce vulnerability	Domestic and distributed clean energy; regional food reserves; diversified suppliers; fertiliser efficiency
7. Resilient and distributed infrastructure	Infrastructure	Withstand, reduce	Resilience standards in new assets; mini-grids and storage; redundancy in critical networks and digital systems
8. Invest in health and human capital	Social	Withstand, reduce	Primary health care and surveillance; nutrition; schooling continuity plans
9. Stress-test across systems	Institutional	Adapt	National risk registers that model interactions; joint fiscal, food, energy and health scenario exercises
10. Measure and monitor capacity	All	Adapt	Annual capacity scorecards; open data; post-crisis reviews that track recovery, not only damage

(ILO, 2024). Adaptive systems combine broad registries, digital payments and rules that scale benefits automatically when a shock hits, so that support reaches people within weeks.

Restore fiscal space. With interest costs absorbing a fifth or more of revenue in countries with 2.6 billion people, many governments cannot invest in resilience without relief on the debt side. Climate-resilient debt clauses, which pause debt service after a qualifying disaster, have been adopted by a growing number of lenders, including the World Bank for small states. Faster and more predictable debt restructuring, more concessional finance and stronger domestic revenue systems are all part of the same agenda (UNCTAD, 2025).

8.2 Reducing exposure and building infrastructure

Early warning and anticipatory action are among the most cost-effective investments available. Just 24 hours' warning of a coming storm or heatwave can cut the ensuing damage by 30 per cent (Global Commission on Adaptation, 2019), and the UN's Early Warnings for All initiative aims to protect everyone on Earth with such systems by 2027. Warnings save lives only when they trigger action, which is why they should be paired with forecast-based financing that releases funds before a hazard strikes.

Reducing exposure to imported essentials addresses the price channel directly. The clean-energy transition is, among other things, a resilience strategy: domestic solar, wind and storage replace imported fuel with local capital, and distributed systems keep power flowing when central grids fail. More than 660 million people still lack electricity, most of them in Sub-Saharan Africa (IEA et al., 2025). Regional food reserves, diversified suppliers and more efficient use of fertiliser can reduce exposure to food-price spikes.

Resilient infrastructure pays for itself. The World Bank estimates a net benefit of US$4 for every dollar invested in making infrastructure more resilient in low- and middle-income countries (Hallegatte et al., 2019). Digital infrastructure has become equally essential: about 2.2 billion people remain offline (ITU, 2025), and with them the ability to receive digital payments, warnings and services. At the same time, the CrowdStrike outage showed that digital systems can themselves be a single point of failure, so redundancy and diversity matter as much as coverage.

8.3 Sequencing in high-stacking countries

For the 50 countries with three or more thin buffers, the challenge is not choosing a priority but sequencing several. A useful rule is to start with the capacity whose absence most limits the use of the others. In many low-income countries that is fiscal space, because it constrains every other investment; in conflict-affected states it is institutional continuity; in countries with large unserved populations it may be the digital and payment infrastructure needed to deliver social protection. International partners can help by financing packages of complementary investments, rather than single projects that depend on capacities the country does not yet have.

8.4 Avoiding maladaptation

Not every investment labelled as resilience reduces vulnerability. Sea walls that protect one district can divert floods to another; subsidies that cushion fuel-price shocks can lock in import dependence and drain fiscal buffers; stockpiles held without rules for release can be captured or wasted. The guard against such maladaptation is to test each investment against the five capacities together: does it strengthen one capacity at the expense of another, and does it reduce exposure to the next shock or only soften the last one? Investments that pass both tests, such as distributed clean energy, adaptive social protection and early warning linked to pre-arranged finance, deserve priority because they build several capacities at once.

SECTION 09

Financing Resilience

The money for resilience exists in principle. What is missing is finance that is cheap enough, fast enough and arranged before it is needed.

IN BRIEF

- Developing countries need an estimated US$310 to 365 billion a year for adaptation by 2035; international public adaptation finance was about US$26 billion in 2023 (UNEP, 2025).
- Every dollar of resilient infrastructure yields about four dollars in net benefits; early warning and anticipatory action yield more.
- A layered strategy matches each instrument to the frequency and severity of the risk it covers.

