

A FRAGILE STATE OF PREPAREDNESS

2023 REPORT ON THE STATE OF
THE WORLD'S PREPAREDNESS

A Fragile State of Preparedness: 2023 Report on the State of the World's Preparedness

©World Health Organization 2023. Acting as the host organization for the Global Preparedness Monitoring Board (GPMB)

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO or GPMB endorse any specific organization, products or services. The use of the WHO and GPMB logos is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition."

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization (<http://www.wipo.int/amc/en/mediation/rules/>).

Suggested citation. A Fragile State of Preparedness: 2023 Report on the State of the World's Preparedness. Global Preparedness Monitoring Board, Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

Sales, rights and licensing. To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The findings, interpretations, conclusions and designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the co-conveners WHO or the World Bank Group concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO or the World Bank Group in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

WHO and the World Bank Group do not guarantee the accuracy of the data included in this publication. All reasonable precautions have been taken by the GPMB to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO, the World Bank Group or the GPMB be liable for damages arising from its use.

This publication contains the collective views of the members of the Global Preparedness Monitoring Board and does not necessarily represent the views and policies of WHO or the World Bank Group.

Cover image: Q'eswachaka Bridge over the Apurímac river, Cusco, Peru, July 2019. Situated 3,700 metres above sea level, the 500-year-old rope bridge needs to be rebuilt every year. Four surrounding communities contribute to the annual bridge renewal, in a ceremony which is fundamental to their social cohesion.

Credit: Stephen Lux

CONTENTS

1	Foreword	4
2	Executive summary	5
3	Context: a more challenging environment for preparedness	9
4	State of the world's preparedness in 2023	12
	Assessing the status of 30 indicators from the GPMB Monitoring Framework	13
4.1	Monitoring and accountability	14
4.2	Financing	14
4.3	Global governance	17
4.4	Research and development, and access to medical countermeasures	18
4.5	Inclusivity and community empowerment	20
4.6	Adoption of One Health approaches	22
4.7	Multisectoral coordination	24
	State of preparedness: conclusions	25
5	Moving ahead: recommendations for action	29
	Recommendation 1	29
	Recommendation 2	31
	Recommendation 3	34
	Recommendation 4	36
6	Conclusions and next steps	38
	GPMB purpose and membership	40
	Abbreviations	42
	Acknowledgements	44
	References	45

1 FOREWORD

Dear Reader,

Four years ago, the Global Preparedness Monitoring Board warned that unless the cycle of panic and neglect that has characterized previous health emergencies was broken, the world would face a devastating pandemic caused by a fast-moving respiratory pathogen. That prediction could not have been more accurate or more timely. The world stumbled into the COVID-19 pandemic unprepared, doing too little too late. Even the life-saving vaccines, developed in record time, did not reach most of the world's population before the virus did.

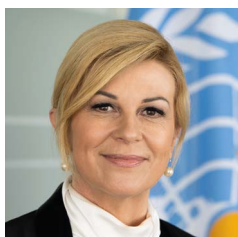
Today, we find that despite some improvement, preparedness remains perilously fragile. We know in theory how to stop a pandemic in its tracks, but in practice, the gaps in preparedness leave us dangerously exposed to a future threat. Competing priorities, geopolitical tensions, and pervasive mistrust are weakening the resolve needed to close these gaps.

Using our new monitoring framework, the GPMB has canvassed experts to assess the state of preparedness. It shows many achievements in the wake of COVID-19 but also critical shortcomings. We are deeply concerned that the international community has failed to secure financing at the scale needed for pandemic prevention, preparedness and response (PPPR), and to institutionalize independent monitoring. These failures are the 'canary in the coal mine': they signal that the world has not yet taken sufficient measures to head off future threats.

The initiatives underway to strengthen preparedness gaps will founder without the right resources and commitment. Efforts must be redoubled to successfully negotiate a framework for PPPR with the binding force of international law that will commit States to action; to raise funds from both the public and private sectors on the basis of ability to pay, that can be deployed where and when they are needed; to build research and development (R&D) capacities over the long term to overcome the access divide; and to strengthen coordination across the many sectors that are engaged in PPPR.

Equity is not a 'nice to have' embellishment of global preparedness, it is its beating heart. Global security will be reached only when everyone regardless of geography is valued and assured equal access.

The state of the world's preparedness is fragile, but it is not hopeless. This Report sets out specific measures, many of which are in progress, which will repair preparedness. By the time the GPMB makes its next annual report, we hope to see a world of preparedness transformed.



Ms Kolinda Grabar-Kitarović

GPMB Co-Chair and former
President of Croatia



Ms Joy Phumaphi

GPMB Co-Chair and former
Minister of Health of Botswana

2 EXECUTIVE SUMMARY

Key messages

- 1 The world's capacity to deal with a potential new pandemic threat remains inadequate.
- 2 The GPMB Monitoring Framework has revealed significant weaknesses or declining capacities in several critical areas of preparedness, including global coordination of R&D, efforts to address misinformation, community engagement, participation of low- and middle-income countries in decision-making, domestic and international financing of preparedness, independent monitoring, and meaningful involvement of relevant actors. Where there are signs of improvement, they are fragile, and in urgent need of reinforcement.
- 3 The trust deficit between countries and between communities is a significant impediment to progress in strengthening preparedness. Urgent steps are needed to build trust through operationalizing principles of equity, leadership and accountability, and coherence within all measures to strengthen pandemic prevention, preparedness and response (PPPR).
- 4 Evidence-based monitoring, including independent monitoring, is essential to increase effectiveness, ensure accountability, and build trust.
- 5 PPPR financing requires fundamental reform to free it from the limitations of development assistance and place it on a sustainable footing, based on burden-sharing. Strengthening PPPR requires ensuring sustainable financing for WHO and other international organizations working on PPPR.
- 6 Strengthening regional capacities for R&D, manufacturing and supply will help to address the inequities in global access to medical countermeasures.
- 7 There is a need to strengthen mechanisms for coordination across the many sectors that play a key role in PPPR, nationally, regionally and globally.

Momentum and commitment to strengthen PPPR is fading, leaving the world dangerously exposed to the next pandemic. The United Nations General Assembly High-level Meeting on PPPR in September 2023 reiterated the need for stronger preparedness, but fell short of setting firm targets and made no commitment to independent evidence-based monitoring.¹ The Intergovernmental Negotiating Body working towards a new convention, agreement or other international instrument on PPPR under the WHO constitution is due to present its outcomes to the World Health Assembly in May 2024. This legally binding instrument will be central to stronger preparedness, and WHO Member States need to maintain their resolve to deliver an ambitious, comprehensive and effective WHO Pandemic Agreement.

The trust deficit between and within countries is a key barrier to improving preparedness. Restoring trust is a long-term exercise, but trust-building measures that can begin now include making governance more inclusive, engaging civil society, taking preparedness closer to the populations most in need, and investing in monitoring as the foundation of mutual accountability.

The GPMB Monitoring Framework for Preparedness, published in May 2023, provides a robust, evidence-based methodology to assess global preparedness.² It is being applied for the first time in this Report, reporting on the 30 of its full 90 indicators most pertinent to equity, leadership and accountability, and coherence.

Across the indicators reviewed, the assessment shows that capacities are inadequate. There are particular weaknesses in global R&D coordination, addressing the impact of misinformation, providing financing and including all actors in governance. Some improvements following COVID-19 have been seen in relation to global information platforms, community engagement, independent monitoring and regional laboratory capacity. Weaknesses in the global financing system for PPPR and the failure of international commitment to strengthening independent monitoring will weaken future prospects for effective PPPR.

Main findings from the GPMB's assessment of preparedness include that:

- Monitoring and accountability has been insufficiently resourced and institutionalized. There is a need for independent monitoring to complement self-assessment and peer review, at all levels, nationally, regionally and globally.
- Global financing of PPPR is woefully inadequate, inefficient, uncoordinated, and insufficiently aligned to country needs and processes. Countries struggle to make investments in PPPR due to shrinking budgetary spaces. The creation of a Pandemic Fund has been a welcome addition but its available funding is far short of the US \$10 billion originally proposed for such a fund.
- Global governance of PPPR is evolving with key developments including the negotiations of a WHO Pandemic Agreement, and potential amendments to International Health Regulations, but progress has been slow.
- Limited national and regional R&D capacities leave countries dependent on a global system that cannot ensure innovation is delivered equitably. Global coordination of pandemic-related R&D is weak.
- Misinformation and disinformation contribute to the global trust deficit. Yet there is currently no global mechanism to effectively address health-related misinformation and disinformation.
- Initiatives to enhance community engagement made during COVID-19 are at risk now that the urgency of the crisis has faded.
- A One Health approach has not been integrated effectively into preparedness.
- Global coordination has critical weaknesses including coordination across sectors beyond health, equal participation of all countries, and a lack of mechanisms for the consistent inclusion of civil society and the private sector.

The way forward

Global, regional and national leaders need to fully institutionalize preparedness measures that work in the collective interests of all. Strengthening preparedness goes hand in hand with global efforts towards the Sustainable Development Goals (SDGs), and many of the gaps in pandemic preparedness are shared with the areas that have been most challenging in progress towards the SDGs.

The GPMB has identified four key priorities to repair the weaknesses in global preparedness: strengthen monitoring and accountability; reform the global financing system for PPPR; achieve more comprehensive, equitable and robust R&D and supply chains; and enhance multisectoral, multistakeholder engagement.

Recommendation 1: Strengthen PPPR monitoring and accountability by improving national monitoring, investing in better data and evidence collection, and strengthening global multisectoral independent monitoring.

Mechanisms for self-assessment, peer review and independent monitoring are needed to strengthen monitoring and accountability at the local, national, regional and global levels, and support countries, organizations and actors to be more resilient. Monitoring should be integrated into the governance of PPPR, most importantly in the WHO Pandemic Agreement. Strong multisectoral independent monitoring is needed to provide broad, independent, evidence- and science-based analysis. The values of objectivity, transparency, impartiality, equity and impact need to be embedded in the structures and mechanisms for monitoring. Beyond assessing data and information, independent monitoring must be able to propose solutions and make recommendations to strengthen PPPR.

Recommendation 2: Strengthen the global financing system for PPPR by addressing immediate funding gaps and reforming the global financing system to enable greater national investments and bolster international financing through new modalities and sources of financing.

The global financing system for PPPR requires comprehensive reform to make it fit for purpose. This will require addressing urgent funding gaps and aligning the system around national priorities and needs, but also identifying new ways to bolster national and international financing, including tapping private sector funding streams. International financing must be expanded through Overseas Development Assistance (ODA) and non-ODA sources to meet identified needs; the fiscal space for domestic resource mobilization must be expanded in those countries where it is lacking; grant, loan and debt relief modalities must be aligned; and predictability and timeliness must be ensured across long-term prevention and preparedness capacity-building as well as immediate response and surge financing needs.

Recommendation 3: Establish baseline regional capabilities to drive more equitable and robust R&D and supply chains.

