Report of the G20 High Level Independent Panel

CLOSING THE DEAL
FINANCING OUR SECURITY AGAINST PANDEMIC THREATS

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Financing Our Security Against Pandemic Threats

Report of the G20 High Level Independent Panel on Financing the Global Commons for Pandemic Preparedness and Response

November 2025

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Acronyms and Abbreviations

Africa CDC	Africa Centres for Disease Control and Prevention
AI	artificial intelligence
AVMA	African Vaccine Manufacturing Accelerator
CCRT	Catastrophe Containment and Release Trust
CEO	chief executive officer
CEPI	Coalition for Pandemic Preparedness and Innovation
DNA	deoxyribonucleic acid
DFI	development finance institution
DRC	Democratic Republic of Congo
EUA	emergency use authorization
FEVR	Framework for Health, Social, and Economic Vulnerabilities
G7	Group of 7
G20	Group of 20
GDP	gross domestic product
GHS Index	Global Health Security Index
HIC	high-income country
HLIP	High Level Independent Panel on Financing the Global Commons for Pandemic Preparedness and Response
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFI	international financial institution
IHR	International Health Regulations
IMF	International Monetary Fund
IMF RST	IMF Resilience and Sustainability Trust
IPPS	International Pandemic Preparedness Secretariat
JEE	Joint External Evaluation
JFHTF	Joint Finance and Health Task Force

LIC	low-income country
LLMIC	low- and lower-middle income country
LMIC	low- and middle-income country
MCM	medical countermeasure
MDB	multilateral development bank
ML4	maturity level 4
ML3	maturity level 3
MOU	memorandum of understanding
NAPHS	National Action Plan for Health Security
NRA	National Regulatory Authority
NATO	North Atlantic Treaty Organization
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
PAHO	Pan American Health Organization
PDB	public development bank
PPE	personal protective equipment
PPR	prevention, preparedness, and response
PQ	pre-qualification
QA	quality assurance
R&D	research and development
SPAR	IHR State Parties Self-Assessment Annual Report
SRA	Stringent Regulatory Authority
WHO	World Health Organization
UMIC	upper-middle-income country
UN	United Nations
UN HLM	United Nations High-Level Meeting on Pandemic Prevention, Preparedness, and Response
UNGA	UN General Assembly

Foreword

Pandemic preparedness stands at a precipice.

In 2021, during the height of social and economic devastation wrought by the COVID-19 pandemic, the Group of 20 (G20) convened the High Level Independent Panel on Financing the Global Commons for Pandemic Preparedness and Response (HLIP) to guard against future health security shocks and light a path to a more pandemic-proof future.

Four years later, the world faces a different kind of turmoil. Social distrust and fragmentation are rising. Many countries are pulling back their official development assistance (ODA), resulting in significant disruptions to global health.

And yet, pandemic risks continue to rise—fueled by our connected world, zoonotic spillover, humanitarian crises, and the increasing likelihood of both accidental and deliberate threats. Outbreaks emerge ever more frequently, exacerbating health and life expectancy gaps, feeding on insecurity, and fueling distrust. The more outbreaks that occur, the greater the risk of another pandemic.

In the midst of these threats, health security financing is at risk of falling from the political agenda globally, despite the recent successful negotiation of a new global Pandemic Agreement.

But moments of great change can unveil unexpected opportunities.

Trust in science and public health is falling among many populations, but scientists around the world continue apace with breakthrough solutions promising a future that can take pandemic threats off the table.

Foreign assistance and development aid face steep declines, yet countries and regions are taking the reins of their own health security. Health budgets are over-burdened, but security and defense budgets are expanding.

These changes will take time to come to fruition, and in the meantime we must not wring our hands. Instead, we must roll up our sleeves and get to work.

This moment demands a pandemic preparedness and response vision that is simultaneously bold and practical. It is a moment that we must seize and shape because the next pandemic won't wait for us to do so.

Going forward, the HLIP commits itself to working with G20 members, the Joint Finance and Health Task Force (JFHTF), and all other relevant actors to bring these recommendations into reality. We will convene at least three meetings in 2026 with their participation requested in advance of the United Nations High-Level Meeting on Pandemic Prevention, Preparedness and Response (UN HLM). We will focus on key recommendations, with the goal of accelerating implementation, identifying and overcoming obstacles, and clarifying and strengthening core country commitments for the UN HLM. Meetings will be focused on specific recommendations and will include G20 members, international financial institutions, and regional and global health organizations.

Let's close the deal.

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Introduction

Every biological crisis comes at a major price—the world invests billions to pick up the pieces and countries pay dearly in lives lost, downturns in travel and trade, reductions in life expectancy, and severe economic decline. Governments are willing to invest major sums to prevent other types of disasters—notably, defense spending is rising in order to avert costly conflicts in an increasingly dangerous world. Yet, despite rising pandemic risks and rippling economic shocks from COVID-19, countries are still grossly under-invested in pandemic preparedness and response.

In 2021, the HLIP recommended that world leaders mobilize reliable and sustainable financing for pandemic prevention, preparedness, and response (PPR). Since that report, the G20 has made progress against numerous recommendations, including establishing the Joint Finance and Health Ministers Task Force and a Pandemic Fund at the World Bank, which has already supported 47 projects benefiting 75 countries across six geographies with a 1:7 leverage ratio, laying important groundwork for future investments.[1]

Over the past 12 months, World Health Organization (WHO) Member States have adopted a Pandemic Agreement and amended International Health Regulations (IHR), even as the world faces the potential for a steep decline in foreign assistance for health and development.

In 2025, seismic shifts are taking place in the global landscape, with falling ODA and rising consensus across countries to mobilize domestic resources for health and take the reins of their own health security. Against this backdrop, the G20 Presidency of South Africa called on the HLIP to reconvene, in keeping with their G20 Presidency's core themes of solidarity, equality, and sustainability. They charged us to identify bold, practical, and operational recommendations to bolster financing for national, regional, and global pandemic preparedness and response.

This document provides that roadmap. Simultaneously, the 2026 UN HLM provides the opportunity for execution. We must redouble our efforts and press the leaders of all countries for progress on specific financing goals that can operationalize our vision of a world safe and secure from pandemic threats.

The Challenge

The world has become distracted from preparing for the next pandemic. Progress on sustainable financing models for pandemic PPR has been limited and fragmented and financing remains vastly insufficient to meet global needs for epidemic and pandemic

1 https://www.thepandemicfund.org/fact-sheet

risks. Despite major advances in research and technology, in many ways the world is perhaps more vulnerable to emerging biological threats today than it was in 2020 when COVID-19 spread and shocked the world.

Over the past four years, the financial and geopolitical landscape has evolved significantly. High-income countries (HICs) are de-prioritizing foreign aid, leading to precipitous declines in ODA. In many countries, debt service burdens are high,[2] limiting fiscal space and crowding out investments in social services. Alliances and partnerships have become fluid, increasing economic and political uncertainty. Rising conflict and security concerns are absorbing an increasing share[3] of public spending.

Meanwhile, major health emergencies and pandemic risks are rising. The Africa Centres for Disease Control and Prevention (Africa CDC) cataloged a 40% increase in reported public health emergencies between 2022 and 2024 on the African continent alone.[4] Pandemic risks are accelerating. Epidemics are occurring at higher frequency,[5,6,7] and with broader potential for severe global impact as populations become more urbanized and the effects of climate change increase opportunities for spillover.[8] At the same time, the Global Preparedness Monitoring Board has defined other drivers of pandemic risk, and they, too, are rising—including misinformation, global movement, trust, and agricultural practices and farming.[9] Taken together, the pandemic of tomorrow is not a theoretical risk—it can happen at any time.

At the same time, risks of accidental and deliberate outbreaks also are increasing. Biotechnology and dangerous agents are increasingly accessible, and there are an increased number of high-containment labs worldwide. Rapid advances in emerging technologies, such as artificial intelligence (AI) and its association with deoxyribonucleic acid (DNA) synthesis, synthetic biology, and gene editing have lowered technical barriers to engineering pathogens, increasing the possibility[10] of both unintentional misuse and deliberate development of bioweapons. The global health community must grapple with the fact that the very same technologies that advance pandemic preparedness have simultaneously made it easier to misuse biology and cause purposeful harm.[11,12]

Countries will not be able to rely solely on grants or donations to access medical countermeasures (MCMs). COVID-19 made it clear that countries and regions will

2 https://www.imf.org/en/Blogs/Articles/2025/05/29/debt-is-higher-and-rising-faster-in-80-percent-of-global-economy
3 https://www.sipri.org/media/press-release/2025/unprecedented-rise-global-military-expenditure-european-and-middle-east-spending-surges
4 https://africacdc.org/news-item/africas-plan-to-fill-health-funding-gaps-amidst-declining-coffers/
5 https://www.cgdev.org/sites/default/files/estimated-future-mortality-pathogens-epidemic-and-pandemic-potential.pdf
6 https://gh.bmj.com/content/8/11/e012026
7 https://royalsocietypublishing.org/doi/10.1098/rsif.2014.0950
8 https://nam.edu/wp-content/uploads/2025/06/Imperative-Global-Pandemic-Risk.pdf
9 https://www.gpmb.org/reports/m/item/expanding-pandemic-risk-assessment
10 https://nap.nationalacademies.org/catalog/24890/biodefense-in-the-age-of-synthetic-biology
11 https://journals.asm.org/doi/10.1128/mbio.02366-14
12 https://disarmament.unoda.org/en/our-work/weapons-mass-destruction/biological-weapons

understandably look inward first during an emerging pandemic to protect their own populations, often before making decisions to stop outbreaks at the source and/or share lifesaving equipment, vaccines, tests, and treatments. While it remains essential to emphasize the global nature of pandemic risk, strengthening country and regional capacity to access MCMs without reliance on donations or gifts is an essential component of global preparedness.

Nearly all PPR funding runs to and through governments—but in 2024, 210 million people lived in areas under the full or contested control of armed groups and 123 million were forcibly displaced, often in areas where governments lack access. Limited public health capabilities and infrastructure in these settings create the conditions for communicable diseases to proliferate without detection. When governments lack physical access and community trust, international PPR investment through civil society is not just a salve for those in need—it is a vital investment in our shared health security.

Health shocks from epidemics and pandemics have severe economic impacts. Investing in health security has a very high rate of return. COVID-19-related cumulative output loss is estimated at about $13.8 trillion through 2024 and global working hours lost equivalent to 255 million full-time jobs in 2020.[13,14] By 2023, the cumulative global output loss was estimated at $10–15 trillion, with advanced economies and emerging markets both affected—though unevenly. Combining estimates of pandemic frequency and intensity with estimates of mortality, economic output, and human capital losses from pandemics of varying severities, experts conservatively estimate global losses from future pandemics to be, on average, over $700 billion each year,[15] with ongoing research indicating that losses may be at least several fold higher. A separate analysis estimates that respiratory pandemics are expected to cause roughly 2.5 million deaths per year on average going forward.[16] These estimates imply a very high rate of return to investments that reduce pandemic frequency and impact and save lives.

The Opportunity

New opportunities and perspectives are also emerging.

Many low- and lower-middle-income countries (LLMICs) are pressing for a system where national priorities drive donor investments, rather than the other way around. The African Union launched a new strategy[17] for health financing, and the Accra Reset, the Sevilla Commitment, and the Lusaka Agenda are vibrant and thriving—setting the stage for a new era of health financing in which pandemic PPR is baked into national

13 https://www.imf.org/en/publications/wp/issues/2022/04/04/a-global-strategy-to-manage-the-long-term-risks-of-covid-19-516079
14 https://www.weforum.org/stories/2021/02/covid-employment-global-job-loss/
15 https://link.springer.com/article/10.1057/s41308-023-00212-z
16 https://www.cgdev.org/publication/estimated-future-mortality-pathogens-epidemic-and-pandemic-potential
17 https://africacdc.org/news-item/africas-health-financing-in-a-new-era-april-2025/

budgets. Building concrete approaches for financing pandemic PPR into these agendas provides an opportunity to rethink spending mechanisms, get creative, and develop solutions that don't rely exclusively on ODA and which take full advantage of existing resources and mechanisms.

AI and AI-enabled tools are rapidly accelerating the 100 Days Mission.[18] Advances in technologies such as AI will allow better detection and response to emerging outbreaks and will accelerate progress toward achieving the 100 Days Mission—the international goal to prepare as much as possible so that within the first 100 days a pandemic threat is identified, safe, effective, and affordable MCMs are made available. AI is becoming integral for designing targeted vaccines and therapeutics, optimizing procurement and logistics, quickly detecting novel pathogens, and predicting where new outbreaks are most likely to emerge. Pandemic PPR financing can both harness AI and advance equitable access by developing a system where tools are accessible, safe, and secure as they are being developed.

The security and defense sectors are increasing their spending. Members of the North Atlantic Treaty Organization (NATO) recently endorsed a major increase of 5% of gross domestic product (GDP) for defense and security spending, which portends new funding lines for biodefense, biosurveillance, and biosecurity. These elements are vital components of the pandemic PPR financing agenda, and now is the time to be more intentional about synergistic investment across health and security budgets.

Pandemic PPR is not just insurance for future events, it saves lives every day. Securing each country against pandemic shocks is also a means for strengthening and securing the systems that underpin health, safety, prosperity, job creation, and economic growth. A strong global system for pandemic PPR is a social, economic, and human investment that will save lives today and drive prosperity while also providing a shield against emerging biological threats. Pandemic PPR also establishes health care access and security *as a norm* that is essential in times of crisis—when sustainable health care systems are in place, a nation can more swiftly and effectively withstand the added pressures placed on communities in the event of a pandemic. Accelerating these systems requires adequate financing so that plans can be mobilized, MCMs manufactured, and humans treated and protected in the event of epidemics and pandemics.

Four years after the HLIP first convened, this report provides concrete recommendations to guide the next phase of pandemic financing cooperation in a changed world. Now, as it was then, a strong global system for pandemic PPR is a no-regrets investment that will save lives and drive prosperity now while providing a shield against imminent pandemic threats.

18 https://ippsecretariat.org/

2021 HLIP: The Original Bargain

In 2021, against the backdrop of the devastating societal and economic shocks of the COVID-19 pandemic, the G20 established the HLIP under the G20 Italian Presidency in January. The HLIP was tasked to identify gaps in the financing system for the global commons for pandemic prevention, surveillance, preparedness, and response; propose actionable solutions to meet these gaps on a systematic and sustainable basis; and optimally leverage resources from the public, private, and philanthropic sectors and international financial institutions (IFIs).

Issued in June 2021, its first report, *A Global Deal for Our Pandemic Age*, recommended actionable solutions and investments to meet the challenge of an age of pandemics and avoid repeating COVID-19's catastrophic damage.[19] The recommendations centered around four major global gaps in pandemic PPR and nine major solutions (see Figure 1).

The 2021 HLIP report was a landmark moment in establishing G20 support for much-needed systemic change and identifying a global financing gap of $15 billion per year to more effectively prevent, prepare for, and respond to pandemics. Its recommendations directly led to the launch of the Pandemic Fund[20] and the establishment of the G20 JFHTF.[21]

Since 2021, some progress has been made toward implementing these nine priorities—but all

FIGURE 1 | *A Global Deal for Our Pandemic Age* Key Proposals
SOURCE: https://wellcome.org/insights/reports/global-deal-our-pandemic-age

19 https://wellcome.org/reports/global-deal-our-pandemic-age
20 https://www.thepandemicfund.org/
21 https://g7g20-documents.org/database/document/2021-g20-it-aly-leaders-leaders-language-g20-rome-leaders-declaration

goals have not yet been met, with implementation of the recommendations in *A Global Deal* falling far short of the level of ambition recommended by the HLIP in light of the devastation from COVID-19.

Most notably, the JFHTF was established in 2021, and the Pandemic Fund was launched in 2022. However, while coordination among G20 health and finance ministers has improved, funding has fallen far short of the recommended annual $15 billion for global public goods. The Pandemic Fund represents a major milestone in advancing pandemic preparedness and health security financing and the implementation of the 2021 HILP recommendations—but it is not yet adequately financed, sustainably capitalized, nor operating at the scale envisioned by the HLIP, which recommended mobilizing $10 billion per year. Additionally, no analogous mechanism covers pandemic response, and efforts to finance breakthrough research and development (R&D) to prevent and contain pandemics are severely under-funded.

ODA is dropping,[22] financing for the WHO is at risk, and limited progress has been made toward sustainable domestic financing for pandemic PPR. Spending on pandemic PPR remains low, particularly in low-income countries (LICs), with an estimated range in 2022 from USD 122 per capita in HICs to USD 2.6 per capita in lower-middle income countries and USD 3.5 per capita in LICs.[23] Despite increased spending on health and pandemic PPR during the COVID-19 pandemic by most countries, including LLMICs, broader health spending has been slow to come back to pre-pandemic trends.[24,25] Compounding this issue, many lower-income countries face unsustainable debt burdens and higher interest rates[26] following the pandemic. At the same time, lower-income countries frequently face great challenges in detecting and responding rapidly to quell emerging outbreaks before they spread and rely on ODA to fill key gaps, with 78% of spending on pandemic PPR in 2022 financed by external sources in LICs.[27]

In 2021, the HLIP identified a need for multilateral development banks (MDBs) to provide adequate incentives for pandemic PPR spending, with shareholders providing support, timely and appropriately sized replenishments of their concessional windows, and capital replenishments over time to ensure that the greater focus on global public goods is not at the expense of poverty reduction and shared prosperity. This need has not yet been fulfilled. Additionally, IFIs have not yet enabled fast-tracked surge financing or at-risk financing in response to a pandemic.

The 2021 HLIP recommendations to establish an independent scientific advisory panel have not yet come to fruition, though efforts are underway to stand up a global

22 https://www.oecd.org/en/publications/2025/06/cuts-in-official-development-assistance_e161f0c5/full-report.html
23 https://www.oecd.org/en/publications/2025/06/cuts-in-official-development-assistance_e161f0c5/full-report.html
24 https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/03/smart-spending-to-combat-global-health-threats_9985a31e/166d7c57-en.pdf
25 https://www.imf.org/en/Publications/WEO/Issues/2023/10/10/world-economic-outlook-october-2023
26 https://theindependentpanel.org/wp-content/uploads/2024/06/The-Independent-Panel_No-time-to-gamble.pdf
27 https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/03/smart-spending-to-combat-global-health-threats_9985a31e/166d7c57-en.pdf

pandemic risk assessment framework[28] and monitoring mechanism. A Health Security Assessment Program has not yet been created. While the Joint External Evaluation (JEE)[29], IHR State Parties Self-Assessment Annual Reporting (SPAR)[30], National Action Plan for Health Security (NAPHS), and Global Health Security Index (GHS Index)[31] provide context on country capacities, none provides for routine benchmarking. JEE and NAPHS are voluntary, SPAR is self-reported, and the GHS Index, which measures 195 countries, is not yet regularly funded or appended to an existing mechanism for financing, such as the Pandemic Fund.