9.1 The economics of acting early

The case for investing in resilience before crises strike is well established. The Global Commission on Adaptation estimated that investing US$1.8 trillion globally between 2020 and 2030 in five areas, namely early warning, climate-resilient infrastructure, improved dryland agriculture, mangrove protection and resilient water resources, could generate US$7.1 trillion in net benefits (Global Commission on Adaptation, 2019). The World Bank's analysis of infrastructure finds a four-to-one benefit-to-cost ratio for resilience investments (Hallegatte et al., 2019). The UNDRR's 2025 global assessment, subtitled *Resilience Pays*, argues that prevention is systematically underfunded relative to response (UNDRR, 2025).

Yet the finance gap is large and widening. The UNEP Adaptation Gap Report estimates that developing countries will need US$310 to 365 billion a year for adaptation by 2035, more than ten times current international public flows (UNEP, 2025). Closing it will require more money, and money that is better structured.

9.2 A layered strategy

Risk-layering matches financial instruments to the frequency and severity of the risks they cover. Small, frequent shocks are cheapest to absorb through budget reserves and contingency funds. Medium shocks are suited to contingent credit lines, which provide liquidity at pre-agreed terms when a trigger is met. Large, rare shocks, for which reserves would be prohibitively expensive, are best transferred to insurance markets or pooled across countries. Table 8 sets out the main instruments.

The Caribbean Catastrophe Risk Insurance Facility, created in 2007 as the first multi-country parametric risk pool, illustrates the value of speed: because payouts are triggered by measured hurricane wind speeds or earthquake intensity rather than assessed losses, member governments receive funds within 14 days of an event (CCRIF SPC, 2025). African Risk Capacity, a specialised agency of the African Union, applies the same model to drought and other hazards (African Risk Capacity, 2025).

Table 8 Layered financing for polycrisis resilience

Risk layer	Instrument	Examples	Speed of payout
Frequent, low-severity	Budget reserves and contingency funds	National disaster funds; contingency lines in annual budgets	Days
Frequent, low-severity	Adaptive social protection	Shock-responsive cash transfers using existing registries	Days to weeks
Medium severity	Contingent credit	World Bank Cat DDOs; IMF precautionary lines; regional development bank facilities	Days to weeks once triggered
Medium severity	Debt-service pauses	Climate-resilient debt clauses that suspend payments after qualifying disasters	Immediate relief on cash flow
Rare, high-severity	Sovereign parametric insurance and risk pools	CCRIF SPC in the Caribbean (CCRIF SPC, 2025); African Risk Capacity (African Risk Capacity, 2025)	Within two weeks for CCRIF
Rare, high-severity	Catastrophe bonds	Sovereign cat bonds issued by Mexico, Chile, Jamaica, the Philippines and others	Weeks
Structural, long-term	Concessional resilience finance	IMF Resilience and Sustainability Trust (IMF, 2025); multilateral development bank programmes	Months to years
Losses beyond adaptation	Loss and damage funds	Fund for responding to Loss and Damage (FRLD, 2025); Global Shield against Climate Risks (Global Shield against Climate Risks, 2025)	Months

9.3 Designing finance for compounding crises

Most existing instruments were designed for single hazards. A finance system fit for a polycrisis needs three additional features. First, **triggers that recognise compound events**: a drought during a currency crisis requires more support than either alone, and instruments could link payouts to combinations of physical and economic indicators. Second, **protection of fiscal space during recovery**, not only during the emergency, since the evidence of Section 6 shows that the costliest losses come in the years after a shock. Debt-service pauses and contingent grants that extend into the recovery phase serve this purpose. Third, **finance for prevention that is counted as such**: resilience investments are often classified as development spending and compete with other priorities, rather than being recognised as reducing future liabilities.

SOURCES OF FINANCE

Where the money could come from

- **Reallocating response to prevention.** Humanitarian and reconstruction spending dwarfs prevention budgets; even a small shift towards early action has high returns.
- **Multilateral balance sheets.** Capital adequacy reforms at multilateral development banks can expand lending for resilience without new capital.
- **Special drawing rights.** Rechannelling SDRs through vehicles such as the IMF's Resilience and Sustainability Trust provides long-term, low-cost finance (IMF, 2025).
- **Domestic revenue.** Stronger tax systems remain the most sustainable source of fiscal space, and the one that most strengthens institutions.
- **Private capital.** Insurance and capital markets can absorb catastrophe risk at scale, provided that premiums are affordable and the poorest countries receive premium support.