Within every region, baseline manufacturing capacity is needed for medical countermeasures, early detection and One Health surveillance systems and laboratories, capacity to track and shape pandemic-relevant social and economic trends, and agile stock management across pandemic response needs. These regional capacities should be component elements of a global approach that promotes strategic coherence and coordination. Long-term investment in building more equitable R&D capabilities is needed, building on the

growing efforts of many middle-income countries. Regional ecosystems will need to be embedded in a global framework for R&D and access to medical countermeasures to support global prioritization and coordination of R&D, information sharing across countries, capacity-building and technology transfers, and equitable access to medical countermeasures.

Recommendation 4: Develop a new approach to multisectoral, multistakeholder engagement for pandemic prevention, preparedness and response.

Multisectoral preparedness and cooperation should be strengthened through engagement of sectors outside of health as well as civil society and the private sector. A new structured and coordinated approach which is multisectoral and multistakeholder in character is needed to support a more integrated, coherent response to pandemics and health emergencies.

3 CONTEXT: A MORE CHALLENGING ENVIRONMENT FOR PREPAREDNESS

In the wake of the COVID-19 pandemic, there was consensus that the world needed much stronger pandemic preparedness and response. That consensus has yet to result in action at the necessary scale, or with the unity of purpose and urgency it requires. Momentum and commitment are ebbing away just when they are most needed, leaving the world even more dangerously exposed to the next pandemic.

In the GPMB's February 2023 [Manifesto for Preparedness](#) we issued a checklist for global preparedness reform. We anticipated that the United Nations High-Level meeting would elevate PPPR to the highest priority, create a shared multisectoral agenda, and affirm the importance of independent evidence-based monitoring. While the political declaration³ adopted by the UN General Assembly on 5 October was a welcome commitment to strengthened preparedness and response, it fell short of the necessarily [ambitious agenda called for by the GPMB](#).

The focus for strengthening PPPR is now on the negotiation of a convention, agreement or other international instrument, under the WHO constitution. The Intergovernmental Negotiating Body established for this purpose by the special session of the World Health Assembly in December 2021 will present its outcomes to the World Health Assembly in May 2024. However, progress has been slow and fundamental differences remain in several key areas of the proposed WHO Pandemic Agreement.

The emergency footing that countries were on at the height of the COVID-19 pandemic has abated, countries have integrated responses into routine public health efforts and COVID-19 ceased to be a Public Health Emergency of International Concern (PHEIC) in May 2023. This has led countries to become complacent. However, there is still a risk that COVID-19 will surge again, or that viral variants will emerge that can evade the protections of vaccines and natural immunity.

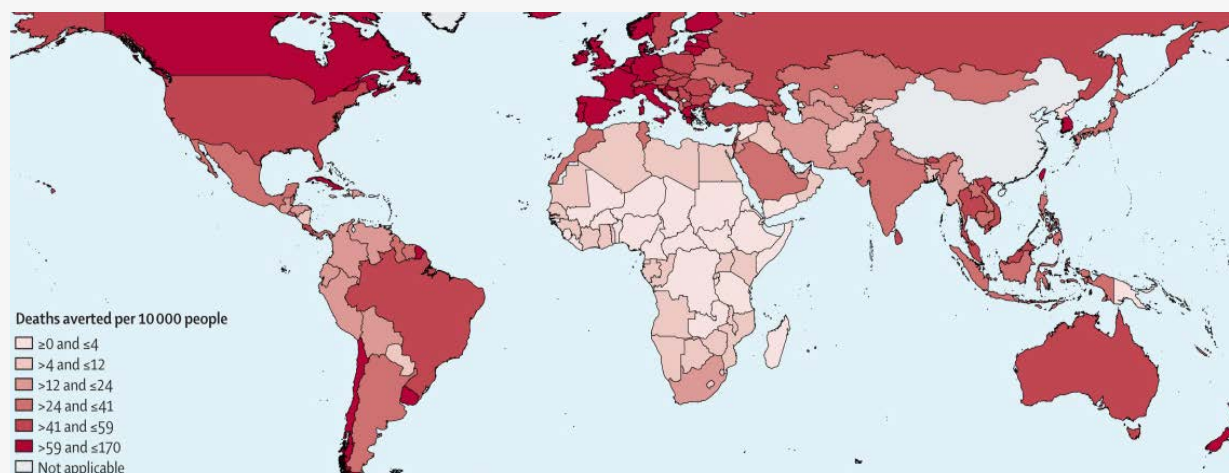
Aside from COVID-19, zoonotic spillover events are frequent, with the One Health High-Level Expert Panel recommending that much more attention needs to be paid to preventing these events from occurring at source.⁴ In 2023, the world has faced the Mpox PHEIC, an outbreak of Ebola Zaire in Uganda, simmering Nipah virus outbreaks in South Asia and a cholera upsurge in several countries due to underdevelopment, poverty and conflict, and amplified by an upsurge of extreme climate events such as flooding.⁵ Meanwhile, avian influenza continues to expand its geographic reach, incidence, impact, susceptible species and virus genetic diversity. The risk of pandemics remains an ever-present threat.

Myriad crises are competing for global political attention. The impacts of climate change are being felt acutely and the world is struggling to meet the collective goal of limiting global warming to 1.5 degrees Celsius above pre-industrial levels. War and conflict continue to drain resources and cause acute suffering in many parts of the world. Heightened food insecurity and inflationary pressures have exacerbated a cost of living crisis, already fuelled by post-pandemic inflationary pressure.

The impact of the competition for global attention has contributed to the relative lack of resources for PPPR. The newly established Pandemic Fund has fallen short of the US \$10 billion proposed by the G20 High-Level Independent Panel on Financing the Global Commons for Pandemic Preparedness and Response.⁶ The value of country proposals' total funding needs exceeded by 23 times the amount allocated in the Fund's first round of grants in May 2023.⁷ Other global mechanisms to finance preparedness and pandemic countermeasures, such as the Coalition for Epidemic Preparedness Innovations (CEPI) and the Global Alliance for Vaccines and Immunisation (GAVI), have also struggled to meet their recent replenishment goals.

The shadow falling over all these efforts is an ever-widening gulf in trust.

Figure 1: Median deaths averted by vaccinations per 10 000 people by country in the first year of COVID-19 vaccination



Source: Watson OJ, Barnsley G, Toor J, Hogan AB, Winskill P and Ghani AC. Global impact of the first year of COVID-19 vaccination: a mathematical modelling study. *The Lancet Infectious Diseases*, 2022, 22:1293–1302. [https://doi.org/10.1016/S1473-3099\(22\)00320-6](https://doi.org/10.1016/S1473-3099(22)00320-6)

Trust between countries is at a low ebb, not only due to geopolitical rivalries but also the profound disappointment by many countries that when the COVID-19 pandemic was raging, countries used their economic power to put self-interest ahead of global solidarity. The disparity was evident in lives saved in the first year of vaccine access, with 66 deaths per 10,000 people averted in high-income and upper-middle-income countries, but only 2.7 per 10,000 population in low-income countries where coverage reached just 3.6% (Figure 1 above).⁸

Amongst people across the world, the social and economic shock of the pandemic, combined with the cost of living crisis, has fuelled mistrust of institutions, and has driven deep polarization in societies.⁹ Political populism has amplified and exploited mistrust for short-term political gain, with unpredictable results. The GPMB's concerns in its 2021 Annual Report about a fragmented and broken world have not been alleviated, they have heightened.

The SDGs represent a shared blueprint for peace and prosperity for people and the planet and the essence of strengthened preparedness is embedded across many of the Goals. The commitment of countries at the High-level Political Forum on Sustainable Development in September 2023 to “promote a systemic shift towards a more inclusive, just, peaceful, resilient and sustainable world”¹⁰ will ring hollow unless substantial progress is made, and seen to be made, in overcoming the scars left by COVID-19 and securing more effective preparedness.

STATE OF THE WORLD'S PREPAREDNESS IN 2023



Second meeting of the Working Group on Amendments to the International Health Regulations, WHO, Geneva, Switzerland, 20–24 February 2023. The amendments to the International Health Regulations form one of the intergovernmental processes that aim to strengthen the pandemic preparedness and response architecture.

Credit: WHO/Pierre Albouy

4 STATE OF THE WORLD'S PREPAREDNESS IN 2023

The state of global preparedness is not merely the sum of national preparedness, nor is it just a collection of discrete component elements. As the COVID-19 pandemic has emphatically demonstrated, preparedness, risk and impact are interlinked, with global, complex interdependencies from local to planetary scale.

Published in May 2023, the GPMB Monitoring Framework for Preparedness provides a robust, independent and evidence-based methodology to measure the global risk of health emergencies and their likely impact, together with assessments of capabilities for PPPR. The Monitoring Framework is a diagnostic tool, highlighting where the most serious gaps lie and drawing attention to the most urgent actions to address them.

The Monitoring Framework is being applied for the first time in this 2023 assessment of the state of the world's preparedness, and the GPMB has chosen to focus on 30 indicators that are most pertinent to the critical issues of leadership and accountability, equity, and coherence. These indicators relate to monitoring and accountability, financing, global governance, R&D and access to medical countermeasures, inclusivity and community empowerment, adoption of One Health approaches, and multisectoral coordination.

For each area, the Board identified experts to provide a preliminary assessment of the indicators. Evidence, data and analyses provided by the experts were consolidated into a technical assessment report, giving the Board a more evidence-based analysis of progress, gaps and challenges related to these priorities to support the development of its report. These expert assessments have been published in the document 'Compilation of expert assessments'.¹¹ The GPMB's assessment of the state of capacity and the trend in relation to each of the 30 indicators is provided in the Appendix to this report. Key elements of this assessment are summarized below.