While many bilateral and multilateral efforts have worked to bridge gaps for vaccine financing and manufacturing, including the International Pandemic Preparedness Secretariat (IPPS) 100 Days Mission,[32] Gavi's Day Zero Financing Facility for Pandemics[33] and African Vaccine Manufacturing Accelerator (AVMA),[34] and efforts by the World Bank and Group of 7 (G7) Development Finance Institutions (DFIs),[35] efforts to ensure rapid and equitable access to MCMs remain fragmented and insufficiently coordinated. There have not been equivalent efforts for diagnostics, therapeutics, and essential supplies such as personal protective equipment (PPE).

Finally, private sector financing and capacity remains under-utilized, and the current pandemic PPR funding landscape, including bilateral and multilateral efforts, remains fundamentally fragmented and siloed.

Unfinished Business: Five Major Preparedness Financing Gaps

Major gaps remain—and they are growing.

Political will is waning, and risks are rising.

Despite the bold vision and actionable recommendations set out in *A Global Deal*, progress has been stunted. Political divides surrounding COVID-19 protection and response continue to underpin an increasingly complex environment for foreign aid financing. Collectively, the world is insufficiently prepared for future infectious disease threats.

Against this backdrop, the G20 Presidency of South Africa called on the HLIP to reconvene to identify bold, practical, and operational recommendations to bolster financing for national, regional, and global pandemic preparedness and response.

28 https://nam.edu/perspectives/the-imperative-of-a-global-pandemic-risk-assessment-framework
29 https://www.who.int/emergencies/operations/international-health-regulations-monitoring-evaluation-framework/joint-external-evaluations
30 https://www.who.int/emergencies/operations/international-health-regulations-monitoring-evaluation-framework/states-parties-self-assessment-annual-reporting
31 https://ghsindex.org/
32 https://ippsecretariat.org/
33 https://www.gavi.org/vaccineswork/advance-market-commitments-day-zero-financing-z-gavis-financial-tools
34 https://www.gavi.org/programmes-impact/types-support/regional-manufacturing-strategy/avma
35 https://www.dfc.gov/media/press-releases/g7-dfis-medaccess-eib-and-ifc-announce-mou-surge-financing-initiative-medical

We focused on two urgent areas: (1) expanding access to MCMs during public health emergencies and (2) strengthening the financing and mobilization of domestic resources for pandemic preparedness.

The HLIP has identified five major gaps:

Gap 1: Domestic Resource Mobilization and Non-ODA Financing.

Pandemic PPR remains severely under-financed and spending is not well tracked. There is an inadequate level of understanding, globally, of where PPR spending is coming from, where it is going, whether it is effective, and how to track it against specific benchmarks. Incentives for building PPR financing into national budgets are fragmented, and the results are difficult to measure. ODA resources are dramatically decreasing. Security and private sector PPR financing remain elusive, and financing for PPR in high-risk fragile settings, often beyond the reach of government systems, is inadequate.

Gap 2: MCM Access and Surge Manufacturing.

Manufacturing and delivery of MCMs is not sufficient nor sufficiently diversified geographically. Blended financing mechanisms are needed to enable regional manufacturing, R&D, and pooled procurement.

Gap 3: MDB and Public Development Bank (PDB) PPR Incentives and Emergency Access to MCM Products.

The World Bank, other MDBs, and PDBs are still significantly under-powered for PPR. Pre-negotiated at-risk financing (i.e. borrowing to purchase promising candidate MCMs before regulatory approval) and rapid use of country-level loans for low- and middle-income countries (LMICs) to procure MCMs during crises is not sufficiently enabled among the World Bank, MDBs, and other PDBs. Even approved products wait too long for WHO pre-qualification (PQ).

Gap 4: Tests, Treatments, and PPE.

Investments in tests, treatments, and PPE have been under-prioritized in the 100 Days Mission, with no clear institutional home to drive innovation and manufacturing or mobilize surge financing. While vaccine progress has advanced, there is still no global mechanism or coordinating body leading R&D, manufacturing, and financing for these essential tools, leaving critical gaps in pandemic preparedness and response.

Gap 5: The Pandemic Fund.

The Pandemic Fund is not yet sufficiently or sustainably capitalized. It should double down on its core prevention and preparedness mandate and its role in incentivizing and filling national capacity gaps and tackling cross-border threats. It should be increasingly focused on assisting countries to build PPR into national budgets.

Closing the Deal: Five Levers to Take Pandemic Threats Off the Table

Since the publication of A Global Deal, there have been glimpses of progress but major gaps remain—placing everyone at risk.

Our charge was serious: to identify near-term, operational steps that can be taken now that build on COVID-19 crisis financing and would strengthen the ability of PDBs to mobilize financing for future outbreaks rapidly and at scale. From June through September 2025, we convened dozens of health and finance experts from around the world—standing up two working groups focused on MCM surge and preparedness financing, respectively. We worked closely with South Africa's G20 Presidency and with the leadership and membership of the G20 JFHTF, which we believe should take many of these recommendations forward. We consulted with experts during recent engagements at UN General Assembly (UNGA), the World Health Summit, and the World Bank fall meetings.

Accordingly, to fill these gaps, the HLIP has identified five corresponding recommended solutions to bridge them, with an eye toward our vision of taking pandemics off the table.

We have prioritized these five steps because we believe they will make a swift and major impact, but we are clear-eyed. To maximize momentum and impact, each recommendation is accompanied by a set of key enabling actions that will be critical for implementation and sustainability. Without focus on these associated actions, efforts could once again stall.

Leaders can close the pandemic financing gap before the next outbreak—or explain to their citizens why they did not.

A full accounting of each recommendation, alongside the enabling actions, can be found in the High-Level Summary beginning on page 23, as well as in the briefs on each recommendation that follow, further explaining our rationale. A two-page Summary of Recommendations is available as Appendix A for easy printing and distribution.

At or ahead of the 2026 UN HLM, we recommend the following be completed:

Recommendation 1: Unlock domestic resource mobilization. Mobilize health, security, and non-ODA spending. Rigorously track results.

All governments should present prioritized, costed PPR plans and announce new PPR financing, funded through a mix of domestic resources—like a dedicated portion of transport fees and health taxes as well as biosecurity spending—and international financing. Direct bilateral ODA and/or MDB financing for civil society organizations should be accelerated where governments lack presence or capacity to enhance PPR financing in fragile settings. Ahead of the UN HLM, the G20 JFHTF should launch an annual Global Pandemic Spending Tracker* covering country, MDB, PDB, and private sector financing across health, security, and development budgets toward minimum benchmarks (outlined on page 23).

* The tracker should be analogous to the existing Organisation for Economic Co-operation and Development (OECD) tools for tracking development assistance and NATO tools for tracking defense spending.

Recommendation 2: Accelerate geographically diversified access to MCMs.

The IFC and other DFIs should partner to launch and finalize at least one dedicated, blended MCM surge financing facility and an associated 'standby' list of regional manufacturers and pooled procurement mechanisms for each region. Linked to that effort, philanthropies should launch a designated operational platform for technical assistance, market assessments, and stress testing to expand the list of regional manufacturers, particularly for under-invested products like diagnostics, PPE, and biomanufacturing. This facility should fill a key financing gap in the private sector, coordinate among like-minded actors as a partnership program, and leverage ongoing design work among G7 and G20 DFIs, IFC, and partners under the MCM Surge Financing Initiative, ensuring rapid deployability by 2026.

Recommendation 3: Enable development bank at-risk financing for MCM advance purchases.

All MDBs and relevant PDBs should confirm and clearly communicate the availability of rapid and effective at-risk financing for advance purchases of MCMs by LMICs during epidemics and pandemics (i.e. borrowing to purchase promising candidate MCMs before regulatory approval). At-risk financing should apply explicitly to country-level loans as well as any pooled procurement mechanisms using the development bank balance sheets. WHO PQ and National Regulatory Authority (NRA) approvals must be accelerated and products that have already received regulatory approval by WHO-Listed Authorities at maturity level 3 (ML3) or higher should be given provisional or temporary approvals until WHO and NRA approvals are completed.

Recommendation 4: Operationalize financing for tests, treatments and PPE.

Global and regional organizations should designate specific international and regional anchor institutions to coordinate the development and scale-up of tests, treatments, and PPE; launch a financing strategy to prioritize and expand investments in these areas for specific epidemic and pandemic threats, leveraging the MCM Surge Financing Facility outlined in Recommendation 2 as well as other existing blended finance mechanisms; and identify and support at least one PPE manufacturing hub in each region with regional stockpiles, including for long shelf-life products such as elastomeric respirators.

Recommendation 5: Strengthen the Pandemic Fund financing, speed, and scale. Cement its role as the world's premier preparedness financing facility.

The G20 and other countries should commit to sustainably capitalize and strengthen the speed and scale of the Pandemic Fund. The World Bank and other MDBs should commit to using their tools and establishing standing allocations to ensure renewable support for the Pandemic Fund and its work. The Pandemic Fund should double down on its core preparedness mandate as well as its role in tackling cross-border threats, catalyzing domestic and non-ODA resources, soliciting matching funding, enhancing access for civil society implementers in fragile settings, and partnering more systematically with MDBs to leverage their lending.

FIGURE 2 | Closing the Deal: Financing our Security Against Pandemic Threats
SOURCE: Created by authors.

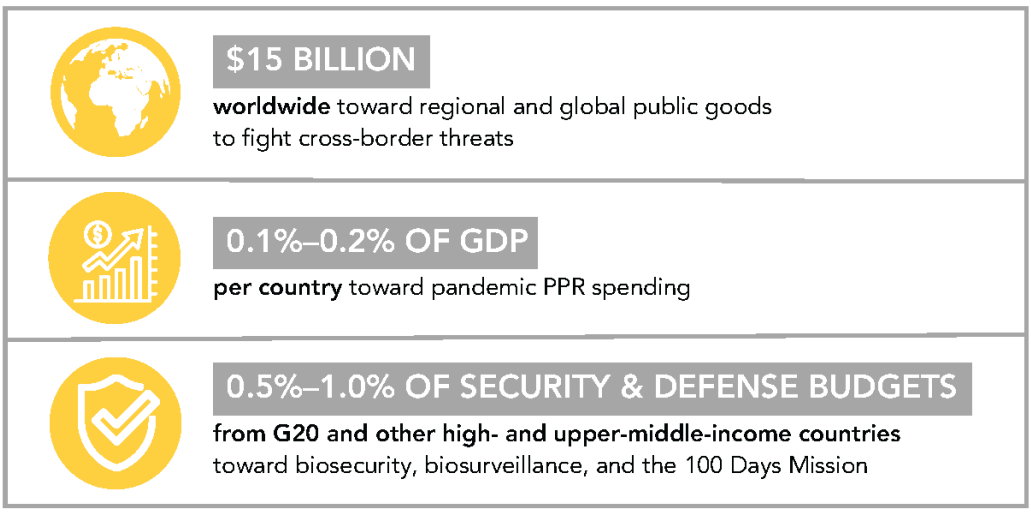

FIGURE 3 | Minimum Benchmarks for Annual Pandemic PPR Financing
SOURCE: Created by authors.

High-Level Summary of Recommendations and Enabling Actions

1
Unlock domestic resource mobilization. Mobilize health, security, and non-ODA spending. Rigorously track results.

Domestic and global spending on pandemic PPR is not well tracked. ODA resources are dramatically decreasing. Security and private sector pandemic PPR financing remains elusive. Humanitarian-setting financing for pandemic PPR is inadequate.

RECOMMENDATION 1

At the UN HLM, all governments should present prioritized, costed PPR plans and announce new PPR financing, funded through a mix of domestic resources—like a dedicated portion of transport fees and health taxes as well as biosecurity spending—and international financing. Direct bilateral ODA and/or MDB financing for civil society organizations should be accelerated where governments lack presence or capacity to enhance PPR financing in fragile settings. Ahead of the UN HLM, the G20 JFHTF should launch an annual Global Pandemic Spending Tracker* covering country, MDB, PDB, and private sector financing across health, security, and development budgets toward the minimum benchmarks below.

MINIMUM BENCHMARKS FOR ANNUAL PANDEMIC PPR FINANCING**

- At least $15 billion annually in international financing directed toward regional and global public goods to fight cross-border threats.
- At least 0.1% to 0.2% of GDP per year, per country, directed toward pandemic PPR spending, informed by the recent analysis from the WHO, OECD, and the World Bank.
- At least 0.5% to 1.0% of security and defense budgets per year from G20 and other high- and upper-middle-income countries (HICs and UMICs) directed toward biosecurity, biosurveillance, and the 100 Days Mission to support deterrence, operational resilience, and to prevent deliberate and accidental misuse of biological agents—at home and globally.

* The tracker should be analogous to the existing OECD tools for tracking development assistance and NATO tools for tracking defense spending.

**While scarcity of existing data on PPR expenditure is a concern, future spending should be benchmarked against historic and required levels. Those data that do exist (see Appendix F) suggest initial minimum PPR expenditure benchmarks in these ranges.

ENABLING ACTIONS TO ENSURE MAXIMUM IMPACT

- **Enhance Domestic Resource Mobilization:** Incentivize and accelerate domestic resource mobilization. Expand fiscal space for pandemic PPR through earmarked health and security budgets and innovative taxes. Stress the importance of PPR as a mechanism for foundational health care access and security, which is essential during a crisis.
- **Expand Defense and Security Sector Spending on Biosecurity:** Accelerate financing for biosecurity and ensure security and defense ministries commit resources alongside health ministries. As defense and security budgets rise, biodefense spending should be a core component.
- **Enable PPR Financing in Fragile Settings:** Develop a mechanism to accelerate the use of International Development Association (IDA) and other MDB grants to directly fund civil society and non-governmental organizations where governments lack presence or capacity to promote effective PPR.
- **Stress Test Pandemic Financing. Invest in Data Collection, Consolidation, and Accountability. Commission a Global Pandemic Risk Assessment:** Institutionalize an annual global exercise based on the G20 JFHTF Operational Playbook for Pandemic Response Financing. Invest in required data collection and consolidation and commission a biennial global Pandemic Risk Assessment to monitor gaps and progress.
- **Radically Mobilize and Scale Private Finance for Pandemic PPR:** Expand business interruption insurance and create real incentives, including blended finance and advance commitments, to unlock capital for PPR innovation. Establish a task force to mobilize private equity, biotechnology investors, and development finance for PPR innovation, with a particular focus on emerging AI-based solutions.
- **Better Leverage IFIs to Accelerate Pandemic Financing:** Maximize resources, coordination, and alignment among IFIs in support of pandemic PPR spending. Leverage the International Monetary Fund (IMF) Resilience and Sustainability Trust (IMF RST); preserve the IMF RST PPR mandate; recapitalize the Catastrophe Containment and Release Trust (CCRT) for outbreaks in LICs; and leverage and scale IDA, other MDB grants, and debt relief and restructuring facilities to de-risk PPR investment.
- **Offset Negative Economic Consequences for Transparency in Disease Reporting:** Encourage MDBs, PDBs, and philanthropies to establish a financial mechanism to offset the negative economic consequences of rapidly reporting an emerging epidemic.

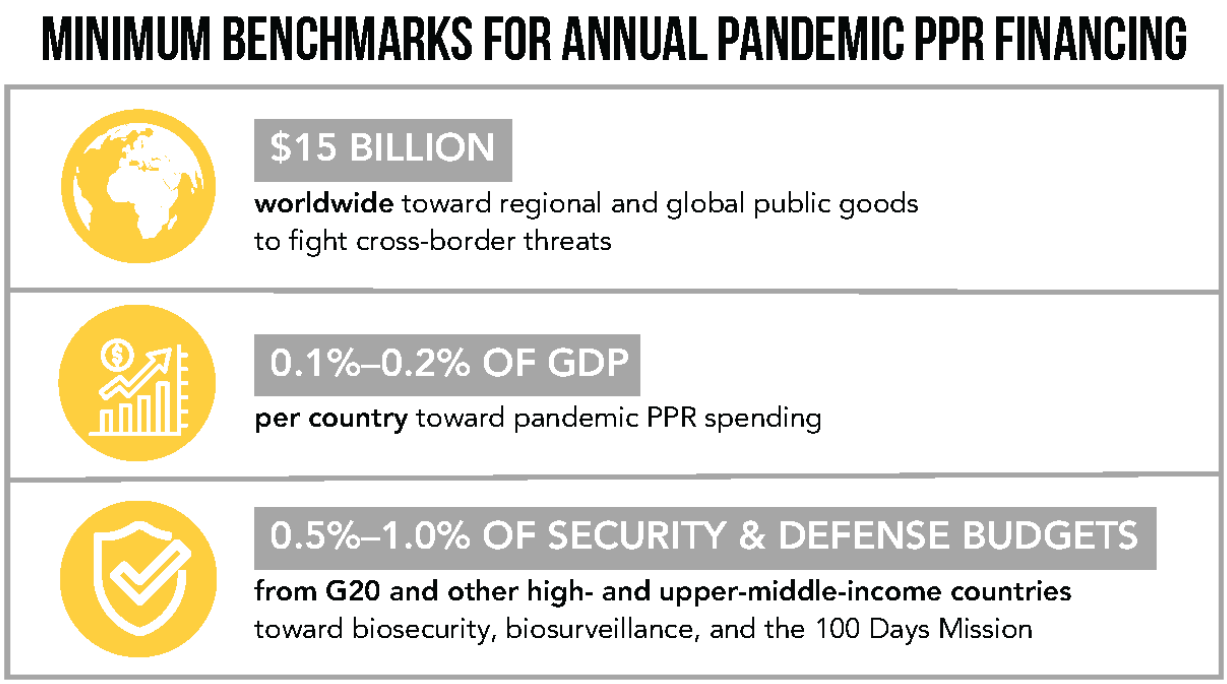

FIGURE 3 | Minimum Benchmarks for Annual Pandemic PPR Financing
SOURCE: Created by authors.

2
Accelerate geographically diversified access to MCMs.

Manufacturing and delivery of MCMs is not sufficient nor sufficiently diversified geographically. Blended financing mechanisms are needed to enable regional manufacturing and pooled procurement.