SECTION 10

Conclusion and Research Agenda

The age of compounding crises will test the capacity of every society. The countries least prepared for it are identifiable now, and so are the investments that would help most.

IN BRIEF

- Capacity to withstand compounding crises is unequal, clustered and only partly determined by income.
- The 2020 to 2023 shocks hit hardest in recovery, and institutions were the buffer that mattered most for lives.
- Five research questions would sharpen the evidence base for the next decade of policy.

This report set out to measure the capacities that let countries withstand, recover from and reduce their vulnerability to compounding crises, and to test whether those capacities shaped what happened in the most severe sequence of global shocks in generations. Four conclusions stand out.

1. **Capacity is unequal.** Income explains most of the variation in resilience capacity, and low-income countries score lowest on almost every dimension. But capacity also follows policy: countries such as Bhutan and Viet Nam outperform their income peers, and many resource-rich economies underperform theirs.
2. **Weaknesses cluster.** Fifty countries with 1.7 billion people have at least three thin buffers out of five. In these countries, crises in one system cannot be offset by strength in another, and isolated interventions are unlikely to succeed.
3. **Recovery is where resilience is decided.** Poorer countries fell less in 2020 but recovered less, and their gap to their pre-pandemic path widened while richer countries closed theirs. A resilience agenda that focuses only on the first blow misses where most of the damage occurs.
4. **Institutions are the master capacity.** Among countries of similar income, effective, lawful and stable institutions were the one buffer robustly associated with lives saved. They are slow to build and easy to erode, and they should be protected above all during crises.

None of these conclusions implies fatalism. The capacities measured here can be built, and the history of disaster risk reduction, from Bangladesh's cyclone shelters to the Caribbean's risk pool, shows that investment in resilience changes outcomes. The window in which to act is the interval between crises, which is growing shorter.

SUMMARY

Five messages for decision-makers

- **Judge resilience by recovery.** Track how far and how fast output, incomes and services return to their pre-shock path, not only the size of the first blow.
- **Protect institutions first.** Keep the core functions of the state financed and staffed during crises; they are the buffer most clearly linked to lives saved.
- **Arrange money before it is needed.** Pre-agreed, rules-based finance reaches people in days; ad hoc appeals take months.

- **Invest in packages, not projects.** Where buffers are thin everywhere, build complementary capacities together and sequence them deliberately.
- **Create fiscal space for resilience.** Debt relief, cheaper finance and stronger domestic revenue are preconditions for every other investment.

10.1 Research agenda

The evidence base for Polycrisis Resilience remains thin, and five questions would do most to improve it.

1. **Usable capacity.** How quickly can different buffers be mobilised in practice? Measures of mobilisation speed, such as days from shock to first transfer, would complement the static indicators used here.
2. **Causal identification.** Which capacities cause better outcomes, rather than merely accompanying them? Within-country studies, natural experiments and the staggered roll-out of programmes offer routes to causal estimates.
3. **Interaction effects.** Do capacities complement one another, so that the return to one depends on the level of others? The clustering documented in Section 5 suggests that they do, but the interaction has not been estimated.
4. **Sub-national and household resilience.** National averages hide large differences within countries. Household panel data and geospatial indicators could identify who is least resilient within each country.
5. **Compound-event finance.** How should insurance and contingent-credit triggers be designed for compound events, and what would they cost?

H Heuristics will update the scorecard as new data are published, and the indicators, code and results for this report are available on request. Readers are encouraged to test the findings, challenge the choices made and propose better measures. Further reports in the Polycrisis Resilience series are published at researchreports.hheuristics.com (H Heuristics, 2026).

APPENDIX

Appendix: Data and Methods

Sources, definitions, treatment of missing data and sensitivity checks for the analysis in Sections 4 to 7.

Data sources

All indicators were downloaded through the World Bank API in November 2026 from the World Development Indicators (source 2) and the Worldwide Governance Indicators (source 3) (World Bank, 2026; World Bank, 2025a). Disaster mortality comes from EM-DAT as published by Our World in Data (CRED, 2025; Ritchie et al., 2025). Commodity prices are IMF primary commodity price series retrieved from FRED (IMF, 2026a). Country income groups and regions follow the World Bank classification current at the time of download. The universe is 217 economies classified by income; 166 meet the inclusion rule described below.