Summary of findings

Of the capacities assessed in this report, none are adequate, and many remain insufficient or absent. The GPMB's analysis finds that the weakest areas of PPPR relate to:

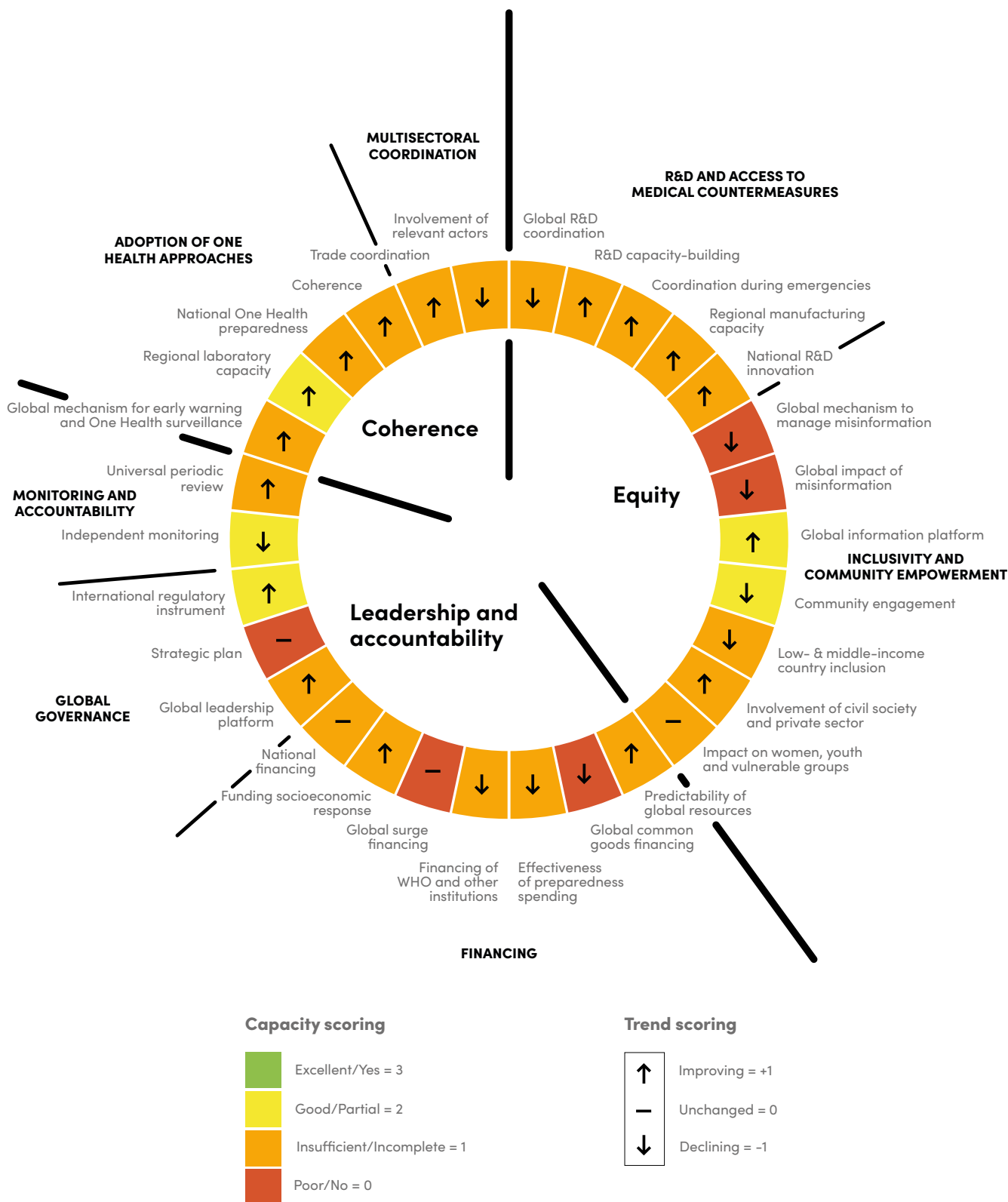
- Financing (global common goods financing, effectiveness and alignment, financing of WHO and other institutions, global surge financing)
- Global R&D coordination
- Global management of misinformation and disinformation
- The participation of all low- and middle-income countries and all relevant actors in prevention, preparedness and response.

Sixteen out of thirty indicators tracked this year are improving, showing some progress made following COVID-19. Indicators for global information platforms, community engagement, an international regulatory instrument, independent monitoring and regional laboratory capacity show that partial capacities are in place, albeit not all. However, there are declines in capacity in global R&D coordination, the global impact of misinformation, community engagement, participation of low- and middle-income countries, most financing indicators, independent monitoring and involvement of relevant actors. Important investments made during COVID-19 are being lost in these areas.

In addition, while independent monitoring has been assessed as having a degree of capacity in place, the GPMB is concerned with its lack of inclusion in key international instruments including the Political Declaration from the United Nations General Assembly High-Level Meeting on Pandemic Prevention, Preparedness and Response, the draft WHO Pandemic Agreement, and in the proposed amendments to the IHR (2005).

Assessing the status of 30 indicators from the GPMB Monitoring Framework

Figure 2: Heatmap



4.1 Monitoring and accountability



B.1.4.5 (a) Independent monitoring



B.1.4.5 (b) Universal periodic review

There are a range of mechanisms to support monitoring and accountability for PPPR but they do not provide a complete picture of multisectoral preparedness. Their focus is on systems and capacities, rather than leadership, effectiveness, efficiency, or equity, and are mostly based on self-assessment with limited independent monitoring. Experience suggests that monitoring efforts are most effective in enhancing accountability and implementation when they draw on the distinctive strengths of self-assessment, peer review, and independent evidence-based monitoring.

As the COVID-19 pandemic demonstrated, existing monitoring mechanisms did not accurately predict national preparedness. While they provide some diagnostics and benchmarking, they are not powered to drive change, having insufficient technical and financial support for implementation of findings and few built-in incentives for action. In addition, there are no mechanisms to address non-compliance with the International Health Regulations (IHR) adopted in 2005.

The Intergovernmental Negotiating Body (INB) and Working Group on Amendments to the IHR (2005) are currently reviewing proposals to include monitoring and compliance mechanisms, however, independent monitoring was not included in the draft Negotiating Text of the WHO Pandemic Agreement¹², nor in the proposed amendments to the IHR (2005). The GPMB is disappointed at the lack of a reference to independent monitoring in the Political Declaration of the High-level Meeting on Pandemic Prevention, Preparedness and Response.¹³ Unless reforms of the central instruments governing PPPR include specific reference to independent monitoring, its essential contribution to the governance of preparedness will never be fully realised.

The WHO Universal Health and Preparedness Review¹⁴ offers a broader scope of review and a more supportive process, which aims to engage political actors to facilitate uptake of recommendations. There is however a need to improve the rigour and independence of the process through the inclusion of civil society, and of all countries, as well as through independent expert review.

4.2 Financing



B.1.4.4 (a) Predictability of resources for global health emergency preparedness and response



B.1.3.1 Global financing of global public/common goods



B.1.3.2 Effectiveness and alignment of spending for preparedness



B.1.3.3 Financing of WHO and other key institutions involved in preparedness and response



B.1.3.4 Global surge financing for response



B.1.3.5 (a) Funding immediate economic and socioeconomic response



B.3.3.1 National assessment of financing for preparedness and response

Global financing for the COVID-19 response was at an unprecedented scale, but at the same time revealed a mismatch between needs and timely availability. As a result, the effectiveness of funding could not be maximized and some funds were left unspent. The lack of a clear and anticipated framework for funding also led to some perverse results. In some cases, countries were reluctant to avail themselves of some funding opportunities because in a complex and rapidly changing funding environment, they saw the possibility of accessing other funds on more favourable terms, such as grants instead of loans; even where the grants were insufficient, less comprehensive and less timely.

Funding made available during COVID-19 was extensive and varied. In the early response, the WHO Contingency Fund for Emergencies (CFE) disbursed US \$129 million within a month of the declaration of the PHEIC, and the United Nations' Central Emergency Response Fund (CERF) disbursed US \$225 million by March.¹⁵ By the end of April 2020, the World Bank Group had mobilized US \$3 billion in a new fast-track facility¹⁶ and the International Monetary Fund (IMF) US \$15 billion for response. Over the course of the pandemic from 2020 to 2022, multilateral development banks made a total of US \$200 billion available to countries from pre-arranged and new financing, ACT-A mobilized an unprecedented US \$24 billion principally for vaccines, and the G20 provided US \$13 billion in debt relief.¹⁷

COVID-19 funding was *ad hoc* and has not necessarily been translated into a coherent surge financing approach that could be rapidly triggered in the event of a health emergency. Existing dedicated surge financing mechanisms are underfunded and are not replenished in a sustainable manner. In a global pandemic, day-zero needs are estimated to be of the order of US \$500 million, but the WHO Contingency Fund for Emergencies currently has US \$20 million available out of its target of US \$100 million¹⁸, and the United Nations' Central Emergency Response Fund is only halfway to its target US \$1 billion.¹⁹ A survey conducted for the G20 Joint Finance-Health Task Force indicated that only 40% of G20 countries had domestic contingency funds that could be deployed in a health emergency (Figure 3 below).²⁰

As the financial response to the COVID-19 pandemic shows, response funding is of a much greater magnitude than funding for preparedness. Despite the conclusion that more effective preparedness would avert at least some of these needs, the spending 'hangover' in the wake of the COVID-19 response has seen preparedness funding fall short of the identified needs. The funding gap for preparedness at country level is approximately US \$6 billion per year.²¹ The Pandemic Fund has initially adopted a relatively narrow set of priorities for funding preparedness but was nevertheless 23 times over subscribed in its first round²², showing that there is a large pool of identified yet unmet needs in countries. One Health capacities have received additional funding, but remain

Figure 3: There are important gaps in surge financing for PPPR

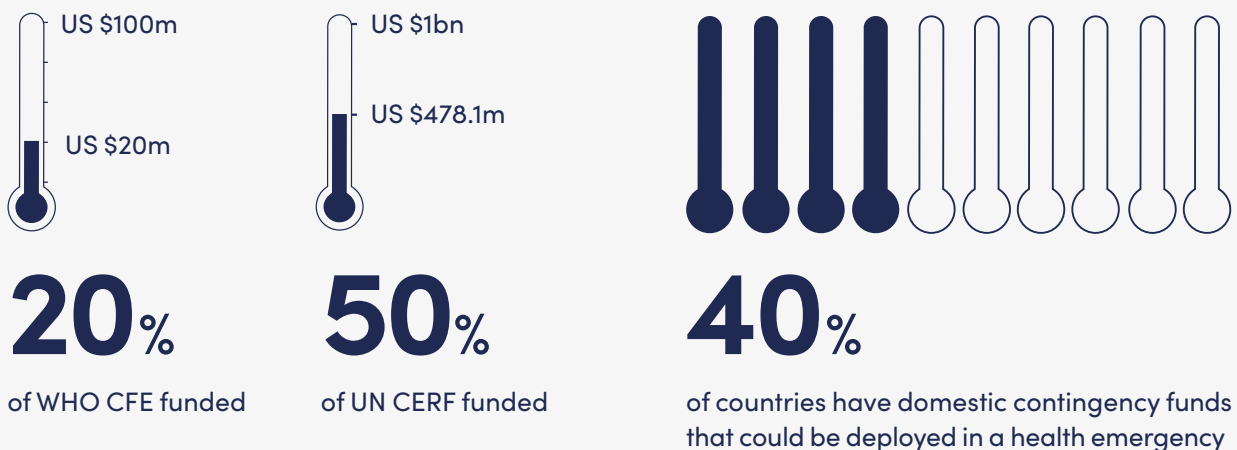
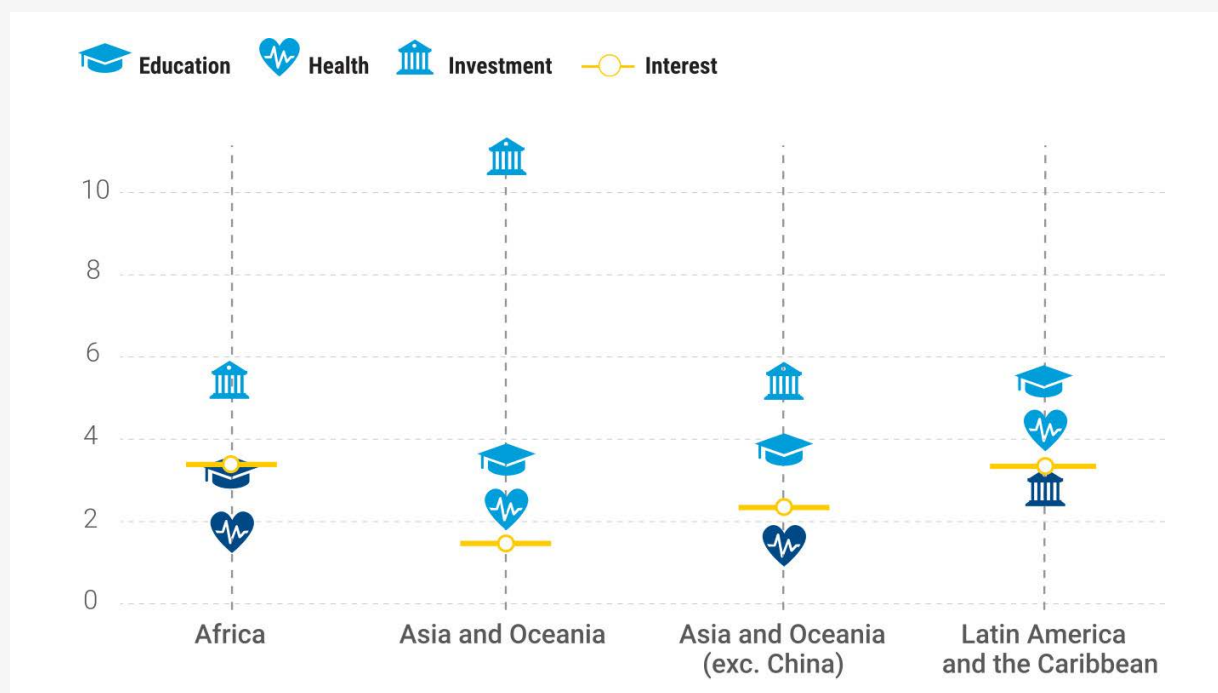