RECOMMENDATION 2

Ahead of the 2026 UN HLM, the IFC and other DFIs should partner to launch and finalize at least one dedicated, blended MCM surge financing facility and an associated 'standby' list of regional manufacturers and pooled procurement mechanisms for each region. Linked to that effort, philanthropies should launch a designated operational platform for technical assistance, market assessments, and stress testing to expand the list of regional manufacturers, particularly for under-invested products like diagnostics, PPE, and biomanufacturing. This facility should fill a key financing gap in the private sector, coordinate among like-minded actors as a partnership program, and leverage ongoing design work among G7 and G20 DFIs, IFC, and partners under the MCM Surge Financing Initiative, ensuring rapid deployability by 2026.

ENABLING ACTIONS TO ENSURE MAXIMUM IMPACT

- Create a 'standby' list of regional manufacturers and pooled procurement mechanisms for each region.
- Hold at least one to two 'live fire' simulations per year, per region, including inter-regional coordination. These exercises should guarantee real production runs of commercially usable products, allowing manufacturers to demonstrate surge-scale capabilities while generating reimbursable sales and creating a dedicated pull-market mechanism.
- Finalize and support the establishment of a permanent secretariat or advisory council for the DFI MCM Surge Financing Initiative to pool resources more effectively.
- Establish pre-negotiated lines of credit for emergencies and regular assessments of supply chains and regional and domestic production capabilities in LMICs.
- Accelerate all regions' ability within 100 days to manufacture a substantial portion of MCM and rapidly respond to an emerging biological threat.

3
Enable development bank at-risk financing for MCM advance purchases.

Pre-negotiated at-risk financing and rapid use of country-level loans for LMICs to procure MCMs during crises is not sufficiently enabled among the World Bank, all MDBs, and relevant PDBs. Even approved products wait too long for WHO PQ.

RECOMMENDATION 3

Ahead of the 2026 UN HLM, all MDBs and relevant PDBs should confirm and clearly communicate the availability of rapid and effective at-risk financing for advance purchases of MCMs by LMICs during epidemics and pandemics (i.e. borrowing to purchase promising candidate MCMs before regulatory approval). At-risk financing should apply explicitly to country-level loans as well as any pooled procurement mechanisms using the development bank balance sheets. WHO PQ and NRA approvals must be accelerated and products that have already received regulatory approval by WHO-Listed Authorities at ML3 or higher should be given provisional or temporary approvals until WHO and NRA approvals are completed.

ENABLING ACTIONS TO ENSURE MAXIMUM IMPACT

- Drawing on existing groups such as the Coalition for Pandemic Preparedness and Innovation (CEPI), Gavi's Independent Product Group, and the WHO, the World Bank should recognize a panel of health and economic experts to recommend candidate MCMs for at-risk advance purchases using IDA or International Bank for Reconstruction and Development (IBRD) financing, as well as financing from other PDBs. The panel will explicitly consider the benefits of accelerating access and the costs of delay. Countries would be free to follow alternative guidance that meets MDB assurance requirements.
- The World Bank should establish a mechanism that allows donors and other funders to share some of the risks associated with at-risk procurement for IDA countries. In extremis, the Gavi First Response Fund could act as a partial backstop or first loss tranche to reduce the impact of potential financial losses associated with early pooled procurement for LMICs.
- Negotiate an Memorandum of Understanding (MOU) to End Pandemics with chief executive officers (CEOs) of leading MCM manufacturers in each region to pre-position indemnity and liability protection for manufacturers, which they require for advance purchases, and establish a template advance purchase contract for LMICs.
- **Related:** During a health emergency, products that are already approved by a WHO-Listed Authority at ML3 or higher should receive a temporary or provisional approval until WHO

PQ reviews are completed, so as not to slow the response by NRAs and international agencies. The WHO PQ mechanism should be adequately financed so that it can accelerate its reviews.

- **Related:** Clarify and confirm the use of country-level loans to acquire existing and approved MCMs during health emergencies. The Crisis Response Toolkit should apply to the use of IDA and IBRD to acquire approved epidemic and pandemic MCMs, as well as at-risk purchases for emerging threats.
- **Related:** Develop a revolving capital fund in each region, modeled after the Pan American Health Organization (PAHO) Revolving Fund.[a] The Revolving Fund structure could serve as a regional window or co-investment partner with the MCM Surge Financing Facility in Recommendation 2.

a https://www.paho.org/en/revolving-fund

4
Operationalize financing for tests, treatments, and PPE.

Tests, treatments, and PPE have been under-prioritized in the 100 Days Mission, with no clear institutional home to drive innovation or mobilize surge financing. While vaccine progress has advanced, there is still no global mechanism or coordinating body leading R&D and financing for these essential tools, leaving critical gaps in pandemic preparedness and response.

RECOMMENDATION 4

Ahead of the 2026 UN HLM, global and regional organizations should designate specific international and regional anchor institutions to coordinate the development and scale-up of tests, treatments, and PPE; launch a financing strategy to prioritize and expand investments for specific epidemic and pandemic threats, leveraging the MCM Surge Financing Facility outlined in Recommendation 2 as well as other existing blended finance mechanisms; and identify and support at least one PPE manufacturing hub in each region with regional stockpiles, including for long shelf-life products such as elastomeric respirators.

ENABLING ACTIONS TO ENSURE MAXIMUM IMPACT

- Spur financing for PPR-relevant diagnostics and launch a multisectoral PPR diagnostics working group that is linked to the Global Diagnostics Coalition.[a] Establish regional hubs for platforms in LMICs to support sample access and test evaluation linked to procurement-aligned quality benchmarks.
- Identify and support at least one PPE manufacturing hub in each region with regional quality assurance (QA) labs and stockpiles of long shelf-life elastomeric respirators.
- Endorse the establishment and acceleration of the Therapeutics Development Coalition, a public-private partnership to reinvigorate the global therapeutics pipeline by coordinating R&D investment, streamlining development pathways, and strengthening access mechanisms for priority pathogens.
- Investment in R&D and innovation, including rigorously applied social science research to reduce disease transmission (e.g. the use of air filters in schools, hospitals, and workplaces; innovations in PPE; and fractional dosing)[b] and investment in countermeasure technologies (including universal vaccines) to address major pandemic risks, such as from respiratory pathogens like coronaviruses and influenza.
- Establish a dedicated taskforce to mobilize venture capital and private equity and development finance for PPR innovation, complemented by public, philanthropic, and blended finance mechanisms.

a https://www.who.int/initiatives/global-diagnostic-coalition
b https://www.cgdev.org/blog/could-fractional-dosing-be-key-addressing-mpox-vaccine-shortage

5
Strengthen the Pandemic Fund financing, speed, and scale. Cement its role as the world's premier preparedness financing facility.

The Pandemic Fund is not yet sufficiently or sustainably capitalized. It should double down on its core prevention and preparedness mandate and its role in incentivizing and filling national capacity gaps and tackling cross-border threats. It should be increasingly focused on assisting countries to build PPR into national budgets.

RECOMMENDATION 5

Ahead of the 2026 UN HLM, the G20 and other countries should commit to sustainably capitalize and strengthen the speed and scale of the Pandemic Fund. The World Bank and other MDBs should commit to using their tools and establishing standing allocations to ensure renewable support for the Pandemic Fund and its work. The Pandemic Fund should double down on its core preparedness mandate as well as its role in tackling cross-border threats, catalyzing domestic and non-ODA resources, soliciting matching funding, enhancing access for civil society implementers in fragile settings, and partnering more systematically with MDBs to leverage their lending.

ENABLING ACTIONS TO ENSURE MAXIMUM IMPACT

- Transition from the current single, time-bound call for proposals process to a rolling model.
- Enter into structured agreements with MDB implementing entities and partner more systematically with them to leverage their lending.
- Create a model compact for pandemic PPR financing and require costed national plans and matching investments, including from biosecurity and private sector funders.
- Allocate a designated portion (e.g., 10–20%) of annual commitments to address fragile, conflict-affected, and hard-to-reach geographic locations and enable funding of civil society and humanitarian actors directly.
- Elevate the Pandemic Fund's membership to more senior-level political appointments to further drive prioritization.

Closing the Deal: Five Levers to Take Pandemic Threats Off the Table

Chapter 1

Unlock domestic resource mobilization. Mobilize health, security, and non-ODA spending. Rigorously track results.

Domestic and global spending on pandemic PPR is not well tracked. ODA resources are dramatically decreasing. Security and private sector pandemic PPR financing remains elusive. Humanitarian-setting financing for pandemic PPR is inadequate.

RECOMMENDATION 1

At the UN HLM, all governments should present prioritized, costed PPR plans and announce new PPR financing, funded through a mix of domestic resources—like a dedicated portion of transport fees and health taxes as well as biosecurity spending—and international financing. Direct bilateral ODA and/or MDB financing for civil society organizations should be accelerated where governments lack presence or capacity to enhance PPR financing in fragile settings. Ahead of the HLM, the G20 JFHTF should launch an annual Global Pandemic Spending Tracker* covering country, MDB, PDB, and private sector financing across health, security, and development budgets toward the minimum benchmarks below.

MINIMUM BENCHMARKS FOR ANNUAL PANDEMIC PPR FINANCING**

- **At least $15 billion annually** in international financing directed toward regional and global public goods to fight cross-border threats.
- **At least 0.1% to 0.2% of GDP per year, per country,** directed toward pandemic PPR spending, informed by the recent analysis from the WHO, OECD, and the World Bank.
- **At least 0.5% to 1.0% of security and defense budgets per year from G20 and other HICs and UMICs** directed toward biosecurity, biosurveillance, and the 100 Days Mission to support deterrence, operational resilience, and to prevent deliberate and accidental misuse of biological agents—at home and globally.

* The tracker should be analogous to the existing OECD tools for tracking development assistance and NATO tools for tracking defense spending.
** While scarcity of existing data on PPR expenditure is a concern, future spending should be benchmarked against historic and required levels. Those data that do exist (see Appendix F) suggest initial minimum PPR expenditure benchmarks in these ranges.

Pandemic crises come at a major price. COVID-19 alone cost millions of lives, with cumulative economic losses estimated to reach US $13.8 trillion through the end of 2024[36]. While governments are doubling down on defense spending to avert costly conflicts, they are cutting back on ODA spending, which has historically underpinned global preparedness for biological catastrophes. With economists estimating a very high level of loss from future pandemics,[37,38] we can anticipate high rates of return for investments that reduce pandemic frequency and impact. Tracking global spending on PPR is vital in order to better understand and reap these returns.

Historically, it has been very difficult to track pandemic PPR spending because it is spread across many health, security, and development accounts. There has been a lack of validated data on pandemic PPR spending across countries and an incomplete understanding of how different capacities and investments specifically reduce pandemic risk and related harm. The absence of clear data on spending and investment effectiveness leaves policy makers and funders without the tools to measure impact, prioritize interventions, or demonstrate results.

Recently, the OECD, WHO, and World Bank produced, for the G20 JFHTF, a new estimate of domestic spending for pandemic PPR by country. The analysis finds, in aggregate, that, from 2016 to 2022 annual global spending on pandemic PPR ranged from $113 billion in 2016 to $267 billion in 2021.[39] This is a great beginning to what, we would argue, should be a much more concerted effort to better understand just how prepared the world really is—and where the funding should come from to fill the gaps that are identified.

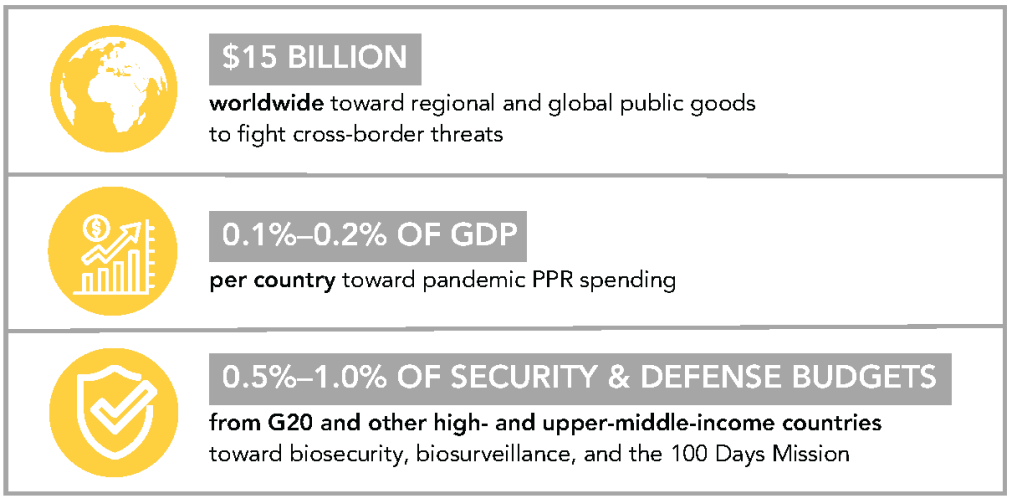

FIGURE 3 | Minimum Benchmarks for Annual Pandemic PPR Financing
SOURCE: Created by authors.

36 https://www.imf.org/en/Publications/WP/Issues/2022/04/04/A-Global-Strategy-to-Manage-the-Long-Term-Risks-of-COVID-19-516079
37 https://link.springer.com/article/10.1057/s41308-023-00212-z
38 https://www.cgdev.org/publication/estimated-future-mortality-pathogens-epidemic-and-pandemic-potential
39 https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/03/smart-spending-to-combat-global-health-threats_9985a31e/166d7c57-en.pdf

It is becoming increasingly necessary to better track pandemic spending because ODA—which provides a major portion of pandemic PPR spending for LMICs—has decreased since the end of the COVID-19 public health emergency and faces steep future declines. This has left the globe vulnerable to rising epidemic and pandemic threats. It is also becoming imperative to identify new sources of—and incentives for—domestic resource mobilization for pandemic PPR, aligned with the African Union's Health Financing in a New Era,[40] the Accra Reset,[41] and the Lusaka Agenda.[42]

Ahead of the 2026 UN HLM, in order to build incentives toward funding pandemic PPR, identify new sources of funding, and meet previously established levels of sustainable financing, the HLIP recommends the following:

RECOMMENDATION 1

All governments should present prioritized, costed PPR plans and announce new PPR financing, funded through a mix of domestic resources—like a dedicated portion of transport fees and health taxes as well as biosecurity spending—and international financing. Direct bilateral ODA and/or MDB financing for civil society organizations should be accelerated where governments lack presence or capacity to enhance PPR financing in fragile settings. Ahead of the UN HLM, the G20 JFHTF should launch an annual Global Pandemic Spending Tracker* covering country, MDB, PDB, and private sector financing across health, security, and development budgets toward minimum benchmarks (outlined on page 33).

* The tracker should be analogous to the existing OECD tools for tracking development assistance and NATO tools for tracking defense spending.

40 https://africacdc.org/news-item/africas-health-financing-in-a-new-era-april-2025/
41 https://www.devex.com/news/the-accra-reset-time-s-up-for-the-legacy-aid-system-110845
42 https://futureofghis.org/final-outputs/lusaka-agenda/

ENABLING ACTIONS TO ENSURE MAXIMUM IMPACT

The HLIP has identified the following seven key enabling actions, listed here and briefly explained below, which, if taken, will facilitate successful implementation and overall progress toward global pandemic preparedness:

- **Enhance Domestic Resource Mobilization:** Incentivize and accelerate domestic resource mobilization. Expand fiscal space for pandemic PPR through earmarked health and security budgets and innovative taxes. Stress the importance of PPR as a mechanism for foundational health care access and security, which is essential during a crisis.
- **Expand Defense and Security Sector Spending on Biosecurity:** Accelerate financing for biosecurity and ensure security and defense ministries commit resources alongside health ministries. As defense and security budgets rise, biodefense spending should be a core component.
- **Enable PPR Financing in Fragile Settings:** Develop a mechanism to accelerate the use of IDA and other MDB grants to directly fund civil society and non-governmental organizations where governments lack presence or capacity to promote effective PPR.
- **Stress Test Pandemic Financing. Invest in Data Collection, Consolidation, and Accountability. Commission a Global Pandemic Risk Assessment:** Institutionalize an annual global exercise based on the G20 JFHTF Operational Playbook for Pandemic Response Financing. Invest in required data collection and consolidation and commission a biennial global Pandemic Risk Assessment to monitor gaps and progress.
- **Radically Mobilize and Scale Private Finance for Pandemic PPR:** Expand business interruption insurance and create real incentives, including blended finance and advance commitments, to unlock capital for PPR innovation. Establish a task force to mobilize private equity, biotechnology investors, and development finance for PPR innovation with a particular focus on emerging AI-based solutions.
- **Better Leverage IFIs to Accelerate Pandemic Financing:** Maximize resources, coordination, and alignment among IFIs in support of pandemic PPR spending. Leverage the IMF RST, preserve the IMF RST PPR mandate; recapitalize the CCRT for outbreaks in LICs; and leverage and scale IDA, other MDB grants, and debt relief and restructuring facilities to de-risk PPR investment.
- **Offset Negative Economic Consequences for Transparency in Disease Reporting:** Encourage MDBs, PDBs and philanthropies to establish a financial mechanism to offset negative economic consequences of rapidly reporting an emerging epidemic.

Enhance Domestic Resource Mobilization

Declining ODA dictates that LMICs will need to substantially expand fiscal space to prevent and fight cross-border outbreaks, including through domestic resource mobilization and earmarked health and security budgets and innovative taxes. Security and private sector spending for pandemic PPR must also increase. Simultaneously, there is an urgent need for international and regional financing institutions to incentivize, clarify, and utilize existing mechanisms for pandemic PPR. Coupled with substantial increases in pandemic PPR spending, there must be a better understanding of the connection between PPR and overall health care access and security. The COVID-19 pandemic revealed that many countries were unequipped to respond to a pandemic—from lacking a trained workforce and safe clinical spaces, to community-level challenges in communication, accessing resources, and finding safe care. Having functional systems in place all the time also means countries will more swiftly and effectively deliver in times of crisis.

Based on an analysis from OECD, WHO, and the World Bank, from 2016–2020 the world spent approximately $100 billion per year on pandemic PPR and was still largely unprepared for COVID-19. In 2019, HICs spent over 25 times more per capita on PPR than LICs, and over 30 times more per capita in 2022[43]. Furthermore, the high levels of spending in 2021 and 2022 ($230 billion to $275 billion) reflect COVID-19's status as a moderate respiratory pandemic. A severe respiratory pandemic would result in higher spending needs, particularly as health care and commodity costs—as well as inflation—continued to rise. Additionally, a major portion of the surge spending in 2021 and 2022 in LLMICs came from ODA, which is diminishing and may not be available at the same level in future pandemic scenarios. Therefore, an annual allocation of $100 billion, particularly when considering rising inflation, is not likely to be enough—all countries should mobilize at least 0.1% to 0.2% of annual GDP toward pandemic PPR, and this amount willl need to be supplemented by other sources, including non-ODA.