Table 9 Indicator coverage

Indicator (World Bank code)	Capacity	Countries with data
Interest payments, % of revenue (GC.XPN.INTP.RV.ZS)	Fiscal	148
Revenue excluding grants, % of GDP (GC.REV.XGRT.GD.ZS)	Fiscal	149
Total reserves, months of imports (FI.RES.TOTL.MO)	Fiscal	171
External debt service, % of exports (DT.TDS.DECT.EX.ZS)	Fiscal	118
Under-five mortality rate (SH.DYN.MORT)	Social	196
Population covered by social protection (per_allsp.cov_pop_tot)	Social	81
Account ownership, % of adults (FX.OWN.TOTL.ZS)	Social	152
Prevalence of undernourishment (SN.ITK.DEFC.ZS)	Social	168
Government effectiveness (GOV_WGI_GE.EST)	Institutional	205
Rule of law (GOV_WGI_RL.EST)	Institutional	207
Political stability and absence of violence (GOV_WGI_PV.EST)	Institutional	207
Access to electricity, % of population (EG.ELC.ACCS.ZS)	Infrastructure	215
Individuals using the internet, % (IT.NET.USER.ZS)	Infrastructure	207
At least basic drinking water, % (SH.H2O.BASW.ZS)	Infrastructure	214
Food imports, % of merchandise imports (TM.VAL.FOOD.ZS.UN)	External	184
Fuel imports, % of merchandise imports (TM.VAL.FUEL.ZS.UN)	External	184

Source: World Bank WDI and WGI (World Bank, 2026; World Bank, 2025a). Counts are of economies with at least one observation from 2016 onward.

Construction of the scores

For each indicator we take each country's most recent observation from 2016 onward and convert it to a percentile rank among all countries with data, reversing indicators for which a higher value indicates greater vulnerability. A capacity score is the mean of the available indicator percentiles, computed when at least three of four indicators (fiscal, social), two of three (institutional, infrastructure) or one of two (external) are present. The composite score is the unweighted mean of the five capacity scores and is computed for countries with at least four capacities: 119 countries have all five and 47 have four. Fiscal capacity is the most frequently missing, chiefly for countries that do not report government finance statistics to the World Bank.

Outcome measures

Growth shock: real GDP growth in 2020 minus mean growth in 2015–19. Gap to trend: real GDP (constant prices) in year t divided by the 2019 level grown at the 2015–19 mean rate, minus one; a 2010–19 base is used as a robustness check. Inflation surge: the higher of annual consumer-price inflation in 2022 and 2023, minus median inflation in 2015–19. Life-expectancy loss: life expectancy at birth in 2019 minus that in 2021. Partial correlations are Spearman correlations between the residuals of rank regressions of the outcome and the capacity on the rank of log GDP per person (PPP, constant 2021 international dollars). With 20 capacity-outcome tests, a Bonferroni threshold at the 5 per cent level is $p < 0.0025$.

Sensitivity checks

The composite is robust to reasonable alternative constructions. Its rank correlation with a version that drops the external-exposure capacity is 0.97; with an equal-weighted mean of all sixteen indicator percentiles, 0.99; with a geometric mean of the five capacities, 0.99; and with the weakest single capacity, 0.90. The clustering result is also robust to the threshold: defining thin buffers as the bottom quarter rather than the bottom third, 37 countries with 1.46 billion people are thin on three or more capacities, 22 per cent of countries against 10 per cent expected under independence. The recovery result is reported under both 2015–19 and 2010–19 trends in Section 6; the level of the 2024 gaps is sensitive to the base period, while the direction of change after 2020 is not.

Limitations

Four limitations deserve emphasis. First, percentile scores are relative: a country's score can change because others improve or deteriorate. Second, the indicators measure capacity in normal times and may overstate the usable capacity of countries whose buffers cannot be mobilised quickly. Third, several indicators are reported with lags and gaps, and the most recent observations for some countries pre-date 2020. Fourth, the outcome analysis is cross-sectional and cannot separate the effects of capacities from those of the policy responses that countries chose; it should be read as descriptive evidence, not as causal estimates.

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About the Polycrisis Resilience series. The series develops Polycrisis Resilience, a concept developed by Hunter Hughes, as a framework for understanding how societies can withstand, adapt to, recover from and reduce vulnerability to interacting crises. This report is the scorecard and evidence instalment of the series.

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