Figure 4: Several countries are spending more on debt interest payments than health



Source: UN Global Crisis Response Group. A world of debt: A growing burden to global prosperity, 2023. <https://unctad.org/publication/world-of-debt>

disproportionately underfunded, despite their potential impact on outbreak prevention. There are important gaps in financing global public goods, including R&D and access to medical countermeasure.

As a direct consequence of the COVID-19 pandemic combined with wider economic and geopolitical challenges, countries' budgetary space is shrinking. Many countries continue to be burdened by debt servicing requirements which compound their lack of fiscal space to address pandemic and other health needs. The number of low- and middle-income countries spending more on debt servicing than on health rose from 33 in 2010 to 54 in 2019²³, with more than 3.3 billion people living in countries that spend more on interest payments than they do on health or education (Figure 4 above).²⁴ Shrinking fiscal space and new crises have also meant that Overseas Development Assistance (ODA) funding has 'rebalanced' away from pandemic priorities. This has been evident in the shortfall in financing ACT-A's transition plan, in meeting CEPI's replenishment goals and the initial funding commitments to the Pandemic Fund of only US \$1.9 billion.

Beyond the scale of financing, there are also fundamental structural issues that reduce the efficiency of funding. A tracking exercise identified more than 1,000 donors and over one million transactions since 2014, within a funding environment that lacks overall coordination.²⁵ The timely availability of funding is not matched to need. For example, inadequate pre-financing of countermeasures at the outset of the COVID-19 pandemic limited the ability of funders to set conditions for equitable access at the outset of countermeasure development. Some countermeasures, in particular vaccines, received far more funding than others, such as diagnostics, and the lack of a priorities-driven funding coordination mechanism meant that some measures, such as securing oxygen supply chains, were delayed.

4.3 Global governance



B.1.4.1 (a) Global platform to support leadership



B.1.4.1 (b) Strategic plan



B.1.4.2 International regulatory instrument

Global governance of PPPR is evolving with key developments in the international negotiation of a WHO Pandemic Agreement, review and revision of the existing International Health Regulations, debate in the World Trade Organization (WTO) TRIPS context to ensure that intellectual property rights do not impede equitable access to medical countermeasures, and evolution of access and benefit-sharing frameworks in relation to genetic resources and the extension of these frameworks to cover digital sequencing data.

There is a high level of fragmentation in the international governance and regulation of PPPR. Several legal frameworks apply to PPPR including the International Health Regulations (2005), the Pandemic Influenza Preparedness Framework, the TRIPS Agreement and the Nagoya Protocol, with little capacity for each of these frameworks to operate in concert with the others. The lack of a coherent multisectoral approach can contribute to ‘forum shopping’ by governments and other actors, and a lack of coordination between relevant stakeholders. Some international agreements relevant to PPPR, such as those addressing environment, intellectual property, and trade, have objectives or approaches that are not supportive of better preparedness, for example, inequitable access led WTO Member States to adopt a waiver to the TRIPS Agreement in relation to COVID-19 vaccines. Important gaps also remain around certain key areas such as equity, R&D and access to medical countermeasures, access and benefit-sharing (beyond pandemic influenza), and One Health.

Reform of global governance for PPPR has focused on the development of a broad and effective international agreement that would set out expectations of States and other actors in preventing and responding to pandemics and other health emergencies, complementing but going beyond the obligations established by the International Health Regulations. The WHO Pandemic Agreement holds out the promise that States will collectively address these challenges and take on binding obligations to better prevent health emergencies, better prepare for their eventuality, and cooperate more effectively not only between themselves but also across sectors. Progress on the negotiations has been slow and while there are many areas of agreement, countries and other stakeholders appear to be far apart on several key issues, such as measures to mandate equitable access to vaccines and other medical countermeasures, access and benefit-sharing, integration of One Health approaches, balancing States’ sovereign interests in protecting their own security with global security and the collective interests of all countries, and accountability. The concerns expressed by the WHO Director-General in October 2023²⁶ at the slow speed of progress with the WHO Pandemic Agreement negotiations are shared by the GPMB.

The Political Declaration on PPPR adopted by the United Nations General Assembly made commitments to multisectoral preparedness but fell short of establishing concrete goals, deferring much of that discussion to the WHO Pandemic Agreement process.²⁷

WHO has been significantly empowered over the course of the COVID-19 response as Member States have recognized the need for its leading technical authority in health emergency response, with a greater degree of its funding available flexibly to be deployed according to need.

PPPR requires multisectoral action and involves a wide range of actors. There is significant progress in WHO’s work and engagement with non-health sectors, and Member States themselves are more broadly engaging at the national level, especially in the context of the WHO Pandemic Agreement negotiations. In addition, beyond the context of negotiating a new pandemic agreement, there are important gaps in multisectoral engagement

Non-exhaustive list of international regulatory frameworks applying to PPPR

Sector	International regulatory framework	Elements covered
Health	International Health Regulations (2005)	Prevention, detection and response to health emergencies, including PPPR core capacities, information sharing and PHEIC Declaration
Health	Pandemic Influenza Preparedness Framework (non-legally binding)	Access to medical countermeasures, PPPR core capacities
One Health	WOAH Standards and surveillance framework (non-legally binding)	Outbreak detection in animals
One Health	FAO/WHO Codex Alimentarius Commission (non-legally binding)	Food contamination
One Health	2022 One Health Joint Plan of Action (non-legally binding)	Quadripartite collaboration between One Health organizations
Environment	Nagoya Protocol/Convention on Biological Diversity	Pathogen sharing and access to benefits derived from their use
Environment	Multilateral Environmental Agreements (MEA)	Addressing determinants of health emergencies
Intellectual Property	TRIPS Agreements	Access to technologies and medical countermeasures
Global financial system	IMF Articles of Agreement; bilateral investment treaties	Financing of PPPR
Trade	GATT agreement and other trade agreements	Trade restrictions
Disaster risk reduction	Sendai Framework (non-legally binding)	Pandemic prevention
Human rights	Right to health	Access to healthcare

Source: based on analysis from Gian Luca Burci, Graduate Institute of International and Development Studies

in the organization's governance. There are also limitations to civil society and private sector engagement, inherent in a state-based multilateral organization, and in WHO's capacity to coordinate a whole-of-UN, multisectoral response to health emergencies.

4.4 Research and development, and access to medical countermeasures

↓ **B.1.1.2.1** Global R&D coordination and priority setting

↑ **B.1.1.2.4** R&D capacity-building

↑ **B.1.1.2.7 (a)** Coordination during health emergencies

↑ **B.2.1.2.2** Regional manufacturing capacity

↑ **B.3.1.2.1** Assessment of national R&D innovation, development, and access to medical countermeasures

There is no effective global system for the coordination of pandemic-related R&D and a market-driven system is unable to deliver equitable outcomes or respond to globally prioritized needs. The WHO-supported global R&D Blueprint sets global priorities and was convened in timely fashion at the beginning of the COVID-19 pandemic (although not thereafter), but it has limited leverage in directing research priorities or investment – only 3% of the 61,000 products in the development pipeline target R&D Blueprint pathogens.²⁸

COVID-19 required the creation of a new coordination apparatus – ACT-A, which lasted only through the height of the pandemic and began winding down in October 2022. While ACT-A played an important role during the pandemic, its governance structure was informal and lacked full participation of low- and middle-income countries and regional bodies as well civil society and the private sector.

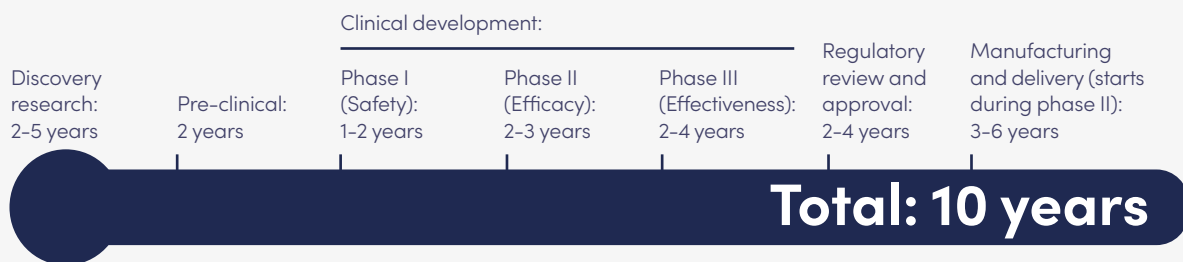
While global spending on R&D is at record highs, amounting to almost US \$1.7 trillion, it is highly concentrated with just 10 countries accounting for 80% of this spending.²⁹ Recent health emergencies have shown that mobilization of R&D funding in a crisis is uncoordinated and siloed, with philanthropic funders reluctant to give up autonomy in how they set their own priorities and government research funding largely directed towards narrow definitions of national self-interest in R&D investments for health emergencies. Funders are largely concentrated in high-income countries and governance of R&D initiatives is not inclusive of low- and middle-income countries.