The G20 should double down on ensuring at least $15 billion annually in international (or external) financing is directed toward regional and global public goods to fight cross-border threats.

Additionally, the HLIP recommends a minimum benchmark of at least 0.1% to 0.2% of GDP per year, per country directed toward pandemic PPR spending, drawing from the recent analysis from the WHO, OECD, and the World Bank.

At the 2026 UN HLM, countries should be encouraged to announce the designation of a specific percentage of transportation fees, health taxes, or other earmarked domestic revenues for PPR.

43 https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/03/smart-spending-to-combat-global-health-threats_9985a31e/166d7c57-en.pdf

Expand Defense and Security Sector Spending on Biosecurity

Biological threats are increasing, not only as a result of increased travel and risk of zoonotic spillover but also due to enhanced access to emerging technologies that can make accidental and deliberate release more possible. Biosecurity and biosafety scores among countries are among the lowest scores within the JEE and the GHS Index,[44] and regional and national disease surveillance systems are not sufficiently linked to identify and rapidly report an emerging biological threat—whether naturally occurring, accidentally released, or deliberately caused. Moreover, access to MCMs that can take the most deadly epidemic and pandemic diseases off the table remains limited. However, investing in capabilities for the 100 Days Mission represents a strong potential area for collaboration between health and defense sectors.

Pandemic PPR spending includes elements that are core to national and global security, including domestic and international spending to advance biosecurity, biosurveillance, and the 100 Days Mission to bolster deterrence and operational resilience and prevent deliberate and accidental misuse of biological agents.

Therefore, nationally, G20 and other HICs and UMICs should double down on their spending for the core elements of pandemic PPR that benefit national and global biosecurity. They should also allocate funding globally to ensure LMICs are able to prioritize these critical international security capacities. Although the security and defense sectors benefit greatly from investments in biosecurity and other elements of pandemic PPR, a substantial portion of pandemic PPR spending for LMICs has come through ODA budget lines[45].

It is vital for G20 and other HICs and UMICs to urgently catalyze biosecurity financing from the security sector. In particular, the HLIP proposes a benchmark for G20 and other HICs and UMICs to identify defense and security spending to supplement their domestic and global biodefense budgets of at least 0.5% to 1.0% annually, or at least $12 billion to $25 billion across all HICs and UMICs.

As defense and security budgets rise, biodefense spending should be a core component of broader defense spending. The HLIP finds that this may present an important opportunity, in that additional countries and multilateral forums such as NATO have made commitments in recent years to increase defense spending as a proportion of GDP.

44 https://ghsindex.org/

45 https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/03/smart-spending-to-combat-global-health-threats_9985a31e/166d7c57-en.pdf

Minimum Benchmarks for Annual Pandemic PPR Financing: Our Rationale for Leveraging and Tracking Increased Domestic, Defense and Security, and International Resources

In 2021, the HLIP recommended minimum additional spending of $15 billion annually for pandemic PPR focused on regional and global public goods across four pandemic PPR categories: (1) robust surveillance and detection networks, (2) building resilience in health systems, (3) supply capacity for MCMs, and (4) increased national health spending for all countries.

In 2025, the HLIP re-examined this issue and found a great need to better identify and track pandemic PPR spending and re-evaluate benchmarks over time. We evaluated recent data from the OECD, the WHO, and the World Bank, which analyzes national health accounts and estimates 2016–2022 spending levels on pandemic PPR. The analysis takes into account spending across a range of national health accounts and finds that countries, in aggregate, spent between $113 billion and $267 billion on pandemic PPR during that timeframe.[46]

The 2021–2022 numbers from this report reflect a relatively high-water mark of spending on pandemic PPR, as new and targeted COVID-19 funding from 2020 and 2021 flowed into health systems globally. In particular, the 2022 spending level on pandemic PPR at $230 billion reflects a focus informed by the clear and present threat of COVID-19, which has since receded. This analysis also highlights the significance of ODA as a major source of LMIC pandemic PPR spending.

It is equally imperative for governments to identify key priority areas to improve pandemic PPR capacity and develop prioritized, costed plans for increasing financing in those areas. We offer these minimum benchmarks as a way to help countries set those priorities and for the world to transparently track and account for progress in meeting, and ideally, exceeding them. We propose that these prioritized, costed plans should be delivered to the 2026 UN HLM and that a global pandemic spending tracker should be launched to support and ensure continued transparent accountability.

BOX 1 | MINIMUM BENCHMARKS FOR ANNUAL PANDEMIC PPR FINANCING

Pandemic crises come at a major price. COVID-19 alone cost millions of lives, with cumulative economic losses estimated to reach US $13.8 trillion through the end of 2024.[a] With economists estimating a very high level of loss from future pandemics,[b,c]

a https://www.imf.org/en/Publications/WP/Issues/2022/04/04/A-Global-Strategy-to-Manage-the-Long-Term-Risks-of-COVID-19-516079
b https://link.springer.com/article/10.1057/s41308-023-00212-z
c https://www.cgdev.org/publication/estimated-future-mortality-pathogens-epidemic-and-pandemic-potential

46 https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/03/smart-spending-to-combat-global-health-threats_9985a31e/166d7c57-en.pdf

we can anticipate high rates of return for investments that reduce pandemic frequency and impact.

First, the HLIP continues to find an urgent need for at least $15 billion in annual investment for regional and global public goods, as well as MCM surge financing, to be made available wherever the need is most acute globally. This level of preparedness necessarily includes a baseline level of spending on surveillance for priority pathogens; investments in R&D, manufacturing, and delivery to meet the goals of the 100 Days Mission for vaccines, diagnostic tests, and treatments; and catalytic funds to spark additional national and private sector spending in pandemic PPR through the Pandemic Fund and international and regional financing institutions. A portion of the $15 billion must be slated for surge financing for readiness and response when a crisis emerges. Ensuring adequate and accessible surge financing—particularly for LMICs—to procure and deliver MCMs in the early stages of an outbreak also is critical to ensuring all countries can rapidly respond. While some progress has been made and must be sustained (e.g. Gavi's First Response Fund), the HLIP finds that inadequate attention has been paid to costing surge financing needs. As a key part of the work to implement Recommendation #2 of this report, that window must be better accounted for and understood.

Second, increased domestic resources will be necessary to prepare for cross-border biological threats. $110 billion to $220 billion in annual spending for pandemic PPR appears to be a bare minimum required for countries to prepare for the next pandemic. This number represents approximately 0.1% to 0.2% of annual GDP. From 2016–2020, the world was spending just over $100 billion annually on pandemic PPR, largely out of HICs, yet the world was largely unprepared for COVID-19. In 2019, HICs spent over 25 times more per capita on PPR than LICs, and over 30 times more per capita in 2022. Furthermore, higher levels of spending in 2021 and 2022 ($230 billion to $275 billion) reflect COVID-19's status as a moderate respiratory pandemic. A severe respiratory pandemic could result in higher spending needs, particularly as health care and commodity costs—as well as inflation—continue to rise. Finally, a major portion of the surge spending in 2021 and 2022 in LMICs came from ODA, which is diminishing and may not be available at the same level in future pandemic scenarios. Therefore, an annual allocation of $100 billion, particularly when considering rising inflation, is not likely to be enough—all countries should mobilize at least 0.1% to 0.2% of annual GDP toward pandemic PPR, and this amount willl need to be supplemented by other sources, including non-ODA.

Third, identifying domestic resources from security budgets, as well as international resources from the private sector and other non-ODA sources, will be crucial to supplement near- and long-term pandemic PPR financing.

d https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/03/smart-spending-to-combat-global-health-threats_9985a31e/166d7c57-en.pdf

While much emphasis has been placed on this goal over the past five years, little has materialized. Therefore, the G20 and other HICs and UMICs should urgently catalyze non-ODA financing for pandemic PPR from the business and security sectors. In particular, the HLIP proposes a benchmark for all G20 and other HICs and UMICs to identify at least 0.5% to 1.0% annually for biodefense spending from defense and security budgets. Importantly, this spending should be scoped to support national, regional, and global efforts to advance biosecurity, biosurveillance, and the 100 Days Mission to bolster deterrence and operational resilience and prevent deliberate and accidental misuse of biological agents. As defense and security budgets rise, biodefense should be a core component of defense spending.

Finally, innovative financing remains crucial, but more work to rapidly execute on a myriad of ideas is needed. The HLIP evaluated proposals from various sources over the past four years that have recommended accelerating non-ODA spending for pandemic PPR. These sources include revenues from domestic health taxes, debt swaps, private sector investments through corporate social responsibility and direct spending to ensure infrastructure in operating regions and markets, expanded philanthropic investment, and pandemic bonds and other forms of insurance. These proposals have merit, but they have yet to deliver a major source of financing for domestic, regional, and global preparedness. Further investigation of these proposals and other innovative approaches will be necessary for ensuring a sustainable future for pandemic PPR financing, but we may not be able to rely on them to yield rapid results.

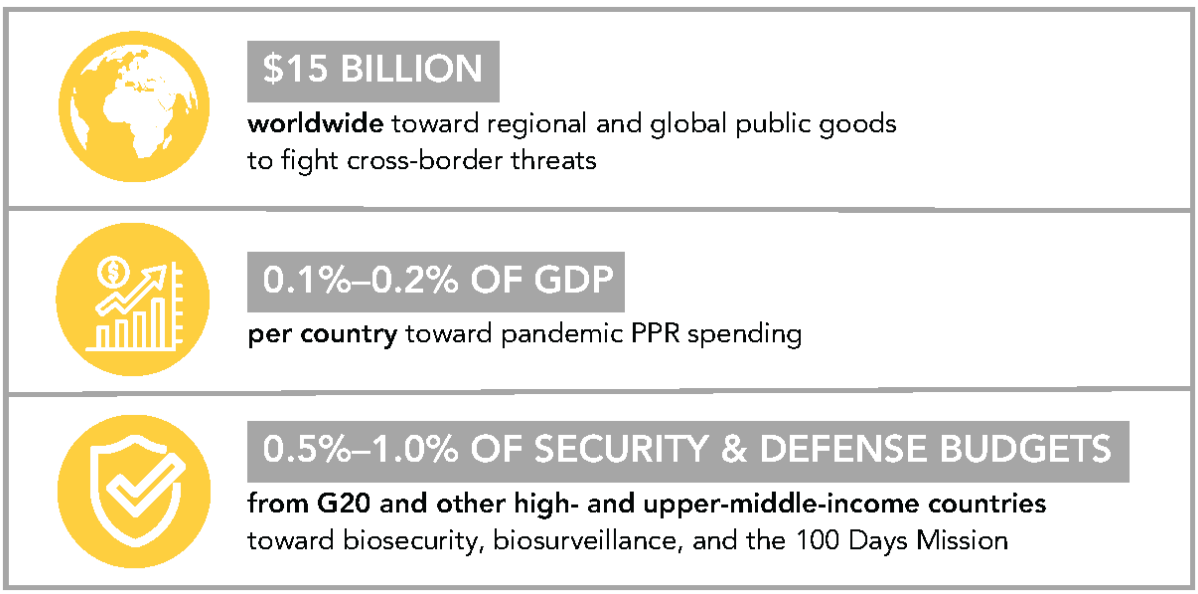

FIGURE 3 | Minimum Benchmarks for Annual Pandemic PPR Financing
SOURCE: Created by authors.

Deliver Prioritized, Costed Plans to the 2026 UN HLM

In an era of decreasing fiscal space, not only should finance and health ministers be able to track pandemic PPR spending, they also should be able to translate that spending into a prioritized spending plan with specific budget lines that fill the most critical gaps.

Prior to 2015, there were no mechanisms for sharing national pandemic PPR gaps or prioritized, costed plans. Over the past decade, many tools have emerged to help countries identify and fill health security gaps and to share that data transparently with neighboring countries and the world. These include the JEE; GHS Index; Global Preparedness Monitoring Board; Framework for Health, Social, and Economic Vulnerabilities (FEVR); IPPS MCM Scorecard; and others. Out of these grew the effort for countries to develop NAPHS and the initiative to link key gaps with national, regional, and Pandemic Fund proposals to finance priority needs.

Unfortunately, these tools rely on spending data that is not well tracked or publicly accessible. Frequently, these data are not properly prioritized or costed. Going forward, these plans should take into account national budget lines (including country envelopes for PDB lending), development finance and other private sector investments, country spending toward global and regional pandemic PPR, and donor spending within the country.

The plans should be concise, with clear metrics and gaps. They should be aligned with gaps highlighted through transparent assessments, including the JEE, the 7-1-7 target[47], and the GHS Index.

The HLIP recommends a large-scale effort, prior to the 2026 UN HLM, that will focus on ensuring every country can come to that meeting with a costed, prioritized plan, linked to a set of clear commitments for financing pandemic PPR. The G20 should set an example by working nationally across the G20 and with regional partners to bring such plans to the 2026 UN HLM.

Launch a Global Pandemic Spending Tracker

The HLIP finds that efforts to track spending on pandemic PPR have been fragmented, and existing financing instruments have been insufficiently utilized to identify, transparently track, and finance gaps that are core to pandemic PPR.

To prepare for the next large-scale biological threat, all countries must know their priority gaps and financing needs to fill them. Tracking pandemic PPR spending in a transparent, clear manner will allow countries to understand how they are performing against their peers, identify which countries may need assistance in meeting their targets, and help external funders clearly understand where gaps in funding are forming or expanding.

47 https://717alliance.org/

Analogous tracking tools include the OECD's ODA dashboard,[48] and the regular publication of NATO defense expenditure data.[49]

Ahead of the 2026 UN HLM, the G20 JFHTF should launch an annual Global Pandemic Spending Tracker* covering country, MDB, PDB, and private sector financing across health, security, and development budgets toward a set of minimum benchmarks for pandemic PPR financing, starting with those recommended in this report.

* The tracker should be analogous to the existing OECD tools for tracking development assistance and NATO tools for tracking defense spending.

Announce New Pandemic PPR and Biosecurity Spending, Including from Health and Security Budgets

To fill major gaps in health spending, including pandemic PPR, countries around the world are laboring to identify new sources of revenue. Among the most exciting and actionable elements, to date, are transportation fees and local health taxes.

At the 2026 UN HLM, countries should announce the designation of a specific percentage of transportation fees, health taxes, or other earmarked domestic revenues for pandemic PPR and component elements, such as biosecurity, biosurveillance, and operational resilience.

Enable PPR Financing in Fragile Settings

Fragile, conflict-affected, and hard-to-reach geographic locations already place people in situations of extreme stress—when an outbreak is underway, it becomes even more challenging to deliver supplies, treatments, and expertise to these populations. Ensuring comprehensive pandemic PPR includes ensuring that all countries are prepared to respond to a pandemic, even in locations where the governments lack presence or capacity to promote effective PPR.

48 https://www.oecd.org/en/topics/sub-issues/oda-trends-and-statistics.html
49 https://www.nato.int/cps/en/natohq/news_237171.htm

In fragile, conflict-affected, and hard-to-reach geographic locations, direct bilateral ODA and/or MDB financing for civil society organizations should be accelerated. The HLIP urges MDBs and other relevant PDBs to develop a mechanism to accelerate the use of IDA and other MDB grants to directly fund civil society and non-governmental organizations where governments lack presence or capacity to promote effective PPR.

In humanitarian contexts, the World Bank and other MDBs should utilize all available options—including IDA—to disburse PPR funds through humanitarian actors in regions that national systems cannot reach due to conflict.

Integrated outbreak insurance for government and humanitarian systems should also be piloted, refined, and scaled, building on precedents for natural disaster risks.

Stress Test Pandemic Financing. Invest in Data Collection, Consolidation, and Accountability. Commission a Global Pandemic Risk Assessment.

Adequate and sustainable funding will be wasted if it is not focused on the most critical priorities for preventing, detecting, and stopping epidemic and pandemic threats. A clear and timely understanding of the pandemic risk landscape is critical to ensuring funding is focused where it will have maximum impact.

In tandem, operationalizing a targeted deployment of finances will require as much data as possible to inform which priorities are most important. These data should be available to all contributing countries so that global decision making can be evidence-based. Numerous measures of pandemic preparedness exist that align with the capacities laid out in the IHR, including the JEE, SPAR, GHS Index, and the Africa Health Security Index, which is launching in 2026.

While donors and national governments might use these and other tools to guide their decision making, there isn't yet a "one-stop shop"—a publicly accessible space to quickly access all available tools and source data for benchmarking health security capacities. There is also no effort to link the data sources so that countries, regional organizations, and researchers can create a more complete picture of the different aspects of need across pandemic preparedness and response. Finally, a pandemic risk assessment is needed to identify upstream drivers of risk that can inform preventive strategies.

To support these goals, the G20 should support data consolidation, commission a biennial global Pandemic Risk Assessment, and institutionalize an annual global exercise based on the G20 Operational Playbook for Pandemic Response Financing.

Radically Mobilize and Scale Private Finance for Pandemic PPR

The HLIP evaluated several proposals from various sources focused on accelerating private sector spending for pandemic PPR, including incentives for businesses to invest in preparedness capacity, corporate social responsibility, and direct spending to ensure infrastructure in operational regions and markets. Many of these proposals have merit, but more work is needed to identify major sources of private sector revenue for pandemic PPR.

Expanding business interruption insurance was among the promising proposals that surfaced to the HLIP. One of the key public health approaches to containing the spread of COVID-19—physical distancing, including temporarily closing businesses—had a massive impact on world economies. Coming out of COVID-19, insurance companies have increased infectious disease exclusions in business interruption policies.

The HLIP supports the acceleration of private insurance markets covering risks related to pandemics, including business interruption insurance. Establishing business interruption insurance prior to an outbreak could help ensure economic stability and business continuity during a public health emergency. This would free government resources to finance PPR public goods that companies cannot and could create positive incentives for companies to improve operational preparedness. To achieve this goal, a task force should be established by the G20 JFHTF to significantly expand business interruption insurance.

The membership for a task force to identify how to expand this type of insurance should include regulators, policyholders, and (re)insurers, including South Africa's Emerald Africa and MunichRe[a], who in 2023 brought to market an innovative parametric insurance product targeting pandemic-related business interruptions for South African corporations.

a https://www.cnbcafrica.com/2023/unique-business-interruption-policy-covers-corporates-future-pandemic-losses

Better Leverage Existing IFIs to Accelerate Pandemic PPR Financing

As political will to prepare for the next pandemic wanes, existing PDB arrangements for pandemic PPR must be leveraged to maximum effect. This will require enhanced coordination across MDBs and other IFIs.