Several promising technology transfer programmes increased low- and middle-income country access to tools and medicines during COVID-19, but as yet have not been widely applied. Similarly, networks and collaborations to build R&D capacity in low- and middle-income country settings proved valuable during the COVID-19 pandemic but remain small scale. Biomedical research collaborations remain overwhelmingly concentrated in high-income countries, and in only a small minority of cases do collaborations extend to lower-income country partners.

The COVID-19 pandemic was proof-of-concept that medical countermeasures can be developed faster with large public investments; joint planning across the clinical development, regulation and manufacturing capacity continuum; and by leveraging innovative platforms. Time to effective product has been reduced to levels that were unthinkable pre-COVID-19, for example, in the 2022-2023 Sudan Ebolavirus outbreak a partnership led by the Serum Institute of India with Oxford University and CEPI brought a vaccine candidate to trial within 79 days

Figure 5: Vaccine development timelines have significantly decreased as a result of COVID-19

Vaccine development timeline – Pre-COVID-19

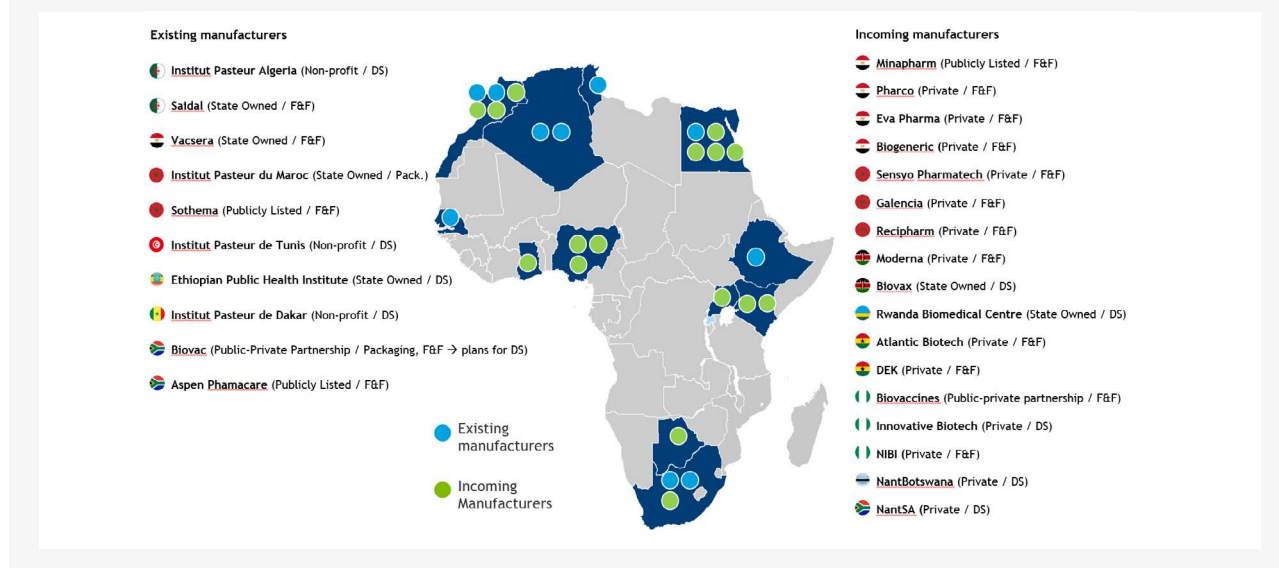


COVID-19 accelerated vaccine development timeline



Source: Wellcome. How have Covid-19 vaccines been made quickly and safely?, 2021. <https://wellcome.org/news/quick-safe-covid-vaccine-development>

Figure 6: Map of current and planned vaccine manufacturing on the African continent, including ownership structure and value chain capabilities



Source: Clinton Access Health Initiative. The African vaccine manufacturing ecosystem: supply landscape and expansion plans, Dec 2022. <https://www.clintonhealthaccess.org/wp-content/uploads/2022/12/White-Paper-African-Vaccine-Manufacturing-Ecosystem.pdf>

of the outbreak.³⁰ However, the experience of COVID-19 showed that when a pandemic causes acute demand for countermeasures worldwide, high-income countries use their dominance in R&D funding to secure priority access, and hoard medical countermeasures, leaving the pandemic to spread unchecked throughout the globe.

Global pandemic vaccine manufacturing capacity has increased significantly in recent years, due in large part to the COVID-19 pandemic. However, manufacturing capacity is not uniformly distributed across regions – it is concentrated in Southeast Asia, Europe, and North America. Africa and the Middle East have relatively low vaccine manufacturing capacity regionally. Latin America is the region second most dependent, after Africa, on vaccine imports with initiatives underway to boost regional manufacturing capacity.³¹

Significant regional initiatives have been launched to increase R&D capability including in Africa, the ASEAN region³² and Latin America.³³ However, there is some fragility in these initiatives – there is already evidence that interest is waning as the crisis in COVID-19 vaccine supply has faded from view.

4.5 Inclusivity and community empowerment

- ↓ **B.1.2.2 (a)** Global mechanism to manage misinformation
- ↓ **B.1.2.2 (b)** Global spread and impact of misinformation during health emergencies
- ↑ **B.1.2.2 (c)** Global platform to disseminate information and build knowledge
- ↓ **B.3.2.1** Assessment of communities and people at the national level
- ↓ **B.1.4.7 (a)** Inclusion of low- and middle-income countries
- ↑ **B.1.4.7 (b)** Involvement of civil society, private sector and community representatives
- **B.1.2.1 (a)** Impact of health emergencies on women, youth, vulnerable and marginalized groups

The importance of engaging communities in preparedness and in pandemic response has been widely recognized by countries. When countries assess their own performance, for example, using the IHR State Party Self-Assessment Annual Report (SPAR) tool, the majority consider that mechanisms are in place to engage communities and that they perform well. The average score for risk communication and community engagement in the SPAR was 69 out of 100 in 2022.³⁴ However, external assessment of country performance is less optimistic, suggesting that countries may overestimate their performance in this area.

Community engagement is intimately linked to the issue of trust. There are few monitoring measures which capture the dynamics of trust-building, and track which strategies are most effective. The monitoring of community engagement is often limited to the dimension of communication, rather than extending to assess meaningful engagement in planning and decision-making processes, and accountability of leaders to their communities.

In the wake of COVID-19, several instruments have been created which assess different aspects of community engagement, including artificial intelligence (AI) listening tools, citizen scorecards, engagement of community health workers and community health centres, and confidence in vaccines. These tools and approaches are boosting efforts to monitor community engagement, but many are still being piloted and involve only a minority of countries. Many are focused more on pandemic response than preparedness and have not been sustained after the initial crisis response phase ended.

Increasingly, community monitoring of programmatic effectiveness is being mainstreamed, for example, into World Bank Group health and nutrition investments³⁵, and country programmes supported by the Global Fund to fight AIDS, TB and Malaria.³⁶ However, community monitoring remains rare in the context of PPPR. Crucially, what are lacking are community-driven measures which would enable consistent standards for community engagement to be set and to be compared across countries, and community-owned global and regional mechanisms that would monitor effectiveness in community engagement.

Gender

There is no overarching global strategy to mitigate the gender impacts of pandemics. Gender is considered under the Joint External Evaluation Framework and in the Universal Health and Preparedness Review mechanism. However, there is potential for a more structured and systematic consideration of gender impacts through the WHO Pandemic Agreement. The Negotiating Text of the WHO Pandemic Agreement contains some consideration of the need to advance gender equality including the need to promote the equal and meaningful participation of women and address gender disparities in the health workforce. In the proposed amendments to the IHR (2005), there is relatively little consideration of gender, with the exception of references to equal representation on the basis of gender and of gender in relation to workforce capacities. However, some members of the Review Committee regarding amendments to the IHR (2005) did see a potential role for greater inclusion within the proposed amendments to help address “the unequal experiences of the international spread of disease due to gender, race, locality, age, disability, sexuality, indigeneity and other vulnerabilities”.³⁷

Vulnerable groups

There is also little consideration in the context of PPPR of systematic measures to ensure the protection of persons in vulnerable situations, including addressing the differential impact on youth, or on ethnic minorities, indigenous populations or displaced populations. Although the COVID-19 pandemic provided a wealth of data on the disproportionate impact on groups which are less wealthy and socially marginalized, mitigation strategies have been piecemeal and not placed within an overall framework of equitable preparedness and response.

Misinformation and disinformation

While the COVID-19 pandemic drew attention to the corrosive effects of mistrust on collective action, burgeoning misinformation and disinformation have been growing concerns over the past decade. A 2022 study found that 20–30% of the YouTube videos about emerging infectious diseases contain inaccurate or misleading information.³⁸

In more and more countries, there is a trust gap between citizens, governments and the private sector, in multiple directions. While trust in science and scientists has generally been found to be high across the globe³⁹, misinformation is undermining this trust, with pockets of the population in many settings strongly distrustful.

There is currently no single global mechanism established to deal with health-related misinformation and disinformation. There are a growing number of initiatives at global and at regional levels to identify and track misinformation and disinformation, but they remain uncoordinated, limiting their capacity to intervene. WHO has established several initiatives to support infodemic management, include the Early AI-supported Response with Social Listening (EARS) platform to monitor misinformation.⁴⁰ Regional initiatives include the Africa Infodemic Response Alliance network and the European Union's strategy to tackle online misinformation and disinformation, and globally the United Nations Development Programme (UNDP), UNESCO, the UN Human Rights Office (OHCHR) and the International Federation of Red Cross and Red Crescent Societies (IFRC) have developed platforms to identify and seek to counter misinformation and disinformation.

Governments have started to legislate and take measures to manage misinformation, and social media companies have implemented a range of policies and tools, including specific policies on COVID-19-related misinformation during the pandemic.⁴¹ While these measures have had a positive impact, they do not have the reach or scale to counter the deterioration in the information environment. Digital and social media platforms have provided the technologies to accelerate misinformation, and a more unified, proactive approach to reducing the harms of misinformation needs to be taken by both regulators and corporate governance bodies. Solidarity-based data governance which strengthens collective control and ownership of data is a corollary to solidarity in global health.





Inclusion and engagement

There is currently no mechanism to track the participation of low- and middle-income countries in governance, nor of the involvement of civil society and the private sectors, and therefore there is little information to assess the quality of their engagement.

Progress was made in the COVID-19 context to improve representation of civil society in the governance of PPPR but this progress is fragile. The establishment of WHO's new civil society commission is a positive development.⁴² A key gap are requirements to ensure governance is inclusive of all genders. At every level, local, national, regional and global, insufficient attention is paid to the composition of decision-making bodies.

Low- and middle-income country participation in PPPR governance has improved through the Intergovernmental Negotiating Body and the IHR (2005) amendment processes. Effective measures to create entry points for the private sector to join preparedness efforts as trusted actors have been stymied by ineffective mechanisms for engagement. The only systematic involvement of the private sector in the governance of PPPR is the inclusion of the pharmaceutical industry in the Pandemic Influenza Preparedness Framework.

4.6 Adoption of One Health approaches

-  **B.1.1.1.2 (a)** Global mechanism for early warning and One Health surveillance
-  **B.2.1.1.1 (a)** Regional laboratory capacity
-  **B.3.1.1.1** Assessment of national One Health and health systems preparedness
-  **B.1.4.8** Coherence

In the wake of COVID-19 there was some progress in reinforcing the capacities for One Health-focused prevention and preparedness, but capacities are still short of what is needed. In the most recent IHR SPAR annual report, 70% of countries report some One Health activities are in place⁴³, but most of these are initial steps rather than a mature integration of a One Health approach. Many One Health activities have been focused on a particular human disease, such as influenza; neglected zoonoses, such as rabies; or emerging One Health priorities, such as antimicrobial resistance. A broader perspective would consider animal health in a more genuinely integrated way alongside human health as fundamental capacities for PPPR. Only when this fully integrated approach is taken will One Health activities have the scope and capacity to assess and respond to the needs of prevention and early warning across a broad range of diseases.

Global initiatives for early warning and One Health surveillance have been strengthened during COVID-19. However, the pandemic highlighted that traditional surveillance systems alone are not sufficient to provide public health and policy decision-makers, at all levels, with access to timely and robust pandemic intelligence needed to make decisions. Greater efforts are needed to facilitate multisectoral integration of intelligence in decision-making to strengthen national capacities to detect emerging events, communicate information quickly, understand local vulnerabilities and the scenarios that might unfold, initiate responses rapidly, and continue to inform actions throughout an emergency cycle. While laboratory capacities have been reinforced at regional level in many regions, fully flexible laboratory capacity that can respond to a range of novel threats is inadequate. In some regions, laboratory capacities are principally in response to specific diseases or aspects of laboratory capacity, rather than a full set of generic capacities that can be adapted across a range of threats.

Integration of One Health into policy-making, governance instruments and programming has been challenging, with some disagreement about the extent to which the WHO Pandemic Agreement should address One Health, and challenges in ensuring representation of animal and environmental health interests in negotiation fora for PPPR. However, the draft Negotiating Text for the WHO Pandemic Agreement⁴⁴ includes concrete proposals to support countries in implementing a One Health approach, demonstrating that progress has been made on this front. In addition, the Quadripartite – the UN Food and Agriculture Organization (FAO), WHO, World Organisation for Animal Health (WOAH) and UN Environment Programme (UNEP) – has adopted a One Health Joint Plan of Action (2022-2026),⁴⁵ which includes Action track 2: Reducing the risks from epidemics and pandemics, and commits the Quadripartite to implementation, monitoring and evaluation of the plan through wide engagement with stakeholders.

Figure 7: National Influenza Centres and WHO Collaborating Centres for Epidemic and Pandemic Preparedness and Response



Source: World Health Organization, Dec. 2022

4.7 Multisectoral coordination



B.1.1.4.1 (a) Trade coordination



B.1.1.4.2 Involvement of relevant actors

Beyond the *ad hoc* and time-limited coordination mechanisms created during recent health emergencies, some elements of global multisectoral coordination around PPPR exist, for example, the Inter-agency Standing Committee. Other platforms are under consideration, including through the WHO Pandemic Agreement and the United Nations Secretary-General's proposal for an Emergency Platform.⁴⁶ However, gaps and weaknesses in coordination remain, including weak multisectoral and multistakeholder coordination and the lack of effective mechanisms to consider interactions and trade-offs between public health and socioeconomic dimensions of pandemics, such as the impact on education and employment.

The level of involvement of different actors in preparedness is inconsistent. Beyond the WHO Framework of Engagement for Non-State Actors (FENSA)⁴⁷ there is no overall framework which mandates the basis on which civil society and private sector actors are involved in preparedness and able to coordinate efforts with governments, at national, regional and global levels. Current governance discussions have focused on new structures and mechanisms, rather than first establishing greater clarity on the coordination and oversight functions needed.

One of the key failures of the early response to COVID-19 was the adoption of export bans on critical medical supplies and trade barriers by several WTO Member States, leading to restrictions on access. These were compounded by disruptions to global supply chains due to local lockdowns (affecting production and shipment of a broad range of goods), travel restrictions and border closures. Without better guidance, countries struggled to assess trade-offs between health and socioeconomic impacts. While WTO and the Organization for Economic and Co-operation and Development (OECD) provided support during the pandemic, this remains an important gap where greater coordination is needed between countries, but also between the health and trade sectors. Existing instruments such as the Trade Facilitation Agreement (TFA) could provide greater coordination, but there is insufficient funding to support its implementation by low- and middle-income countries.

STATE OF PREPAREDNESS: CONCLUSIONS

While there are signs of improvement in some aspects of global preparedness, and significant global and regional initiatives are under development to enhance collective action, the world lacks a commonly agreed framework for PPPR that is comprehensive in scope, based on shared goals and targets, and able to facilitate planning, implementation, monitoring, and resource mobilization.

Overall, global preparedness for PPPR remains inadequate. There are key weaknesses or declining capacities in independent monitoring, most of the financing indicators, global R&D coordination, management of misinformation, community engagement, participation of low- and middle-income countries, and involvement of relevant actors. Where there are signals of improvement, they are weak and in urgent need of reinforcement. The COVID-19 pandemic resulted in a clearer picture of where the most critical points of system failure are located and what can be done about them. Many national governments, international organizations, civil society, private sector and research actors have developed tools, programmes and initiatives directed towards better and more sustainable PPPR. But more of these initiatives are at the planning than the implementation stage. Until and unless they are brought to fruition, global vulnerability to a new or resurgent pandemic threat remains extremely high.

Grounded in the expert assessments provided to it, the GPMB has drawn the following conclusions in relation to equity, leadership and accountability, and coherence.

Leadership and accountability

- 1 Monitoring and accountability** has been insufficiently resourced and institutionalized. In particular, there is a need for independent monitoring to complement self-assessment and peer review, to create layered and improvement-oriented systems that reinforce accountability.
- Systemic deficiencies in the **global financing** of PPPR were revealed over the past three years and despite major initiatives including the creation of the Pandemic Fund, the level of available funding is not yet close to meeting identified needs. The failure to align different elements of global financing for PPPR make it inefficient, and continuing reliance on Official Development Assistance leaves it unsustainable.
- Negotiations of a **WHO Pandemic Agreement** are underway, but progress has been slow. Significant differences remain between different interest groups and a geopolitical context that lacks trust makes it challenging to reach consensus. Strong opposition from the pharmaceutical industry to proposed measures to encourage equitable access to countermeasures is also concerning. Other international obligations and governance in non-health sectors that have an impact on PPPR, such as trade facilitation, intellectual property, pathogen-sharing, and environmental measures, remain poorly aligned.

Equity

- The gross global inequities in timely access to COVID-19 vaccines has demonstrated the need for sustained and distributed **R&D innovation**, able to deliver its benefits fairly based on need. The inequity in access resulted from the concentration of R&D capacity in a few - mainly wealthy - countries. Without R&D capacity closer to hand to all countries, countries remain vulnerable to being locked out of supplies of medical countermeasures in the event of a widespread health emergency.

- 5 In many settings, the COVID-19 pandemic resulted in **enhanced community engagement**, itself a key determinant of response success. However, many of these positive initiatives are in danger of falling into disuse now that the urgency of the crisis has faded. COVID-19 has had hugely different **outcomes within countries across gender, age, race and ethnicity, especially for vulnerable groups**. Yet, there is no consistent global effort to tackle these inequities. The increasingly fragmented information environment as well as misinformation and disinformation is undermining trust between citizens, governments and the private sector but efforts to tackle this problem do not have the required structure, reach or scale.

Coherence

- 6 A **One Health** approach has not been integrated effectively into preparedness. However, the newly released draft WHO Pandemic Agreement proposes several approaches to better integrate One Health and shows promise.
- 7 The failure of **coordination** which characterized the COVID-19 response remains a critical gap, with weak multilateral and multisectoral coordination, situations where access to support and finance is fragmented, where some countries are central to decision-making but others feel marginalized, and weak and inconsistent mechanisms for including civil society and the private sector.

Initiatives developed in the wake of the COVID-19 pandemic raise the hope that the global preparedness landscape is on the threshold of transformative change, but too often in the past that hope has been dashed as momentum is lost post-crisis. Global, regional and national leaders need to keep the hope of transformative change alive by seizing the moment to fully institutionalize an effective system of preparedness for pandemics that works in the collective interests of all.

A special note about trust-building for better preparedness

Pandemics are the paradigm for security through the pursuit of mutual interests. States attentively guard their sovereignty, but it is a mistake to imagine that their sovereignty is best safeguarded only through the lens of self-interest. Mistrust between States is a geopolitical reality, which will not disappear through well intentioned calls for change, but must be addressed in ways that encourage cooperation and advance mutual accountability.

The lack of global solidarity shown when COVID-19 vaccines were most in demand profoundly affected global trust, and exceptional efforts will be needed to turn it around. Accountability and transparency boost trust, from open science to community engagement, to inclusive multilateral processes. Just as inequity erodes trust, taking meaningful steps towards equity builds trust. Trust-building should be elevated to an explicit goal of multilateral institutions.

Independent monitoring serves as a reinforcer of trust. It adds to the confidence and veracity of data and creates a platform for accountability by tracking whether commitments made are kept and where additional effort is required.

The fundamental imbalances in global financing of preparedness also feed mistrust between countries. When countries are forced to spend more on debt servicing than they have available for health or education, it is little wonder that citizens lose faith in the fairness of the global system. Countries in need cannot trust those with resources to help put financing on a sustainable basis.⁴⁸

Regional institutions and processes are often in a better position than global ones to build trust, as they are closer to the needs and concerns of both national governments and the citizenry of their regions. The participation of governments from all regional and income levels in the governance of instruments like the Pandemic Fund are important confidence-building measures. When equity can be advanced by ensuring that every region has at minimum skilled workforces, technical know-how and vaccine, diagnostics and therapeutics manufacturing capabilities, they will build trust as a concrete measure of self-reliance.

There is a complex relationship between inequity, economic uncertainty and misinformation, which feed a vicious cycle of deepening mistrust.^{49,50} The trust-building measures to counter it are parallel at the level of individuals and of nations – transparency, inclusion and engagement.

When governance bodies also include civil society, trust and accountability is further enhanced. Building a web of trust will require concerted good-faith efforts which jointly mobilize government, civil society and the private sector, across geopolitical divides.

MOVING AHEAD: RECOMMENDATIONS FOR ACTION

Laboratory testing during COVID-19, Egypt, March 2020.
A WHO expert team on a COVID-19 technical support mission to Egypt in March 2020 found significant work in laboratory testing, early detection, isolation, contact tracing and referral of patients.

5 MOVING AHEAD: RECOMMENDATIONS FOR ACTION

We live in a world of poly crises and cascading risks, made worse by a negative spiral of geopolitical division and multi-layered mistrust. Exhausted by these multiple demands, countries are scaling back their ambition for what can be achieved by acting together. But the risk of tinkering with a system that has fundamental flaws is that it gives the illusion of progress while the fatal flaws are left untouched.