IFIs should maximize resources, coordination, and alignment in support of pandemic PPR spending. IDA and other MDB grants and debt relief and restructuring facilities should be leveraged and scaled to de-risk pandemic PPR investment.

The IMF RST provides longer-term, affordable financing to LMICs to address challenges like climate change and pandemic preparedness.[50] To advance comprehensive pandemic PPR, all eligible countries should have a clear understanding of and easy access to the IMF RST facility and its highly concessional terms, and the IMF RST's PPR mandate should be preserved.

Ensuring that all LMICs are aware of the IMF RST funding mechanism may allow for the expansion of pandemic PPR planning or execution of existing plans. Relatedly, the HLIP also calls for the recapitalization of the CCRT for outbreaks in LICs.

The World Bank, IMF, and other IFIs should also commit to providing at least one multilateral surveillance report biannually on global health security risks. They should enable results-based tools and incentives when country JEE scores or other preparedness metrics improve.

Offset Negative Economic Consequences for Transparency in Disease Reporting

When LMICs rapidly notify global health authorities of an emerging epidemic, they are often subject to trade and travel restrictions that can significantly impact their economies and disincentivize the very transparency that is crucial to effective response.

Therefore, MDBs, PDBs, and philanthropies should be encouraged to establish a financial mechanism to offset the negative economic consequences of rapidly reporting an emerging epidemic and thus incentivize rapid reporting.

50 https://www.imf.org/en/Topics/Resilience-and-Sustainability-Trust

Chapter 2

Accelerate geographically diversified access to MCMs.

Manufacturing and delivery of MCMs is not sufficiently diversified geographically. Blended financing mechanisms are needed to enable regional manufacturing and pooled procurement.

RECOMMENDATION 2

Ahead of the 2026 UN HLM, the IFC and other DFIs should partner to launch and finalize at least one dedicated, blended MCM surge financing facility and an associated 'standby' list of regional manufacturers and pooled procurement mechanisms for each region. Linked to that effort, philanthropies should launch a designated operational platform for technical assistance, market assessments, and stress testing to expand the list of regional manufacturers, particularly for under-invested products like diagnostics, PPE, and biomanufacturing. This facility should fill a key financing gap in the private sector, coordinate among like-minded actors as a partnership program, and leverage ongoing design work among G7 and G20 DFIs, IFC, and partners under the MCM Surge Financing Initiative, ensuring rapid deployability by 2026.

The first hurdle in responding to a global biological threat is ensuring vaccines, tests, treatments, and PPE—MCMs—are available to those who need them. The second hurdle is getting those MCMs to their destinations quickly enough to ensure maximum impact. To date, the world has not equitably cleared either of these two hurdles.

During an epidemic or pandemic, countries will focus first on their own populations. While countries and international organizations made great strides during the COVID-19 pandemic to develop new approaches for sharing MCMs, there was a lag as HICs focused inward before they were able to share. Meanwhile, the virus spread rapidly, reproducing unchecked and developing viral variants that rendered some of those MCMs less effective.

These lessons from COVID-19 have taught us that accelerating geographically diversified access to MCMs is essential for the health security and protection of all countries—including HICs as well as LMICs. In the wake of COVID-19, world leaders have broadly recognized the need for regional diversification of MCM manufacturing, procurement, and delivery, as HICs have been consistently unable to share MCMs rapidly enough to

respond to threats. In tandem, many LMICs did not have the capacity to operate MCM manufacturing sustainably in regions that would effectively serve their populations and large portions of their continents, necessitating importing MCMs from HICs. The lack of timely and sufficient financing for the procurement, production, and delivery of MCMs was a significant driver of inequities in MCM access, disease spread, viral variant evolution, and health outcomes during the COVID-19 pandemic.

However, progress is possible. Innovative approaches to incentivize global health markets to invest in regional products, like the AVMA, offer a roadmap. Rwanda's partnership with BioNTech—which is advancing mRNA vaccine manufacturing in Africa with investments from IFC,[51] CEPI,[52] the European Investment Bank, and the European Commission[53]—showcases what can be achieved with collaboration and vision.

Existing Barriers to Expanding MCM Manufacturing

The current MCM financing architecture is fragmented, vaccine-centric, and misaligned with the practical needs of a more geographically diversified set of regional manufacturers.

In addition, working capital is not readily accessible for private sector entities seeking to expand MCM procurement, manufacturing, or distribution during biological emergencies. The available financing does not sufficiently blend concessional lending and grants in ways that allow for investment in both sustainable regional manufacturing and platform technologies that can surge and scale to meet emerging crises. This capacity must be created in advance so that it is available when a surge is needed.

Existing financing solutions to diversify MCM access and surge manufacturing during epidemics and pandemics suffer from structural and design mismatches, including:

- **Capital type and maturity:** Existing debt financing tools are not geared toward the medium-term working capital needed to expand manufacturing, and equity-focused instruments may not match the needs of new manufacturers.
- **Timing and deployment constraints:** Even when supported financially, many manufacturers' existing facilities and infrastructure are unable to rapidly mobilize during health emergencies.
- **Investor mandate:** Traditional investors require risk-adjusted, market-level returns that are incompatible with underutilized capacity and volatile demand in between health emergencies.
- **Fragmented coordination:** Coordination between financing institutions is also fragmented and struggles to address the demand and supply-side needs of MCM manufacturing.

51 https://www.ifc.org/en/pressroom/2021/ifc-government-of-rwanda-partner-to-develop-vaccine-manufacturing-capacity-in-rwanda

52 https://cepi.net/biontech-and-cepi-expand-partnership-strengthen-africas-mrna-vaccine-ecosystem

53 https://www.eib.org/en/press/all/2025-380-eib-and-european-commission-join-forces-with-biontech-to-build-a-sustainable-vaccine-ecosystem-in-africa

In addition to these financing challenges, there is also a dearth of existing, pre-identified, and scalable regional manufacturers capable of and prepared to surge MCM manufacturing for epidemic- and pandemic-priority pathogens in their geographic area. Growing this ecosystem of manufacturers will require blended financing that includes technical assistance, grant-making, market assessment, regulatory support, and stress testing to create a growing list of companies eligible for international investment.

Blended facilities that combine first-loss catalytic layers, senior investment tranches, and technical-assistance envelopes can directly address these mismatches by offering flexible working capital and capex instruments suited to regional manufacturers.

Creating Surge Financing Facilities

Establishing effective, novel financing mechanisms to allow for regional manufacturer surging during health emergencies will therefore require:

- Coordinated action and de-risking across existing financing institutions
- A pre-vetted set of regional manufacturers for platform vaccines, diagnostic tests, treatments, and PPE
- Blended financing, including grants and loans
- Technical assistance to expand the pool of qualified manufacturers
- Financing for innovation along the development pipeline

Ahead of the 2026 UN HLM, in order to create such capacity, the HLIP recommends the following:

RECOMMENDATION 2

The IFC and other DFIs should partner to launch and finalize at least one dedicated, blended MCM surge financing facility and an associated 'standby' list of regional manufacturers and pooled procurement mechanisms for each region. Linked to that effort, philanthropies should launch a designated operational platform for technical assistance, market assessments, and stress testing to expand the list of regional manufacturers, particularly for under-invested products diagnostics, PPE, and biomanufacturing. This facility should fill a key financing gap in the private sector, coordinate among like-minded actors as a partnership program, and leverage ongoing design work among G7 and G20 DFIs, IFC, and partners under the MCM Surge Financing Initiative, ensuring rapid deployability by 2026.

Launch a Working Capital Facility to Enable MCM Surge Financing

By no later than March of 2026, and building on existing efforts under the DFI MCM Surge Financing Initiative[54], the IFC and G20 DFIs should secure necessary investments, including grant funding and a tentative pipeline of manufacturers, to finalize one or more new MCM surge financing facilities. This could be executed through an independent, third-party fund manager with a blended finance track record. Regional implementers should be positioned as co-implementers in this new facility. The facility should be fully integrated with existing capital allocated for similar purposes, such as the current Afreximbank facility. At least two of the use cases for the facility within the first year should be targeted at working capital for diagnostic tests, treatments, and/or PPE.

The facility should be focused on surge financing and should make targeted investments now, before a surge is needed, in instances and regions where the manufacturing capacity base is weak. The facility should also provide grant financing focused on ability to scale, which can be blended with DFI or commercial capital to offer concessional financing to regional MCM manufacturers.

In addition to financing for epidemic- and pandemic-priority vaccines, this facility should target tests, treatments, and PPE—the most underrepresented categories in the global MCM ecosystem—and work in conjunction with regional bodies to guide pipeline development by identifying priority manufacturers across geographies and sectors.

The HLIP also recommends the development and launch of a two-phased investment model to ensure that surge-ready manufacturers and suppliers are technically capable, financially stable, and operationally aligned with emergency response needs when the next health crisis arises. Initial investments, ranging from $5 to $15 million, can be made during the preparedness phase to strengthen or build operational capacity and help companies begin to generate revenue for routine and acute health care markets. During a public health emergency, a pre-identified subset of high-performing manufacturers would become eligible for surge financing from a reserved capital pool, enabling rapid scale-up of production (targeting 1.5 to 3 times increases in output). The facility should be designed as a flexible financing vehicle to recycle capital between preparedness and surge phases with pre-negotiated surge-capital triggers.

Platform for Technical Assistance, Market Assessments, and Stress Testing

Linked to the recommended surge financing facility, philanthropies should launch a designated platform for technical assistance, market assessments, and stress testing to expand the list of regional manufacturers.

54 https://www.dfc.gov/media/press-releases/dfc-announces-surge-financing-initiative-and-strategic-investments-bolster

This independent or philanthropically-funded entity should be responsible for expanding the stable of regional MCM manufacturers, providing technical assistance, conducting stress testing, and accelerating market and health needs assessments to ensure investment readiness. This would also help streamline approval processes and harmonize investment and legal requirements for DFIs and commercial investors.

In parallel, dedicated market-shaping mechanisms should be deployed to complement the technical assistance platform. These tools, such as volume and procurement guarantees, can reduce demand uncertainty, stabilize pricing, and improve manufacturers' ability to plan and scale production sustainably. Procurement partners should be identified beforehand and coordinated with DFIs, IFC, and other stakeholders to ensure alignment between financial, regulatory, and demand-generation efforts.

ENABLING ACTIONS TO ENSURE MAXIMUM IMPACT

The HLIP has identified the following five key enabling actions, listed here and briefly explained below, which, if taken, will facilitate successful implementation and overall progress toward global pandemic preparedness:

- Create a 'standby' list of regional manufacturers and pooled procurement mechanisms for each region.
- Hold at least one to two 'live fire' simulations per year, per region, including inter-regional coordination.
- Finalize and support the establishment of a permanent secretariat or advisory council for the DFI MCM Surge Financing Initiative to pool resources more effectively. The permanent secretariat or advisory council should serve as the coordinating governance body for DFI surge financing vehicles, pooling catalytic and senior capital across regions.
- Establish pre-negotiated lines of credit for emergencies and regular assessments of supply chains and regional and domestic production capabilities in LMICs.
- Accelerate all regions' ability within 100 days to manufacture a substantial portion of MCM and rapidly respond to an emerging threat.

Create a 'Standby' List of Regional Manufacturers and Pooled Procurement Mechanisms

To date, regional and IFIs have not sufficiently harmonized their investments in regional MCM financing, and there is no coordinated platform for accelerating and tracking progress and providing technical assistance to qualify or pre-qualify for loans related to MCM production, procurement, or delivery. Furthermore, investments in MCM production, procurement, and distribution have not been diversely focused across MCMs, with many more focused on vaccines than diagnostic tests, treatment, and PPE.

To address these challenges, the surge financing facility and associated technical assistance platform should create a 'standby' list of regional manufacturers across all MCM production including diagnostic tests, treatment, and PPE, as well as pooled procurement mechanisms for each region. The pre-vetted 'standby' list of transparently-agreed regional manufacturers should be assessed against a shared portfolio scorecard to ensure consistent investability criteria across stakeholders, including the ability to deliver for public health outcomes.

Hold at Least One to Two 'Live Fire' Simulations Per Year

Once a regional MCM manufacturer is sufficiently funded, operational, and appropriately focused, it is critical to ensure that they can rapidly surge production—and remains able to do so over the long term.

Therefore, the surge financing facility and associated technical assistance platform should require at least one to two 'live fire' simulations per year, per region, including inter-regional coordination. These simulations should include exercises of surge financing itself, as well as demonstrating the capacity to scale specific products—including procurement, securing payments, QA and quality control, indemnity and liability protections, last-mile delivery, and cross-border movement. These 'live fire' simulations should ultimately be used to assess capabilities and performance, with manufacturers completing campaigns that can be sold in the marketplace. This would create a dedicated revenue stream or guarantee that can provide liquidity and cashflow to these manufacturers.

Finalize and Support the Establishment of a Permanent Secretariat for the DFI MCM Surge Financing Initiative

During the COVID-19 pandemic, DFIs were not sufficiently coordinated and often competed for investments rather than working collaboratively to facilitate better investments and a more sustainable infrastructure for pandemic PPR. From 2023–2024, DFIs partnered to establish the MCM Surge Financing Initiative, which resulted in an MOU among G7 DFIs in late 2024. This effort should be expanded and sustained.

In parallel to investments in new MCM surge financing facilities and stress testing, G20 DFIs should establish a permanent secretariat or advisory council of stakeholders for the existing DFI MCM Surge Financing Initiative to pool resources more effectively. This could be done with even limited investments across the DFIs in support of the existing MOU.

Establish Pre-Negotiated Lines of Credit and Ensure Supply Chain Resiliency

Smaller manufacturers do not always have access to readily available lines of credit or local supplies during epidemic or pandemic emergencies. These must be a critical component of accelerating geographic diversification and MCM surge financing.

Additionally, one of COVID-19's clearest lessons was that supply chain brittleness or breakdown can cause enormous delays and subsequent economic and human costs. Ensuring that all supply chains, including generic products and those within LMICs, continue to operate as designed throughout health emergencies will help ensure the most rapid and effective response.

Therefore, both the surge financing facility and technical assistance platform should establish pre-negotiated lines of credit for emergencies and conduct regular assessments of supply chains and regional and domestic production capabilities in LMICs.

These lines of credit will serve as a backstop for regional MCM manufacturers during emerging biological threats and will help ensure their ability to surge appropriately. These facilities should also conduct assessments of supply chains and domestic production capabilities to help identify key inputs, gaps, and bottlenecks that surge financing could address. This supports and aligns with the actions of the amended IHR and Pandemic Agreement.

Accelerate All Regions' Ability Within 100 Days to Manufacture a Substantial Portion of MCM and Rapidly Respond to an Emerging Biological Threat

Empowering LMICs to manufacture sufficient MCMs for their own population will reduce many of the inequities experienced during the COVID-19 pandemic and improve the global response to any emerging health threat. Rapid response is key to stopping global spread and mitigating economic, as well as health, impacts—benefiting HICs as well as LICs.

Ultimately, the goal of this recommendation and its enabling actions is to support all regions' ability within 100 days to manufacture a substantial portion of MCM and rapidly respond to an emerging biological threat. This recommendation could be rapidly operationalized through the MCM Surge Financing Facility prototype among DFIs and independent managers, demonstrating proof of concept by 2026.

Chapter 3

Enable development bank at-risk financing for MCM advance purchases.

Pre-negotiated at-risk financing and rapid use of country level loans for LMICs to procure MCMs during crises is not sufficiently enabled among the World Bank, all MDBs, and relevant PDBs. Even approved products wait too long for WHO PQ.*

RECOMMENDATION 3

Ahead of the 2026 UN HLM, all MDBs and relevant PDBs should confirm and clearly communicate the availability of rapid and effective at-risk financing for advance purchases of MCMs by LMICs during epidemics and pandemics (i.e. borrowing to purchase promising candidate MCMs before regulatory approval). At-risk financing should apply explicitly to country-level loans as well as any pooled procurement mechanisms using the development bank balance sheets. WHO PQ and NRA approvals must be accelerated and products that have already received regulatory approval by WHO-Listed Authorities at ML3 or higher should be given provisional or temporary approvals until WHO and NRA approvals are completed.

LMICs are and have been last in line to procure MCMs during public health emergencies. Early in the COVID-19 pandemic, while HICs were able to get into the queue to buy vaccines and other MCMs that were still under development, LMICs were not able to use IDA, IBRD, and other forms of financing to procure MCM that had not yet been authorized or approved for use. Countries were not able to access at-risk financing, and while COVAX was able to provide advanced purchase agreements for products in development it could not procure vaccines for LMICs until they were WHO PQ, compounding the delay. In fact, research has shown that 60–75% of the delay in vaccine deliveries to LMICs was explained by the fact that they ordered later (due to a lack of availability of financing) than HICs, rather than a longer lag between order and delivery. Countries should be able to use at-risk financing windows to procure MCMs through regional surge financing facilities or pooled arrangements like COVAX that can aggregate country demand and deploy funds faster than sovereign channels.

Effective at-risk financing would allow firms to expand capacity and start technology transfers while clinical trials are underway, enabling faster vaccination for everyone.

* At-risk financing is borrowing to purchase promising candidate MCMs before regulatory approval.

Barriers to At-Risk Financing

A key barrier to LMIC access to MCMs was the lack of dedicated at-risk funding available at the beginning of the COVID-19 pandemic. Organizations like Gavi and CEPI stepped forward in the crisis and leveraged balance sheets to make at-risk R&D, manufacturing, and procurement decisions. Boards were rightfully concerned about the amount of risk that was being taken—although, over time, as fundraising was successful and the risk mitigated through insurance and other options, they allowed for more risk. Pre-negotiated risk tolerance and zero-day finance is thus critical to allow the fastest scale-up and delivery of MCMs during an emergency. This may not always be an available option, and even with these tools in place, countries were not able to procure MCM at-risk during the COVID-19 pandemic. Countries needed access to the large-scale finance provided by MDBs and relevant PDBs in order to buy MCMs before approval. However, the World Bank's initial criteria for using their resources for vaccine purchases during the pandemic required in-country regulatory authorization and either (i) WHO PQ and approval by one Stringent Regulatory Authority (SRA); or (ii) approval by three SRAs in three regions.

Such delays in using existing financing mechanisms, such as IDA and IBRD, should be unacceptable to both LMICs and HICs from a public health and international security perspective. Accelerating countries' immediate access to attain envelopes to procure MCMs at-risk is a critical first step to stopping spread and saving lives. Continued infections and mortality in regions that cannot otherwise quickly access MCMs have rippling health, economic, security, and human costs.

Three Related Barriers for LMICs to Procure MCM During Health Emergencies

Compounding this access barrier, LMICs also experience three related challenges in accessing MCMs more broadly, even when they already have received regulatory approvals or an emergency use authorization (EUA) from a WHO-Listed Authority.