Over the past four years, the GPMB has made a series of recommendations to improve PPPR. These recommendations remain as relevant today as when they were made. The GPMB reaffirms its past calls to action and encourages countries, international organizations and actors to strengthen PPPR across all its dimensions.

Noting with concern that the assessment of the state of the world's preparedness in 2023 has revealed the persistence of key gaps and shown areas where global preparedness is deteriorating, the GPMB makes four recommendations.

Recommendation 1: Strengthen monitoring and accountability at all levels by improving national monitoring of pandemic prevention, preparedness and response, investing in better data and evidence collection, and strengthening global multisectoral independent monitoring.

Strengthening monitoring and accountability through a step-by-step approach across all actors at the local, national, regional and global levels will enhance PPPR as countries, institutions and communities are better able to assess risks and track their capacities to respond. A combination of self-assessment, peer review, and independent monitoring is needed. Self-assessment allows countries and actors to assess their own capacity based on their specific context, needs and resources; peer reviews encourage the sharing of best practices and create mutual accountability; and independent monitoring provides the most objective and accurate picture of successes, challenges and gaps, and supports more effective investments. Robust monitoring and accountability must be adequately resourced and supported through greater investment in building better data and evidence collection capacity.

Improving monitoring of national pandemic prevention, preparedness and response

Mandating monitoring in international regulatory instruments will help countries track their progress in meeting their obligations under international instruments, uncover challenges and gaps, and identify areas where they need further action and support. It would facilitate prioritization and targeting of investment. Monitoring should not be about criticism, blame and fault-finding, but ensuring that countries have the best data and information to support evidence-based decision-making, and are empowered to protect themselves.

The GPMB reaffirms its previous calls for the inclusion of monitoring in the governance of PPPR and recommends that Member States ensure the WHO Pandemic Agreement includes both review and compliance mechanisms with the following characteristics:

- A universal periodic peer-review mechanism should include country self-assessment with technical and, where necessary, resource support from WHO and other international organizations, and with contributions from national civil society groups; a peer-review mechanism led by State Parties; and independent expert review. The universal periodic peer-review process will need to ensure that countries have the support in place to implement, and track the implementation of, recommendations.
- A conference of parties with the mandate to assess compliance with the WHO Pandemic Agreement's provisions. The Conference of Parties should be supported by independent expert monitoring and civil society engagement and should provide support to State Parties in meeting their commitments.

The GPMB also supports current proposals to amend the IHR (2005) to improve compliance through the establishment of a Conference of Parties or a formal review process by the World Health Assembly. This should be supplemented by an independent assessment process.

Investing in global, regional and national data collection capacities

The accuracy, and usefulness, of monitoring depends on the quality of the information and evidence available. There are major blind spots in our understanding of PPPR because insufficient investments have been made in building global, regional and national data collection capacities. As a priority, countries, international bodies and funders must invest in these capacities, building on existing data collection systems. A better understanding is needed of PPPR capacities globally, with key knowledge gaps that should be filled in relation to:

- One Health surveillance
- R&D capacity and pipelines including regional/national manufacturing capacity, national regulatory and clinical capacities, access to medical countermeasures
- Global, regional and national financing and investments in PPPR
- Impact of misinformation on PPPR and broader public health
- Impact of pandemics and health emergencies on women, youth, displaced populations and vulnerable groups
- Inclusion of women, low- and middle-income countries', civil society and the private sector in PPPR governance processes
- Community engagement and social accountability.

Strengthening multisectoral independent monitoring

A strong multisectoral independent monitoring mechanism is needed to support national monitoring. Independent monitoring can reinforce self-assessment and peer review, and help provide a more objective, transparent, impartial and evidence- and science-based expert assessment of PPPR. Beyond assessing data and information, independent monitoring can propose solutions and make recommendations to strengthen PPPR.

Existing monitoring mechanisms such as the Intergovernmental Panel on Climate Change (IPCC) offer examples of good practice. Effective independent monitoring should comprise high-level independent leaders and experts. To be credible, balanced, reliable, and comprehensive it must be inclusive and informed by experts

from all regions and subregions and across all relevant sectors and stakeholders. A complete picture of the state of the world's preparedness requires assessment of the impacts of health emergencies, their drivers and amplifiers, gaps and weaknesses in our collective ability to anticipate and respond to health emergencies, and the extent to which national obligations under international law – including the IHR (2005) and the WHO Pandemic Agreement – are met.

The GPMB will soon reach the end of its first mandate. The need for the GPMB – or a similar multisectoral independent monitoring mechanism – is as important today as it was when the Global Health Crises Task Force called for it in 2017 and when the WHO Director General and the World Bank Group President established it in 2018. The GPMB therefore requests its co-Conveners, WHO and the World Bank Group, to carry out an independent review of the work of the GPMB to identify gaps and areas of improvement so that it can evolve into a more robust, multisectoral, independent monitoring mechanism. Potential reforms could include the GPMB being formally recognized as a source of independent monitoring for the WHO Pandemic Agreement, expanding the scope of its work to the full continuum of PPPR, and enhancing its multisectoral nature by expanding the GPMB co-Conveners to include other relevant international organizations, for example, FAO, IMF, UNEP, UNICEF, the World Intellectual Property Organization (WIPO), WOA, and WTO, or to derive its mandate from the UN Secretary-General.

Actions under Recommendation 1

The GPMB calls on:

- 1 Member States to ensure the WHO Pandemic Agreement includes both a universal periodic peer-review mechanism for PPPR and a Conference of Parties with the mandate of reviewing compliance with its measures.
- 2 All countries to invest in building their national capacity for data collection and analysis on PPPR, in collaboration with regional bodies.
- 3 International organizations and other actors such as the G7, G20, CEPI, GAVI and the Global Fund, with support from funders, to invest in building data collection and analyses to support a better understanding of PPPR capacities globally.
- 4 WHO and the World Bank Group to carry out an independent review of the work of the GPMB to identify gaps and areas of improvement and consider expanding the GPMB co-Conveners to include other relevant international organizations, for example, FAO, IMF, UNEP, UNICEF, WIPO, WOA, and WTO, or to derive its mandate from the UN Secretary-General.

Recommendation 2: Reform the global financing system for PPPR by fully financing the Pandemic Fund and reviewing its funding model, and finding new ways of financing pandemic prevention, preparedness and response.

Improving the global system for financing PPPR requires addressing urgent funding gaps and aligning it around national priorities and needs, but also identifying new ways to bolster national and international financing.

The GPMB has repeatedly stated that development assistance (ODA) is not an adequate or sufficient source of financing and has called for a new financing approach, grounded in burden-sharing, to supplement development-assistance-based funding. Strengthening global financing requires increasing available

international financing through ODA and non-ODA sources; expanding the fiscal space for domestic resource mobilization in those countries where it is lacking; mainstreaming PPPR in international financing instruments; aligning grant, loan and debt relief modalities; and ensuring predictability and timeliness across long-term prevention and preparedness capacity-building as well as immediate response and surge financing needs.

The adage “no one is safe until all are safe” remains true after the pandemic. PPPR is a global good that requires ensuring that all countries are better equipped to detect and respond to pandemics. Similarly to climate change prevention and adaptation, financing for PPPR must go beyond the more traditional donor models of ODA.

National and global financing of prevention and preparedness

Financing for PPPR should be anchored by domestic investment. International financing will complement domestic investment by providing additional resources and by improving the ability of countries to access financing. New sources of sustainable financing need to be found, and the structural issues which limit the capacity of low- and middle-income countries to invest in PPPR addressed.

In order to ground financing discussions, definitions of the scope of PPPR need to be agreed, and financing flows better tracked. The GPMB calls on the World Bank Group, WHO and the G20, as part of the work of the G20 Health and Finance Task Force, to press ahead to achieve a transparent global consensus on PPPR financing needs and flows.

Fully finance the Pandemic Fund and review options for additional funding sources

Donors should ensure that the Pandemic Fund is sustainably and adequately funded to meet the US \$10 billion a year gap identified by the G20 High-Level Independent Panel on Financing the Global Commons for Pandemic Preparedness and Response. While the Pandemic Fund is not currently powered to fully meet the financing needs of PPPR, it is the largest dedicated international mechanism to fund PPPR, and should be sufficiently resourced. The GPMB encourages a broad range of donors to contribute to the Fund, including philanthropists, foundations and the private sector.

However, the GPMB has repeatedly stated that PPPR should not be primarily funded through a replenishment, donor model, especially one relying largely on ODA. The GPMB believes that the Pandemic Fund should evolve towards a more sustainable, collective financing mechanism, with improved inclusivity of governance. Its role should be developed in the broader context of national financing needs, with predictable and sustained funding, avoiding the drawbacks of dependence on ODA which is often on a project basis or subject to variability as donor priorities change. The Pandemic Fund should conduct an assessment of potential new financial resources to improve its future financing. Non-ODA options to be explored could include a collective contribution mechanism, a public-private mechanism and the use of IMF special drawing rights.

The GPMB welcomes the alignment of the Pandemic Fund’s financing with National Action Plans for Health Security and calls on the Pandemic Fund to consider a more bottom-up approach to setting financing priorities, based on countries’ identified needs, and to eliminate earmarked funding.

For its first round of funding, the Pandemic Fund prioritized “strengthening comprehensive disease surveillance and early warning, laboratory systems, and human resources/public health workforce capacity”. Prioritization can help avoid overstretching and ensure the Pandemic Fund is able to demonstrate tangible results. However, future funding should not be limited to these areas. The GPMB also reaffirms its 2021 call for the Pandemic Fund to provide funding for global and regional common goods.

The Pandemic Fund, the Global Fund, GAVI and other International Financing Institutions providing funding for PPPR should ensure that the resources they provide are coordinated and aligned with countries’ priorities and needs. Countries should be using their National Action Plans for Health Security as a basis for funding proposal requests.

Enable greater national investments and bolster international financing through new modalities and sources of financing

Beyond the Pandemic Fund, the global financing system should prioritize funding PPPR as a fundamental dimension of advancing wellbeing and supporting economic stability. Conditions must be in place to increase domestic resource mobilization and identify new modalities and sources of financing.

As proposed in the Bridgetown Initiative, the IMF, the World Bank Group, the G20, as well as public and private creditors, should support debt restructuring to improve debt sustainability, freeing funds for countries to invest in their own PPPR. The GPMB also endorses the Initiative's call for 'Natural Disaster and Pandemic Clauses' in all debt instruments to automatically suspend debt service for two years when WHO declares a pandemic or PHEIC. To bolster international financing, the IMF, the World Bank Group and other multilateral and public development banks should invest in PPPR, including by providing additional concessional financing for national investment in PPPR and supporting global public goods. The IMF's Resilience and Sustainability Trust (RST), which channels IMF Special Drawing Rights (SDR), should support PPPR projects. During the COVID-19 pandemic, the IMF allocated 650 billion SDR in 2021 to its members to boost liquidity and reserve; 31.2 billion SDR (US\$ 41.1 billion) is currently available through the RST. While the RST was created to support climate resilience and pandemic preparedness in low- and middle-income countries, no PPPR project has been funded.