First, the availability of country loans to procure MCMs during health emergencies has not been sufficiently clear. As ODA declines, it will be increasingly important for countries to access IDA, IBRD, and other mechanisms for MCM purchases without waiting for grant financing that may be delayed or might not come at all.

Second, there have been significant regulatory delays that have made it challenging for countries to access MCMs that have been authorized or approved by SRAs or maturity level 4 (ML4) regulators. For example, during recent outbreaks of mpox, access to vaccines that had been approved by more than one SRA was delayed by over a year as the WHO and local regulatory authorities struggled to provide PQ, and many procuring entities were unable to purchase vaccines without PQ in place.

Finally, individual LMICs cannot compete in the market to purchase at lower prices and smaller quantities. Pooled procurement mechanisms continue to be essential to coordinate, drive down prices for pandemic products, and prevent lengthy negotiations on liability.

To sufficiently enable and scale at-risk financing for MCMs, the HLIP recommends the following:

RECOMMENDATION 3

Ahead of the 2026 UN HLM, all MDBs and relevant PDBs should confirm and clearly communicate the availability of rapid and effective at-risk financing for advance purchases of MCMs by LMICs during epidemics and pandemics (i.e. borrowing to purchase promising candidate MCMs before regulatory approval). At-risk financing should apply explicitly to country-level loans as well as any pooled procurement mechanisms using the development bank balance sheets. WHO PQ and NRA approvals must be accelerated and products that have already received regulatory approval by WHO-Listed Authorities at ML3 or higher should be given provisional or temporary approvals until WHO and NRA approvals are completed.

Provide Clear Guidance to Countries Enabling At-Risk Financing

First and foremost, countries must have clarity. While progress has been made since the COVID-19 pandemic, there has still not been a clear decision for countries, manufacturers, or regulators that LMICs will be able to procure MCMs at-risk during a public health emergency using MDB financing. This means that LMICs will continue to struggle to access their country envelopes during epidemics and pandemics, undermining timely effective response. Additionally, countries will have difficulty accessing new MCMs at a competitive volume or price if they don't have access to pooled procurement and delivery.

Within the next six months, and building on discussions at the World Bank Board, the World Bank and other PDBs should each produce a specific guidance note confirming that crisis response facilities can be used to invest in MCMs in advance of EUA during public health emergencies and pandemics, unlike during COVID-19, when financing could initially only be used for MCMs with approval from multiple SRAs. Eligible investments would include, but not be limited to, advance purchase agreements, R&D grants, and advance market commitments, as well as the use of third-party blended finance vehicles such as the MCM Surge Financing Facility to channel working capital and capex into regional manufacturing and supply chain readiness.

Financing should promote the use of pooled procurement, whether conducted by groups of countries, regions, international agencies, or directly by the World Bank and/or other PDBs.

The World Bank can, if countries and manufacturers agree, establish one set of terms for all clients using IDA or IBRD funding to pay for the MCMs to address the challenge of multiple small orders.

ENABLING ACTIONS TO ENSURE MAXIMUM IMPACT

The HLIP has identified the following six key enabling actions, listed here and briefly explained below, which, if taken, will facilitate successful implementation and overall progress toward global pandemic preparedness:

- Drawing on existing groups such as CEPI, Gavi's Independent Product Group, and the WHO, the World Bank should recognize a panel of health and economic experts to recommend candidate MCM for at-risk advance purchases using IDA and IBRD financing, as well as financing from other PDBs. The panel should explicitly consider the benefits of accelerating access and the costs of delay. Countries would be free to follow alternative guidance that meets MDB assurance requirements.
- The World Bank should establish a mechanism, in advance, that allows donors and other funders to share some of the risks associated with at-risk procurement for IDA countries. In extremis, the Gavi First Response Fund could act as a partial backstop or first loss tranche to reduce the impact of potential financial losses associated with early pooled procurement for LMICs.
- An MOU to End Pandemics should be negotiated with CEOs of leading MCM manufacturers in each region to pre-position indemnity and liability protection for manufacturers, which they require for advance purchases, and a template advance purchase contract for LMICs should be established.
- **Related:** During a health emergency, products that are already approved by a WHO-Listed Authority at ML3 or higher should receive a temporary or provisional approval until WHO PQ reviews are completed, so as not to slow the response by NRAs and international agencies. The WHO PQ mechanism should be adequately financed so that it can accelerate its reviews.

- **Related:** Clarify and confirm the use of country-level loans to acquire existing and approved MCMs during health emergencies. The Crisis Response Toolkit should rapidly apply to the use of IDA and IBRD to acquire approved epidemic and pandemic MCMs, as well as at-risk purchases for emerging threats.
- **Related:** Develop a revolving capital fund in each region, modeled after the PAHO Revolving Fund[a]. The Revolving Fund structure could serve as a regional window or co-investment partner with the MCM Surge Financing Facility in Recommendation 2.

a https://www.paho.org/en/revolving-fund

Recognize a Panel of Health and Economic Experts to Recommend Candidate MCMs for At-Risk Advance Purchases

During COVID-19, there were different mechanisms to review pre-clinical and clinical experimental vaccines. For example, COVAX had an independent product group that provided advice and decisions on which vaccines were worthy of investment. It is important to create a standing mechanism(s) that could be used by countries, regional and international agencies, and the World Bank and other PDBs to implement at-risk financing decisions and guide countries as to which MCMs would be most beneficial for early investment. The panel would include: (1) an expert on the MCMs (e.g., vaccines, therapeutics, diagnostics), (2) an expert on the economics of contract design and innovation, and (3) an expert in benefit, cost, and risk analysis of health policy interventions. This panel would have a mandate to balance risk and reward. Given the high return on investment, investing in MCMs makes economic sense even if some candidate MCMs fail. The panel would not replace authorities providing regulatory approval for clinical use.

Drawing on existing groups such as CEPI, Gavi's Independent Product Group, and the WHO, the World Bank should recognize a panel of health and economic experts to recommend candidate MCM for at-risk advance purchases using IDA and IBRD financing, as well as financing from other PDBs. The panel will explicitly consider the benefits of accelerating access and the costs of delay. Countries would be free to follow alternative guidance that meets MDB assurance requirements.

Establish a Mechanism, in Advance, that Allows Donors and Other Funders to Share Risks Associated with At-Risk Procurement for IDA Countries

In an at-risk financing arrangement for procuring MCMs, countries will be responsible for repaying their loans even if the MCMs do not achieve EUA status. In the event that an EUA is not achieved for a pre-purchased MCM, first loss mechanisms will be important to alleviate loan repayment for IDA countries. Alongside consideration from PDBs of what level of risk they can support with their own balance sheets, donors and/or other existing funders should also develop a mechanism, in advance, to partially or fully repay IDA loans taken to buy MCMs at-risk if the countermeasure fails to get regulatory approval.

The World Bank should establish a mechanism, in advance, that allows donors and other funders to share some of the risks associated with at-risk procurement for IDA countries and other countries most in need. In extremis, the Gavi First Response Fund could act as a partial backstop or first loss tranche to reduce the impact of potential financial losses associated with early pooled procurement for LMICs.

Negotiate an MOU to End Pandemics to Pre-Position Indemnity and Liability Protection for Manufacturers and Establish a Template Advance Purchase Contract for LMICs

During the COVID-19 pandemic, COVAX established standard contracts and indemnity and liability agreements for the 92 LLMICs that were accepted by the leading vaccine manufacturers. Ideally, these should also be extended to all middle-income countries to allow the fastest rollout of vaccines. While the World Bank and other PDBs should rapidly communicate their intent to enable at-risk financing for MCMs during epidemics and pandemics, they must also be ready to work with manufacturers to speed LMIC procurement of MCMs made available under an EUA.

Within the next 12 months, building on COVAX's existing model, through a MOU, the World Bank should pre-position an indemnity program that provides liability protection for MCM manufacturers and compensation for patients who may be injured by an MCM administered under EUA. In addition, the MOU would agree to advance purchase contract terms with a pool of MCM manufacturers so that a template contract is available in an emergency. Coordination with ongoing efforts will be essential, including the CEPI Vaccine Manufacturing Network and the Regional Vaccine Manufacturing Collaborative, as well as insurers that supported the COVAX No Fault Compensation program.

This MOU would:

- Commit insurance companies to provide liability protection for manufacturers and compensation for patients who may be injured by an MCM administered under EUA from insurance companies. This structure would build on COVAX's existing efforts, with a small insurance premium added to the vaccine unit price.
- Guarantee MCM advance purchase contract terms, including that countries' pricing, pre-payment terms, and delivery times are on par with the manufacturers' most favored customer who provides a similar level of upfront payment, even if countries have smaller orders. Manufacturers may offer lower pricing, less pre-payment, and faster delivery time to World Bank clients if this increases their order volume, reflecting their greater price sensitivity. To help solve the challenge of small orders, the World Bank can, if countries and manufacturers want, agree to one set of terms for all its clients using IDA or IBRD financing to pay for the MCMs.
- Provide a template for an advance purchase contract and liability protection that could be rapidly adopted by any MCM manufacturer.

Speed PQ and Other Regulatory Approvals

Even after financing is made available, regulatory barriers remain a critical bottleneck for countries. The WHO PQ process is significantly delayed and under-resourced.

During a health emergency, products that are already approved by a WHO-Listed Authority at ML3 or higher should receive a temporary or provisional approval until WHO PQ reviews are completed so as not to slow the response by NRAs and international agencies. The WHO PQ mechanism should be adequately financed so that it can accelerate its reviews. Countries should be encouraged to enact enabling laws to anticipate this development, and WHO should develop model proposals for these laws.

Clarify and Confirm the Use of Country-Level Loans to Acquire Existing and Approved MCMs During Emergencies

Particularly in an era of declining ODA, it is vital for countries to be able to quickly and easily access loans to procure MCMs when needed, rather than relying solely on grant financing that could be significantly delayed or never come at all. This is especially essential at the start of an outbreak, when the most important task should be containing the threat—not securing funding.

Alongside a clearly communicated decision to allow at-risk financing for MCMs during epidemics and pandemics, MDBs, other PDBs, and donors also should clarify the rules, more generally, for use of country-level loans and procurement mechanisms to acquire existing and approved MCMs during health emergencies, including through the Crisis Response Toolkit.

To ensure all nations' ability to rapidly respond to emerging threats, the World Bank, donors, and other PDBs should promote the use of IDA and IBRD for MCM advance purchases during public health emergencies and pandemics. The World Bank Crisis Response Toolkit should rapidly apply to the use of country-level loans to acquire epidemic and pandemic MCMs that are SRA- or NRA-approved, EUA, WHO-EUL, and WHO-PQ, as well as at-risk purchases for emerging threats. Confirming and clarifying these rules will accelerate decision making in a crisis.

Develop a Revolving Capital Fund in Each Region

Regional approaches are essential to ensure that all countries can access MCMs and related supplies during public health emergencies. PAHO's Revolving Fund was a very successful instrument for enhancing pooled financing and pooled procurement for MCMs in the PAHO region. These regional revolving capital funds could work in tandem with the MCM Surge Financing Facility outlined in Recommendation 2, in order to serve as a regional or co-investment partner alongside the investment vehicle.

To provide further support for countries experiencing financial challenges during or between epidemics and pandemics, each region should develop a revolving capital fund, modeled after the PAHO Revolving Fund and UNICEF's Vaccine Independence Initiative. A regional revolving capital fund would allow for procurement planning and purchase of critical MCMs despite the region's financial situation. This financial institution would provide additional capacity and flexibility during times of crisis.

Chapter 4

Operationalize financing for tests, treatments, and PPE.

Tests, treatments, and PPE have been under-prioritized in the 100 Days Mission, with no clear institutional home to drive innovation or mobilize surge financing. While vaccine progress has advanced, there is still no global mechanism or coordinating body leading R&D and financing for these essential tools, leaving critical gaps in pandemic preparedness and response.

RECOMMENDATION 4

Ahead of the 2026 UN HLM, global and regional organizations should designate specific international and regional anchor institutions to coordinate the development and scale-up of tests, treatments, and PPE; launch a financing strategy to prioritize and expand investments in these areas for specific epidemic and pandemic threats, leveraging the MCM Surge Financing Facility outlined in Recommendation 2 as well as other existing blended finance mechanisms; and identify and support at least one PPE manufacturing hub in each region with regional stockpiles, including for long shelf-life products such as elastomeric respirators.

While more investment in vaccines that address the likely culprit of the next global pandemic is needed, the world is lacking a baseline of adequate investment in diagnostic tests, treatments, and PPE—all of which will remain among the earliest needs during any emerging moderate or severe epidemic or pandemic. Manufacturing of these essential tools is highly concentrated in a few countries, with limited capacity in many regions, leaving LMICs vulnerable to supply chain crises during emergencies.

During the COVID-19 pandemic, global PPE markets faced severe shortages, price spikes, and challenges in ensuring equitable access to their materials. LMICs experienced dire shortages of tests, treatments, and PPE—including therapeutics and oxygen. It is important to mobilize political will and capital to support the manufacturing, procurement, and delivery of these missing pieces of the pandemic preparedness puzzle.

Ahead of the 2026 UN HLM, in order to increase focus on and progress toward tests, treatment, and PPE innovation, manufacturing, and scale, the HLIP recommends the following:

RECOMMENDATION 4

Global and regional organizations should designate specific international and regional anchor institutions to coordinate the development and scale-up of tests, treatments, and PPE; launch a financing strategy to prioritize and expand investments in these areas for specific epidemic and pandemic threats, leveraging the MCM Surge Financing Facility outlined in Recommendation 2 as well as other existing blended finance mechanisms; and identify and support at least one PPE manufacturing hub in each region with regional stockpiles, including for long shelf-life products such as elastomeric respirators.

Launch a Dedicated Blended Finance Plan For Surging Access to Tests, Treatments, and PPE

In conjunction with the blended MCM Surge Financing Facility outlined in Recommendation 1, a list of geographically diversified standby manufacturers should be named for tests, treatments, and PPE for specific epidemic and pandemic pathogens.

G20 DFIs, PDBs, and relevant philanthropies and private sector partners should launch a dedicated blended financing plan focused on surging access to tests, treatments, and PPE for specific epidemic and pandemic threats.

Designate Global and Regional Anchors for Pandemic Tests, Treatments, and PPE

Within the 100 Days Mission, there are clear roles and responsibilities for vaccine R&D, funding, procurement, and distribution. However, less progress has been made in establishing similar roles and responsibilities for tests, treatments, and PPE. While vaccines have garnered significant attention, especially following COVID-19, tests, treatments, and PPE are just as important as vaccines in the early days of an emerging biological threat and should be prioritized to the same degree.

The IPPS has recently launched a therapeutics coalition and diagnostics gap assessment to move these missions forward. To further advance this agenda, one or more existing global organizations—like CEPI, Global Fund, or UNICEF—could be nominated to take on the coordinating function for accelerating, surging, and scaling PPR-relevant tests, treatments, and PPE. The nominated entity is to have a devolved structure to support the same at the global and regional levels.

ENABLING ACTIONS TO ENSURE MAXIMUM IMPACT

The HLIP has identified the following five key enabling actions, listed here and briefly explained below, which, if taken, will facilitate successful implementation and overall progress toward global pandemic preparedness:

- Spur financing for PPR-relevant diagnostics and launch a multisectoral PPR diagnostics working group that is linked to the Global Diagnostics Coalition[a]. Establish regional hubs for platforms in LMICs to support sample access and test evaluation linked to procurement-aligned quality benchmarks.
- Identify and support at least one PPE manufacturing hub in each region with regional QA labs and stockpiles of long shelf-life elastomeric respirators.
- Endorse the establishment and acceleration of the Therapeutics Development Coalition, a public-private partnership to reinvigorate the global therapeutics pipeline by coordinating R&D investment, streamlining development pathways, and strengthening access mechanisms for priority pathogens.
- Invest in R&D and innovation, including rigorously applied social science research to reduce disease transmission (e.g. the use of air filters in schools, hospitals, and workplaces; innovations in PPE; and fractional dosing[b]) and investment in countermeasure technologies (including universal vaccines) to address major pandemic risks, such as from respiratory pathogens like coronaviruses and influenza.
- Establish a dedicated taskforce to mobilize venture capital and private equity and development finance for PPR innovation, complemented by public, philanthropic, and blended finance mechanisms.

a https://www.who.int/initiatives/global-diagnostic-coalition
b https://www.cgdev.org/blog/could-fractional-dosing-be-key-addressing-mpox-vaccine-shortage

Spur Financing for Diagnostics and Launch a Multisectoral PPR Diagnostics Working Group

Testing is crucial for preventing, identifying, tracking, and treating emergent diseases. It is the first line of defense to understand the emergent pathogen and is essential for correctly and successfully targeting vaccines, treatments, PPE, and other supplies. Unfortunately, there has not yet been a sufficient emphasis on surging tests for epidemics and pandemics, nor in understanding the specific testing needs for specific priority pathogens.

To ensure sufficient financing and capacity for test development, innovation, and manufacturing, global and regional organizations should launch a multisectoral pandemic PPR diagnostics working group, linked to the Global Diagnostics Coalition. Additionally, philanthropic and private sector financiers should establish a dedicated initiative also linked to the Global Diagnostics Coalition to design and pilot surge financing tools specifically for epidemic- and pandemic-relevant diagnostic tests.

The initiative should establish regional hubs for platforms in LMICs to support sample access and test evaluation linked to procurement-aligned quality benchmarks.

The initiative also should create flexible frameworks that rapidly deploy appropriate push (R&D grants, capacity building) and pull mechanisms (advance market commitments, volume guarantees) based on outbreak scale, pathogen characteristics, and manufacturer capacity.

BOX 2 | DISEASE-SPECIFIC NEEDS FOR SURGING ACCESS TO DIAGNOSTICS[a]

- For diseases with zero-market scenarios like Ebola, the WHO and regional health organizations should establish regional stockpiling strategies for diagnostic tests, backed by maintenance contracts and blended finance models that combine grant funding with milestone-based payments. Governments, philanthropic funders, and development institutions should deploy minimum volume guarantees backed by grant subsidies to address the absence of routine commercial demand.

[a] These recommendations are derived from the following recent report: https://ippsecretariat.org/news/2025-diagnostics-gap-assessment/
[b] https://www.theglobalfund.org/en/
[c] https://www.paho.org/en/paho-strategic-fund
[d] https://amsp.africa/about-us/

- For high-burden endemic diseases in LMICs like dengue, pooled procurement mechanisms like the Global Fund,[b] the PAHO Strategic Fund,[c] or the Africa Medical Supplies Platform[d] should aggregate demand and deploy volume guarantees to improve pricing and reduce market uncertainty. All such mechanisms should be underpinned by strong quality standards to prevent the proliferation of low-performing products.
- For dual-market pathogens like H5N1 influenza, international organizations and finance institutions should deploy minimum volume guarantees and rapid activation financing mechanisms to enable tiered pricing structures for diagnostic products so that higher margins in high-income markets support affordable access in LMICs. These structures should be pre-negotiated to ensure rapid scale-up when outbreaks emerge.
- For Disease X scenarios, international agencies and governments should deploy capacity insurance models, where manufacturers are paid to maintain idle production capacity or pre-approved product configurations during non-emergency periods with automatic triggers for surge production when outbreaks occur.
- Manufacturers and financing institutions should also implement portfolio-based strategies that bundle diagnostic tests for diseases with diverse market profiles into unified manufacturing and distribution portfolios. This approach would enable commercially viable business modes for niche or low-volume diagnostic tests by cross-subsidizing production costs and leveraging combined volumes to achieve economies of scale.
- Regional procurement mechanisms should embed dedicated diagnostic test forecasting functions within their operations to provide visibility into diagnostic test performance characteristics, regulatory status, potential use cases, and buyer preferences. This will provide early-stage developers and investors with the information needed to model market entry, scale, and return on investment.
- DFIs and research funding agencies should also establish financing incentives for multiplexed tests, platform technologies, and breakthrough innovations. These mechanisms should provide extended funding timelines and pathway-specific incentives for technologies that can simultaneously address multiple barriers like cost, accessibility, and regulatory requirements. Investment should be structured to support both initial development and long-term sustainability, including provisions for staff retention, revalidation, and readiness between outbreaks.

Identify and Support at Least One PPE Manufacturing Hub in Each Region

Although all MCMs may be impacted by supply chain fragility and disruption, COVID-19 illustrated the specific challenges for PPE, as many of the main manufacturers are located in a few geographic regions. If an outbreak were to begin in one of these regions, the world again could easily experience similar delays in the delivery of critical supplies. Expanding the world's ability to manufacture and stockpile PPE geographically will assist LMICs in serving their own populations during an outbreak, without having to wait on HICs to ship PPE, and will diversify the PPE supply chain, providing the entire globe with more options during the next pandemic.

To effectively expand PPE manufacturing globally, global and regional organizations should identify at least one PPE manufacturing hub and stockpile in each region, including for long shelf-life PPE, such as elastomeric respirators. These should include advance purchase agreements and be equipped with regional QA laboratories.

The regional manufacturing hubs should be sustainably financed to maintain dual-production lines, capable of shifting from routine production to surge production within 14 days, and contractually required to rotate output into routine markets to minimize expiries and sustain operational readiness. The hubs should be coordinated with pooled procurement mechanisms like the African Pooled Procurement Mechanism and the PAHO Revolving Fund.

Endorse the Establishment and Acceleration of the Therapeutics Development Coalition

Future pandemic preparedness depends on both prevention through vaccines and effective treatments once outbreaks occur. However, due to funding and coordination challenges, many viruses with pandemic potential have no therapeutic candidates in Phase 2 or 3 clinical trials, leaving the world unprepared to deal with future pandemics.[55] Explicit funding and focus are necessary to ensure that the world is ready to treat the next disease that spills over—regardless of what it is.

To advance R&D, innovation, and scaling of treatments that could be used in future pandemics, global and regional organizations should accelerate and expand the Therapeutics Coalition. The Therapeutics Coalition, which was established by the IPPS, Unitaid, the Drugs for Neglected Diseases Initiative, the Rapidly Emerging Antiviral Drug Development Initiative, and the INTREPID Alliance, has the expertise and the momentum to move toward this critical goal. However, the Therapeutics Coalition must be adequately funded, staffed, and backed by urgent political will to succeed.

55 https://readdi.org/stories/readdi-helps-build-a-therapeutics-coalition/

Invest in R&D and Innovation and Establish a Dedicated Taskforce to Mobilize Venture Capital and Private Equity for PPR Innovation

Pandemic PPR—and innovation in the field—can no longer depend solely on ODA to advance. The input and investment of venture capital and private equity will be critical in ensuring that PPR continues to evolve. These finance streams could kick-start truly innovative ideas that might not be palatable for ODA funding and investigate neglected areas in need of attention.

Relatedly, alongside critical investments in MCM surge capacity, R&D investments can substantially increase efficiencies and reduce the cost of MCM production.[56] These include accelerated investment in platforms that can pivot to produce multiple vaccines, multiplex tests, and more temperature-stable products.

As a critical piece of this report's recommendations, investments are needed in R&D and innovation, including rigorously applied social science research to reduce disease transmission (e.g. the use of air filters in schools, hospitals, and workplaces; innovations in PPE; and fractional dosing) and investment in countermeasure technologies (including universal vaccines) to address major pandemic risks, such as from respiratory pathogens like coronaviruses and influenza.

In order to advance this cause and to facilitate comprehensive and innovative preparedness strategies now and into the future, the following is recommended:

- **Establish a Dedicated Task Force: Create a high-level task force or working group focused on mobilizing private sector and development finance for PPR innovation.**
- **Engage Private Capital and DFIs: Identify and convene venture capital, private equity, and development finance partners with an interest in health security, technology, and innovation.**
- **Design Incentive Mechanisms: Develop blended finance instruments, guarantees, or co-investment models that attract private investment into PPR innovation.**
- **Align with Existing Innovation Ecosystem: Leverage ongoing initiatives (e.g. WHO Hub for Pandemic Intelligence, CEPI, and Africa CDC innovation platforms) to ensure coordination and avoid duplication.**
- **Secure Political and Institutional Endorsement: Obtain formal G20 and multilateral backing to legitimize the task force, ensuring sustainability and accountability.**

56 https://www.sciencedirect.com/science/article/pii/S0168170225000784

Chapter 5

Strengthen the Pandemic Fund financing, speed, and scale. Cement its role as the world's premier preparedness financing facility.

The Pandemic Fund is not yet sufficiently or sustainably capitalized. It should double down on its core prevention and preparedness mandate and its role in incentivizing and filling national capacity gaps and tackling cross-border threats. It should be increasingly focused on assisting countries to build PPR into national budgets.

RECOMMENDATION 5

Ahead of the 2026 UN HLM, the G20 and other countries should commit to sustainably capitalize and strengthen the speed and scale of the Pandemic Fund. The World Bank and other MDBs should commit to using their tools and establishing standing allocations to ensure renewable support for the Pandemic Fund and its work. The Pandemic Fund should double down on its core preparedness mandate as well as its role in tackling cross-border threats, catalyzing domestic and non-ODA resources, enhancing access for civil society implementers in fragile settings, and partnering more systematically with MDBs to leverage their lending.

The establishment of the Pandemic Fund at the World Bank in September 2022, recommended by the 2021 HLIP and championed by G20 leaders and finance ministers under the leadership of Indonesia's G20 Presidency, represented a major milestone in advancing global financing cooperation for pandemic PPR. The expectation emerging from this high-level consensus was to mobilize commitments from international donors toward a $10 billion per year fund to close critical global PPR financing gaps. In its first three years of operation, the Pandemic Fund has completed two funding rounds, awarding grants totaling $885 million that have mobilized an additional over $6 billion in international co-financing and domestic co-investment in surveillance, laboratories, and workforce capacity building, benefiting 75 countries across six geographies. A third round of funding is expected to be awarded before the end of 2025.

Despite these impressive accomplishments, the Pandemic Fund is not yet operating at the speed and scale envisioned by the HLIP, and its funding to date is insufficient to respond to country demands. Global funders have not yet fully stepped up, and the Pandemic Fund is still largely reliant on voluntary ODA contributions, which continue to wane given ongoing political shifts and commitments from traditional donors.

As of July 2025, the Pandemic Fund has raised about $3 billion in pledges from 28 sovereign and philanthropic donors,[57] of which, a little over $2 billion is in signed contributions. Approximately one-third of that amount was pledged by the United States, which has recently announced dramatic spending reductions for global health and development assistance programs.[58] Despite the 2022 commitment by G20 leaders to establish the Pandemic Fund to ensure that the world is sufficiently invested in preparedness, the Pandemic Fund has been vulnerable to donor priorities shifting away from PPR following the end of the COVID-19 emergency phase—reverting to the cycle of panic and neglect that has been a long-term roadblock to comprehensive and sustainable PPR. Meanwhile, unmet demand from LMICs for PPR grant financing from the Pandemic Fund has far exceeded available resources. In its first two funding rounds, 140 countries requested about eight times as much as what the Pandemic Fund had to offer through those rounds.

Responding to country needs and ensuring the Pandemic Fund's long-term sustainability will require a renewed commitment by global leaders to scale up and sustain PPR financing as a foundational economic and security imperative—positioning the Pandemic Fund as a smart, cost-effective investment toward protecting all nations by preventing much more costly future pandemics.

Armed with the lessons of its first three years of operations, now is the time to strengthen and mature the Pandemic Fund's model and operating modalities and mobilize additional and predictable resource streams that will enable it to help close critical country and global preparedness gaps and accelerate sustainable financing for PPR at the necessary scale.

To achieve this goal, the HLIP recommends the following:

RECOMMENDATION 5

Ahead of the 2026 UN HLM, the G20 and other countries should commit to sustainably capitalize and strengthen the speed and scale of the Pandemic Fund. The World Bank and other MDBs should commit to using their tools and establishing standing allocations to ensure renewable support for the Pandemic Fund and its work. The Pandemic Fund should double down on its core preparedness mandate as well as its role in tackling cross-border threats, catalyzing domestic and non-ODA resources, enhancing access for civil society implementers in fragile settings, and partnering more systematically with MDBs to leverage their lending.

57 https://www.thepandemicfund.org/contributors
58 https://www.kff.org/global-health-policy/10-things-to-know-about-u-s-funding-for-global-health/

The Pandemic Fund has demonstrated proof of concept as a global financing mechanism and is well-positioned to catalyze additional domestic and international resources for pandemic PPR. In its first three years, it has become an important platform for promoting global coordination and collaboration on PPR financing. To meet the high demand for PPR grant financing and fulfill its mission to make the world safer from pandemics, more countries should contribute annually to the Pandemic Fund in accordance with their relative wealth; the Pandemic Fund should secure sustainable financing from a diversified set of sources; and the Pandemic Fund should regularly solicit matching funds—including from defense and security sector accounts, philanthropy, and private sector industries.

The World Bank and other MDBs have substantial balance sheets, with income enabled by their global capital base, which should be invested in global public goods like those associated with the Pandemic Fund's operations. While there are many competing priorities for those resources, we believe the World Bank and other MDBs should insure the world against pandemic threats that endanger the globe. The COVID-19 pandemic caused the death of millions, and cumulative economic losses from the pandemic have been estimated to reach US $13.8 trillion through the end of 2024.[59] As of October 2025, many of the world's poorest economies continue to be impacted by high levels of debt distress and weak economic growth induced by the pandemic.[60]

Utilizing a small, standing allocation of the World Bank's resources to maintain the Pandemic Fund is a smart strategy. This model could be replicated by other development banks, reflecting regional public goods created by PPR investments. A global public good such as the Pandemic Fund—which is designed to protect countries and the global community from incurring much higher financial outlays for future crises—should be a standing priority for this spending.

Additionally, the Pandemic Fund's offer should be targeted to better meet country-specific capacities for LICs that are necessary to prevent, detect, and respond to potentially large-scale cross-border biological threats and regional capacities for LMICs that allow for disease-agnostic coordination and response to major epidemics and pandemics.

The World Bank and other MDBs should commit to using their tools and to establishing standing allocations to ensure renewable support for the Pandemic Fund and its work.

59 https://www.imf.org/en/Publications/WP/Issues/2022/04/04/A-Global-Strategy-to-Manage-the-Long-Term-Risks-of-COVID-19-516079

60 https://www.imf.org/en/Publications/WEO/Issues/2025/10/14/world-economic-outlook-october-2025

ENABLING ACTIONS TO ENSURE MAXIMUM IMPACT

The HLIP has identified the following five key enabling actions, listed here and briefly explained below, which, if taken, will facilitate successful implementation and overall progress toward global pandemic preparedness:

- Transition from the current single, time-bound call for proposals process to a rolling model.
- Enter into structured agreements with MDB implementing entities and partner more systematically with them to leverage their lending.
- Create a model compact for PPR financing, requiring costed national plans and matching investments, including from biosecurity and private sector funders, and stress the importance of pandemic preparedness as a mechanism for overall health care access and security, which is vital in times of crisis.
- Allocate a designated portion (e.g., 10–20%) of annual commitments to accelerate the use of IDA and other country loans and grants to fund civil society and non-governmental organizations directly where governments lack capacity to promote effective pandemic PPR.
- Elevate its membership to more senior-level political appointments to further drive prioritization.

Transition from the Current Single, Time-Bound Call for Proposals Process to a Rolling Model

A well-resourced Pandemic Fund will benefit the globe by advancing PPR across borders and continents. These gains underpin the need for equitable burden sharing in a pooled financing mechanism like the Pandemic Fund—all who benefit should contribute.

Relatedly, the Pandemic Fund's first three years of operation have clearly demonstrated the enormous global appetite for financial PPR support, especially among LMICs. The Pandemic Fund currently releases, on average, one call for proposals per year, making it challenging for countries to qualify for assistance.

To ensure the Pandemic Fund's work advances pandemic PPR as much as possible, it should transition from the current single, time-bound call for proposals process to a rolling funding model.

Ideally, the Pandemic Fund should identify at least two to three focused calls for proposals every year, accompanied by a dedicated campaign for matching funds through co-financing from MDBs, private sector and philanthropies, and co-investments from recipients. These calls for proposals ideally would:

- Encourage eligible recipients to use IDA, IBRD, and other MDB credits and loans (co-financed with Pandemic Fund grants) to address priority PPR gaps as identified through the JEE and/or other independent assessments.

- Incentivize sharing of regional disease data and workforce surge capacity levels.
- Galvanize grant financing to improve regional MCM access and delivery.
- Cultivate and enable private sector and philanthropic fund matching.

Enter Into Structured Agreements with MDB Implementing Entities and Partner More Systematically with Them to Leverage Their Lending

MDBs play a vital role in pandemic preparedness, including by catalyzing domestic resource mobilization. Expanding their use as Pandemic Fund implementers could further target the Pandemic Fund toward the greatest sustainable preparedness gains and returns on investment.

To further catalyze use of domestic resources for pandemic PPR, the Pandemic Fund should expand its work with MDBs as implementing partners. The Pandemic Fund should enter into structured agreements with each of the MDB implementing entities, including clear targets, to enhance alignment with their funding processes and potentially leverage additional co-financing.

Create a Model Compact for Pandemic PPR Financing and Require Matching Investments

The Pandemic Fund's grants endeavor to advance pandemic PPR globally, but should also be used to coordinate efforts, monitor progress, and serve as lessons learned for new entrants to the PPR ecosystem. The pooled financing mechanism of the Pandemic Fund also provides an opportunity to require and solicit matching funds from additional funding sources to ensure the sustainability and longevity of country plans for pandemic PPR.

Alongside the compact, the Pandemic Fund should require matching investments and that all grantees develop or have in place a prioritized, costed national plan.

The Pandemic Fund and its compacts should also promote the solicitation of matching investments, including from biosecurity and private sector funders.

Guarantees could be provided by sovereign contributors to enable the Pandemic Fund to issue pandemic bonds to accelerate financing for pandemic PPR.

Allocate a Designated Portion of Pandemic Fund Annual Commitments to Accelerate Country Loans and Grants to Fund Civil Society and Non-Governmental Organizations Directly Where Governments Lack Capacity

While the overwhelming majority of pandemic preparedness and response investments rightly flow through national systems, areas inaccessible to governments due to conflict and fragility are often not covered by pandemic surveillance or wider preparedness measures.

Conflict-affected countries and regions are also highly exposed to infectious disease outbreaks, and conflict-driven displacement accelerates transmission. For example, more regionally or globally significant outbreaks originated in the Democratic Republic of Congo (DRC) than any other country since 2000. Detection of the 2018 Ebola outbreak in conflict-affected Eastern DRC was among the slowest on record.

Many civil society organizations, including humanitarian actors, have access to hard-to-reach communities in fragile and conflict-affected regions like those in Eastern DRC. Yet humanitarian actors and wider civil society are not well-represented in pandemic preparedness financing mechanisms, as MDB preparedness funding flows to government health systems, and Pandemic Fund resources flow through a set of accredited implementing entities, that currently include seven MDBs, three UN agencies, and three Global Health Initiatives.

The Pandemic Fund should designate qualified humanitarian organizations as implementing entities for operations in conflict-affected and hard-to-reach settings and should allocate a designated portion of annual commitments (e.g., 10–20%) to address fragile, conflict-affected, and hard-to-reach geographic locations.

Elevate the Pandemic Fund's Membership

Cementing the Pandemic Fund as the world's premier pandemic preparedness financing facility will require a supercharged level of political will. Seating high-level officials on its Governing Board will necessarily draw additional attention to the Pandemic Fund's work and catalyze additional investment and sustainment.

To further drive prioritization of its work, the Pandemic Fund should elevate its membership to more senior-level political appointments.

A Call for Leadership

In the Foreword to our 2021 report, *A Global Deal for Our Pandemic Age*, the HLIP stated that "scaling up pandemic preparedness cannot wait until COVID-19 is over. The threat of future pandemics is already with us." That statement remains true today, and **we continue to believe that pandemic preparedness is a global good—one worth pursuing despite economic and political headwinds.**

The financial landscape for supporting pandemic preparedness in 2025 is vastly different from 2021, as ODA shrinks and countries focus on other threats. The political will that followed in the wake of COVID-19 has also faded, and it has become increasingly difficult for global leaders to prioritize pandemic preparedness.

However, we remain optimistic. **The changing landscape does not mean that pandemic preparedness is unimportant—it requires us to think creatively, reach out to new partners, and address this complex problem in novel ways.** As pandemics evolve, so must we, and we believe that the world is still well-positioned to respond to these threats through global cooperation and acting and investing collectively.

The five recommendations laid out in this report are tailored to this unique time and address the specific challenges for pandemic preparedness in 2025. Despite the constraints on the current moment, our thinking was not constrained except by **ensuring that every recommendation is practical, actionable, and will have a direct impact on pandemic PPR.**

Accelerating geographically diversified access to MCMs and enabling at-risk financing and rapid use of country-level loans will help ensure that LMICs are primed to respond to emerging threats. Transparently tracking and reporting on pandemic PPR spending against a set of minimum benchmarks will ensure accountability and increase public trust. Drawing on security, as well as health budgets, will diversify pandemic PPR spending and build needed biosecurity and biodefense capacities. New financing and focus on tests, treatments, and PPE will solidify our global response to an emerging biological threat. Sustaining and strengthening the Pandemic Fund will provide necessary catalysis for countries to get prepared and to build domestic resources and regional and global capacities to stop outbreaks at the source when it is possible and to mitigate pandemic harms when it is not.

Over the course of the next six months, the HLIP commits itself to working with G20 members, the JFHTF, and all other relevant actors to bring these recommendations into reality. We will convene at least three meetings in 2026 with their participation requested, in advance of the UN HLM. We will focus on key recommendations, with

the goal of accelerating implementation, identifying and overcoming obstacles, and clarifying and strengthening core country commitments for the UN HLM. Meetings will be focused on specific recommendations and will include G20 members, IFIs, and regional and global health organizations.

We are still living in an age of pandemics. However, humanity has the intelligence and the resources necessary to turn future pandemic threats into preventable and treatable diseases—we simply need to mobilize them. **We challenge other leaders to embrace the unique and urgent nature of this moment and help us close the deal.**

APPENDIX A
Summary of Recommendations

CLOSING THE DEAL: FINANCING OUR SECURITY AGAINST PANDEMIC THREATS

Summary of Recommendations

RECOMMENDATION 1

Unlock domestic resource mobilization. Mobilize health, security, and non-ODA spending. Rigorously track results.

At the UN HLM, all governments should present prioritized, costed PPR plans and announce new PPR financing, funded through a mix of domestic resources—like a dedicated portion of transport fees and health taxes as well as biosecurity spending—and international financing. Direct bilateral ODA and/or MDB financing for civil society organizations should be accelerated where governments lack presence or capacity to enhance PPR financing in fragile settings. Ahead of the UN HLM, the G20 JFHTF should launch an annual Global Pandemic Spending Tracker* covering country, MDB, PDB, and private sector financing across health, security, and development budgets toward the minimum benchmarks below.

MINIMUM BENCHMARKS FOR ANNUAL PANDEMIC PPR FINANCING

- At least $15 billion annually in international financing directed toward regional and global public goods to fight cross-border threats.
- At least 0.1% to 0.2% of GDP per year, per country, directed toward pandemic PPR spending, informed by the recent analysis from the WHO, OECD, and the World Bank.
- At least 0.5% to 1.0% of security and defense budgets per year from G20 and other high- and upper-middle-income countries (HICs and UMICs) directed toward biosecurity, biosurveillance, and the 100 Days Mission to support deterrence, operational resilience, and to prevent deliberate and accidental misuse of biological agents—at home and globally.

RECOMMENDATION 2

Accelerate geographically diversified access to MCMs.

Ahead of the 2026 UN HLM, the IFC and other DFIs should partner to launch and finalize at least one dedicated, blended MCM surge financing facility and an associated 'standby' list of regional manufacturers and pooled procurement mechanisms for each region. Linked to that effort, philanthropies should launch a designated operational platform for technical assistance, market assessments, and stress testing to expand the list of regional manufacturers, particularly for under-invested products like diagnostics, PPE, and biomanufacturing. This facility should fill a key financing gap in the private sector, coordinate among like-minded actors as a partnership program, and leverage ongoing design work among G7 and G20 DFIs, IFC, and partners under the MCM Surge Financing Initiative, ensuring rapid deployability by 2026.

RECOMMENDATION 3

Enable development bank at-risk financing for MCM advance purchases.

Ahead of the 2026 UN HLM, all MDBs and relevant PDBs should confirm and clearly communicate the availability of rapid and effective at-risk financing for advance purchases of MCMs by LMICs during epidemics and pandemics (i.e. borrowing to purchase promising candidate MCMs before regulatory approval). At-risk financing should apply explicitly to country-level loans as well as any pooled procurement mechanisms using the development bank balance sheets. WHO PQ and NRA approvals must be accelerated and products that have already received regulatory approval by WHO-Listed Authorities at ML3 or higher should be given provisional or temporary approvals until WHO and NRA approvals are completed.

RECOMMENDATION 4

Operationalize financing for tests, treatments, and PPE.

Ahead of the 2026 UN HLM, global and regional organizations should designate specific international and regional anchor institutions to coordinate the development and scale-up of tests, treatments, and PPE; launch a financing strategy to prioritize and expand investments for specific epidemic and pandemic threats, leveraging the MCM Surge Financing Facility outlined in Recommendation 2 as well as other existing blended finance mechanisms; and identify and support at least one PPE manufacturing hub in each region with regional stockpiles, including for long shelf-life products such as elastomeric respirators.

RECOMMENDATION 5

Strengthen the Pandemic Fund financing, speed, and scale. Cement its role as the world's premier preparedness financing facility.

Ahead of the 2026 UN HLM, the G20 and other countries should commit to sustainably capitalize and strengthen the speed and scale of the Pandemic Fund. The World Bank and other MDBs should commit to using their tools and establishing standing allocations to ensure renewable support for the Pandemic Fund and its work. The Pandemic Fund should double down on its core preparedness mandate as well as its role in tackling cross-border threats, catalyzing domestic and non-ODA resources, soliciting matching funding, enhancing access for civil society implementers in fragile settings, and partnering more systematically with MDBs to leverage their lending.

Appendix B
G20 HLIP: Co-Chairs, Members, and Secretariat

G20 HLIP 2025 MEMBERS

VICTOR DZAU *(Co-Chair),* President, U.S. National Academy of Medicine
JANE HALTON *(Co-Chair),* Chair of the Board, CEPI
JEAN KASEYA *(Co-Chair),* Director General, Africa Centres for Disease Control and Prevention
BENEDICT ORAMAH *(Co-Chair),* Former President and Chair of the Board of Afreximbank and Chair of the African Medical Centers of Excellence
JOHN-ARNE RØTTINGEN *(Co-Chair),* CEO, Wellcome Trust
NGOZI OKONJO-IWEALA, Director General, World Trade Organization
PATRICIA REILLY, Member of the Cabinet of European Union President Ursula von der Leyen
KEIZO TAKEMI, Former Member of the House of Councillors, Japan
SYARIFAH LIZA MUNIRA, Senior Advisor, JLI Center for Global Health Diplomacy and Former Director General of Health Policy, Ministry of Health, Indonesia
CHRIS ELIAS, President for Development, The Gates Foundation
KIRAN MAZUMDAR-SHAW, Founder and Executive Chairperson, Biocon
RACHEL GLENNERSTER, President, Center for Global Development
DAVID MILIBAND, President and CEO, International Rescue Committee
AMANDA GLASSMAN, Executive Advisor to the President, Inter-American Development Bank
SETH BERKLEY, former CEO, Gavi, the Vaccine Alliance and Senior Advisor to the Brown Pandemic Center

SPECIAL ADVISOR TO THE G20 HLIP

ELIZABETH (BETH) CAMERON, Senior Advisor to the Brown Pandemic Center and Professor of the Practice of Health Services, Policy and Practice, Brown University School of Public Health

SECRETARIAT

MELISSA LAITNER, Director of Strategic Initiatives and Special Assistant to the President, U.S. National Academy of Medicine
EMILY SHAMBAUGH, Research Associate, U.S. National Academy of Medicine
CAROLYN SHORE, Global Health Lead, U.S. National Academies of Sciences, Engineering, and Medicine
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SABRINA CHWALEK, Visiting Fellow, Brown University School of Public Health Pandemic Center
YULIYA VELHAN, Research Assistant, Brown Pandemic Center

 *All HLIP members served in their individual capacity.

Appendix C

Working Group Members and Consulted Individuals and Organizations to Inform These Recommendations

MCM SURGE FINANCING WORKING GROUP

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NAOKO ISHII, Special Presidential Envoy for Global Commons, University of Tokyo, and former Deputy Vice Minister of Finance of Japan
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SPECIAL ACKNOWLEDGEMENT

We thank Working Group co-leads, members, and colleagues and Working Group members at the RAND Center for AI, Security, and Technology for insights and analysis that contributed to the development of these minimum benchmarks, as well as colleagues and analyses referenced by the OECD, WHO, and World Bank.

Appendix D
G20 HLIP Terms of Reference

Issued by the 2021 G20 Italian Presidency on January 27, 2021

G20 HIGH LEVEL INDEPENDENT PANEL (HLIP) ON FINANCING THE GLOBAL COMMONS FOR PANDEMIC PREPAREDNESS AND RESPONSE

- A G20 High Level Independent Panel (HLIP) on Financing the Global Commons for Pandemic Preparedness and Response is established on 26 January 2021.
- The HLIP is mandated by the G20 to fulfil the following responsibilities:
  - Identify the gaps in the financing system for the global commons for pandemic prevention, surveillance, preparedness and response.
  - Propose actionable solutions to meet these gaps on a systematic and sustainable basis, and optimally leverage resources from the public, private and philanthropic sectors and the international financial institutions. Solutions should take into account and build on related ongoing international initiatives, undertaken by relevant bodies, such as the Independent Panel for Pandemic Preparedness and Response (IPPPR) and the Global Preparedness Monitoring Board (GPMB), to ensure coherence and avoid duplication.
- The members of the independent Panel comprise eminent individuals who collectively bring deep knowledge and experience in finance and governance. Members will contribute in their personal capacities. The Panel will be supported by a Project Team constituted by Bruegel and the Center for Global Development and a Secretariat from the US National Academy of Medicine and Wellcome Trust.
- The HLIP will provide an update of its work to the G20 Finance Ministers and Central Bank Governors (G20 FMCBGs) at their meeting in April 2021, before presenting its report at the July 2021 meeting of the G20 FMCBGs.

Appendix E
Letter from G20 Presidency, Minister of South Africa

MINISTER: FINANCE
REPUBLIC OF SOUTH AFRICA

[redacted]

Ref: M3/4/3/2/13(1571/2025)

The Secretariat
High-Level Independent Panel on Pandemic Financing

RECONVENING OF G20 HIGH LEVEL INDEPENDENT PANEL ON PANDEMIC FINANCING

Dear High-Level Independent Panel Members and Professor Victor Dzau, Chairperson

On behalf of the Government of the Republic of South Africa and in my capacity as Minister of Finance and presidency of the G20 Finance Track, I am writing to express my strong support for the reconvening of the G20 High Level Independent Panel (herein after 'HLIP') on Financing the Global Commons for Pandemic Preparedness and Response in 2025.

The first report "A Global Deal for Our Pandemic Age" under the G20 Italian Presidency in 2021 was a landmark in establishing G20 support for much needed systemic change and a potential global financing gap of $10.5 billion to better deal with the health risks and effectively prevent, prepare for and respond to pandemics. The HLIP led to the launch of the Pandemic Fund as well as the establishment of the G20 Joint Finance Health Task Force. It is particularly timely for the HLIP to reconvene this year under South Africa's presidency as the African region continues to be disproportionately exposed to health risks and is increasingly resource constrained, facing multiple fiscal and economic challenges. In this context, I particularly welcome the focus on public-private investment for global health security and the inclusion of African leaders in the panel co-chair leadership. The themes of Solidarity, Equality, Sustainability of the South Africa G20 presidency are important guiding principles for the HLIP's discussions.

I am very grateful to the leadership of the co-chairs and the panel members for devoting their time to this critical issue. I appreciate the series of meetings that you have already had with our technical team, led by Dr Mark Blecher, as well as the G20 Joint Finance Health Task Force and its secretariat. I look forward to the HLIP's forthcoming report and recommendations and to future engagement during the course of the remaining South Africa G20 Presidency.

Please accept my deepest appreciation for your dedication and leadership.

Yours sincerely,

ENOCH GODONGWANA, MP
MINISTER OF FINANCE
DATE: 16/09/2025

Appendix F
Minimum Benchmarks for Annual Pandemic PPR Financing

	2021 HLIP	2025 HLIP
Regional and Global Public Goods	**Minimum benchmark** • **15 billion annually**	**Minimum benchmark** • **15 billion annually**
Domestic Resources	**No formal benchmark** • **HLIP noted the need for an additional 1% GDP**	**Minimum benchmark** • **0.1–0.2% GDP per year** • **$110–$220B per year** • **Inclusive of the $15B**
Security and Defense Budgets	**No benchmark**	**Minimum benchmark** • **0.5–1.0% security and defense budgets per year** • **$12–$25B per year**

Pandemic crises come at a major price. COVID-19 alone cost millions of lives, with cumulative economic losses estimated to reach US $13.8 trillion through the end of 2024[61]. While governments are doubling down on defense spending to avert costly conflicts, they are cutting back on ODA spending, which has historically underpinned global preparedness for biological catastrophes. With economists estimating a very high level of loss from future pandemics,[62,63] we can anticipate high rates of return for investments that reduce pandemic frequency and impact. Tracking global spending on PPR is vital in order to better understand and reap these returns.

Decreasing levels of ODA dictate that, to achieve an adequate level of pandemic PPR today, security and private sector spending must increase, and other sources of revenue like health taxes will be essential to prevent and fight cross-border outbreaks. Simultaneously, there is an urgent need for international and regional financing institutions to incentivize, clarify, and utilize existing mechanisms for pandemic PPR.

In 2021, the HLIP recommended minimum additional spending of $15 billion annually for pandemic PPR focused on regional and global public goods across four pandemic PPR categories:

61 https://www.imf.org/en/Publications/WP/Issues/2022/04/04/A-Global-Strategy-to-Manage-the-Long-Term-Risks-of-COVID-19-516079
62 https://link.springer.com/article/10.1057/s41308-023-00212-z
63 https://www.cgdev.org/publication/estimated-future-mortality-pathogens-epidemic-and-pandemic-potential

1. robust surveillance and detection networks;
2. building resilience in health systems;
3. supply capacity for MCMs; and
4. increased national health spending for all countries.

In 2025, the HLIP re-examined this issue and found a great need to better identify and track pandemic PPR spending and to re-evaluate benchmarks over time. Recently, the OECD, WHO, and World Bank produced, for the G20 JFHTF, a new estimate of domestic spending for pandemic PPR by country. The analysis finds, in aggregate, that, from 2016 to 2022 annual global spending on pandemic PPR ranged from $113 billion (in 2016) to $267 billion (in 2021).[64] This is a great beginning to what, we would argue, should be a much more concerted effort to better understand just how prepared the world really is—and where the funding should come from to fill the gaps that are identified.

The 2021-2022 numbers from this report reflect a relatively high-water mark of spending on pandemic PPR, as new and targeted COVID-19 funding from 2020 and 2021 flowed into health systems globally. In particular, the 2022 spending level on pandemic PPR at $230 billion reflects a focus informed by the clear and present threat of COVID-19, which has since receded. This analysis also highlights the significance of ODA as a major source of LMIC pandemic PPR spending.

This report doesn't predict levels of needed spending for future epidemics and pandemics, and more work is necessary to better identify and track pandemic PPR spending—including national health accounts associated with that data.

The HLIP concludes four things from these data:

1. **First, the HLIP continues to find an urgent need for at least $15 billion in annual investment for regional and global public goods, as well as MCM surge financing, to be made available wherever the need is most acute globally.** This level of preparedness necessarily includes a baseline level of spending on surveillance for priority pathogens; investments in R&D, manufacturing, and delivery to meet the goals of the 100 Days Mission for vaccines, diagnostic tests, and treatments; and catalytic funds to spark additional national and private sector spending in pandemic PPR through the Pandemic Fund and international and regional financing institutions. A portion of the $15 billion must be slated for surge financing for readiness and response when a crisis emerges. Ensuring adequate and accessible surge financing—particularly for LMICs—to procure and deliver MCMs in the early stages of an outbreak also is critical to ensuring all countries can rapidly respond. While some progress has been made and must be sustained (e.g. Gavi's First Response Fund), the HLIP finds that inadequate attention has been paid to costing surge financing needs. As a key part of the work to implement Recommendation #2 of this report, that window must be better accounted for and understood.

64 https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/03/smart-spending-to-combat-global-health-threats_9985a31e/166d7c57-en.pdf

2. **Second, increased domestic resources will be necessary to prepare for cross-border biological threats.** $110 billion to $220 billion in annual spending for pandemic PPR appears to be a bare minimum required for countries to prepare for the next pandemic. This number represents approximately 0.1% to 0.2% of annual GDP. From 2016–2020, the world was spending just over $100 billion annually on pandemic PPR, largely out of HICs, yet the world was largely unprepared for COVID-19. In 2019, HICs spent over 25 times more per capita on PPR than LICs, and over 30 times more per capita in 2022. Furthermore, higher levels of spending in 2021 and 2022 ($230 billion to $275 billion) reflect COVID-19's status as a moderate respiratory pandemic. A severe respiratory pandemic could result in higher spending needs, particularly as health care and commodity costs—as well as inflation—continue to rise. Finally, a major portion of the surge spending in 2021 and 2022 in LMICs came from ODA, which is diminishing and may not be available at the same level in future pandemic scenarios. Therefore, an annual allocation of $100 billion, particularly when considering rising inflation, is not likely to be enough—all countries should mobilize at least 0.1% to 0.2% of annual GDP toward pandemic PPR, and this amount willl need to be supplemented by other sources, including non-ODA.
3. **Third, identifying domestic resources from security budgets, as well as international resources from the private sector and other non-ODA sources, will be crucial to supplement near- and long-term pandemic PPR financing.** While much emphasis has been placed on this goal over the past five years, little has materialized. Therefore, the G20 and other HICs and UMICs should urgently catalyze non-ODA financing for pandemic PPR from the business and security sectors. In particular, the HLIP proposes a benchmark for all G20 and other HICs and UMICs to identify at least 0.5% to 1.0% annually for biodefense spending from defense and security budgets. Importantly, this spending should be scoped to support national, regional, and global efforts to advance biosecurity, biosurveillance, and the 100 Days Mission to bolster deterrence and operational resilience and prevent deliberate and accidental misuse of biological agents. As defense and security budgets rise, biodefense should be a core component of defense spending.
4. **Finally, innovative financing remains crucial, but more work to rapidly execute on a myriad of ideas is needed.** The HLIP evaluated proposals from various sources over the past four years that have recommended accelerating non-ODA spending for pandemic PPR. These sources include revenues from domestic health taxes, debt swaps, private sector investments through corporate social responsibility and direct spending to ensure infrastructure in operating regions and markets, expanded philanthropic investment, and pandemic bonds and other forms of insurance. These proposals have merit, but they have yet to deliver a major source of financing for domestic, regional, and global preparedness. Further investigation of these proposals and other innovative approaches will be necessary for ensuring a sustainable future for pandemic PPR financing, but we may not be able to rely on them to yield rapid results.