Reforming the global financing system may eventually require more fundamentally transforming the governance and functioning of international financial institutions. Making them 'more representative, equitable and inclusive'⁵¹ could better enable them to play a core role in financing global public goods and ensure international financing better meets the needs of countries.

Surge financing for pandemic response

It will be crucial to identify rapidly deployable sources of financing well in advance of another pandemic or health emergency. Considering the scale of surge financing needed, relying on existing response funds will not provide sufficient resources and new approaches must be identified.

The GPMB calls on all countries to develop domestic contingency funds to respond to health emergencies. These funds should be integrated into broader emergency financing.

The WHO Contingency Fund should be increased to meet the US \$500 million day-zero needs and sustainably funded, including through non-ODA sources. In addition, the GPMB calls on multilateral development banks globally and regionally, including the IMF and the World Bank Group, together with the G7, G20 and others, to implement strategies to boost international surge financing, including support for R&D as well as procurement and delivery of medical countermeasures early on during a health emergency. These strategies would likely involve multiple new and existing sources; therefore, the GPMB calls on financing actors to ensure international surge financing is well coordinated and rapidly accessible to countries at the time of a health emergency.

WHO plays a key role in the prevention of and early response to health emergencies, and therefore its surge capacity must be ensured through adequate financing.

Actions under Recommendation 2

The GPMB calls on:

- 1 The World Bank Group, WHO and the G20, as part of the work of the G20 Joint Finance and Health Task Force, to conduct an assessment of PPPR financing needs and flows.

- 2 Donors to sustainably and adequately fund the Pandemic Fund to meet the US \$10 billion a year gap identified by the G20 High-Level Independent Panel on Financing the Global Commons for Pandemic Preparedness and Response.
- 3 The Pandemic Fund to conduct an assessment of potential new financial resources outside of ODA and to develop a more bottom-up approach to setting financing priorities, based on countries' identified needs and to eliminate earmarked funding. The GPMB also reaffirms its 2021 call for the Pandemic Fund to provide funding for global and regional common goods.
- 4 The Pandemic Fund, the Global Fund, GAVI and other International Financing Institutions that provide funding for PPPR to ensure that the resources they provide are coordinated and aligned with countries' priorities and needs.
- 5 The IMF, the World Bank Group, the G20, as well as public and private creditors, to support debt restructuring to improve debt sustainability.
- 6 The IMF, the World Bank Group and other public and multilateral development banks to increase their investment in PPPR and provide additional concessional financing for national investments in PPPR. The IMF's Resilience and Sustainability Trust (RST) should provide support for PPPR projects.
- 7 All countries to develop domestic contingency funds to respond to health emergencies. These funds should be integrated into broader emergency financing.
- 8 WHO Member States to increase funding for the WHO Contingency Fund to meet the US \$500 million day-zero needs and ensure it is sustainably funded, including through non-ODA sources. They should also ensure adequate financing for WHO's surge capacity.
- 9 Multilateral development banks globally and regionally, including the IMF and the World Bank Group, together with the G7, G20 and others, to implement strategies to boost international surge financing.

Recommendation 3: Establish baseline regional capabilities to drive more equitable and robust R&D and supply chains.

Neither R&D nor supply chains can be equitable and robust if they are concentrated in a small number of regions and countries. Within every global region, there should exist at least: baseline manufacturing capacity in product-agnostic vaccines, therapeutics and diagnostics, oxygen and other key medical countermeasures; generic early detection and surveillance systems and laboratories; capacity to track and shape pandemic-relevant social and economic trends; and agile stock management systems across pandemic response needs. These regional capacities should be component elements of a global approach that promotes strategic coherence and coordination. Regional capacities should play a catalytic role in ensuring that national capacity-building is sustained and adapted to national circumstances. Long-term investment in building more equitable R&D capabilities should begin now, building on the growing efforts of many middle-income countries. More effective surge financing at the global and national levels will also be key to supporting the development and procurement of medical countermeasures. Regional institutions should play a key stewardship role in ensuring these regional capacities are developed.

The GPMB calls on countries and regional institutions to build sustainable regional capacity for surveillance, R&D, manufacturing, regulatory processes and deployment of medical countermeasures by creating strong regional ecosystems for R&D. Sustaining these ecosystems will require building regional markets for vaccines and other medical countermeasures, developing regional pooling or stockpiling mechanisms, regulatory coordination across countries, and open information sharing. Strengthening routine vaccine capacity between

pandemic periods can improve sustainability. In addition, creating a more sustainable R&D ecosystem will require strengthening the capacity and role of low- and middle-income countries, including by improving financing of R&D, workforce retention and capacity to implement technology transfers.

Investments in animal health R&D should also be prioritized as a way to integrate a One Health approach and prevent pathogen spillover.

Improve global R&D governance and coordination through the WHO Pandemic Agreement

Regional ecosystems will need to be embedded in a global framework for R&D and access to medical countermeasures to support global prioritization and coordination of R&D, data generation and sharing across countries, capacity-building and technology transfers, and equitable access to medical countermeasures, especially while regional capacities are being built. Global R&D governance should integrate a One Health approach and ensure coordination between human and animal R&D systems where appropriate.

The GPMB reaffirms its 2021 call for an international agreement creating, among others, “mechanisms for One-Health surveillance and for R&D to ensure rapid data, sample and benefits sharing and equitable access to countermeasures and essential medical goods”. The GPMB calls on Member States to adopt strong rules to address global R&D in the WHO Pandemic Agreement and to implement these rules through a global R&D roadmap that will include a focus on strengthening regional ecosystems. The WHO should support the development of this roadmap by publishing the updated list of R&D Blueprint priority pathogens.

Countries must also commit to ensuring that intellectual property rights do not impede access to life-saving medical countermeasures and technologies for PPPR.

Ensure equity through upstream commitments

To ensure investments in R&D can lead to greater equitable access to medical countermeasures, equity should be implemented upstream in the R&D phase. The public sector as well as philanthropic organizations, as key sources of financing for R&D in the context of PPPR, can leverage financing to ensure this is implemented. The GPMB calls on funders (governments and philanthropic organizations) to ensure terms for equitable access to technologies, countermeasures, and data and information are included in funding agreements.

The GPMB also calls on the private sector, especially countermeasures manufacturers, to support greater equitable access to medical countermeasures, including through technology transfers and support for regional capacity-building, private-public collaborations, as well as support for more equitable terms of access, including fair pricing.

Actions under Recommendation 3

The GPMB calls on:

- 1** Countries and regional institutions to build sustainable regional capacity for R&D, manufacturing, regulatory processes and deployment of medical countermeasures by creating strong regional ecosystems for R&D.
- 2** Member States to adopt strong rules to address global R&D in the WHO Pandemic Agreement and to implement these rules through a global R&D roadmap that will include a focus on strengthening regional ecosystems. Countries should also find appropriate mechanisms to ensure that intellectual property rights do not impede access to life-saving medical countermeasures and technologies for PPPR.
- 3** WHO to support R&D coordination by publishing the updated list of R&D Blueprint priority pathogens.

- 4 Funders (governments and philanthropic organizations) to ensure terms for equitable access to technologies, countermeasures, and data and information are included in funding agreements.
- 5 The private sector, especially countermeasures, manufacturers, to support greater equitable access to medical countermeasures.

Recommendation 4: Develop a new approach to multisectoral, multistakeholder engagement for pandemic prevention, preparedness and response.

Strengthening multisectoral preparedness through engagement of sectors outside of health as well as civil society and the private sector is crucial. COVID-19 demonstrated that responding to health emergencies requires the involvement of multiple sectors beyond health.

A new multisectoral, multistakeholder approach is needed to bring together all stakeholders and sectors involved in PPPR, and support a more integrated, coherent response to pandemics and health emergencies.

This new approach should be focused on building a more inclusive and broad movement to support PPPR; creating a forum to discuss policy design and implementation; strengthening citizen-led PPPR and improving social accountability; and promote coordination, information exchange and harmonization between stakeholder groups. It should provide information and support the activities of relevant governance bodies in the respective sectors, such as the WHA, to ensure their work is well informed of the needs and functioning of these sectors. This approach should aim to create full participation from all regions, incorporate civil society voices through representative structures, provide a forum for private sector engagement across economic sectors, and be grounded in One Health, multisectoral approaches.

The GPMB calls on WHO, in collaboration with key partners including WOA, FAO and UNEP, World Bank Group, WTO and WIPO, to work together to develop an approach to improving multisectoral, multistakeholder PPPR at all levels. Existing approaches that can be drawn on include the Sendai Framework's Global Platform for Disaster Risk Reduction and its Stakeholder Engagement Mechanism, the AMR Multi-Stakeholder Partnership Platform and the Multi-stakeholder Forum on Science, Technology and Innovation for the Sustainable Development Goals.

The GPMB recommends a structured coordination rather than a regulatory approach. Therefore, this process does not need to await the conclusion of intergovernmental negotiations on a WHO Pandemic Agreement – it can commence immediately. Establishing this approach in parallel to the finalization and implementation of the WHO Pandemic Agreement would assist in understanding how multisectoral engagement can underpin multilateral accountability and governance. Once the WHO Pandemic Agreement enters into force, this approach can play a key role in supporting implementation of the Agreement and IHR (2005).

To support greater engagement of civil society and communities, the GPMB also encourages civil society organizations, citizens and communities to build a PPPR advocacy movement, aligned with other sectors such as universal health coverage and climate change.

Actions under Recommendation 4

The GPMB calls on:

- 1 WHO, in collaboration with the Quadripartite for One Health (FAO, UNEP WOA) and other key partners, including the World Bank Group, WTO, and WIPO, to work together to develop a structured approach to improving multisectoral, multistakeholder PPPR at all levels.

CONCLUSIONS AND NEXT STEPS



Medications inspection, Iran, April 2023. WHO staff in Iran inspect a shipment of calcium gluconate, used to treat conditions caused by low calcium, acquired through international financial support.

6 CONCLUSIONS AND NEXT STEPS

In order to give effect to the recommendations above, the full range of institutions implicated in PPPR need to make specific and time-bound commitments. Every month that this action is delayed will further expose the world to pandemic risks. The achievements which were hard won in the unprecedented scale of the response to the COVID-19 pandemic will rapidly fade unless action is taken now to reinforce global PPPR.

The GPMB therefore calls for the following actions to be taken over the next year:

- The INB must complete negotiation of a WHO Pandemic Agreement for adoption by the World Health Assembly in May 2024.

The draft WHO Pandemic Agreement should include a universal periodic peer-review mechanism and a mechanism for reviewing compliance, as well as the inclusion of independent monitoring to support these mechanisms. It should also include strong measures to promote R&D coordination and ensure equitable access to medical countermeasures as well as support data capacity-building.

The INB and the Working Group on amendments to the International Health Regulations should commission a simulation exercise to test the effectiveness of these instruments and ensure coherence, before the negotiations are finalized.

- The international community must urgently adopt strategies to boost international surge financing and enable greater national investments and bolster international financing through new modalities and sources of financing.

At their 2024 Spring meetings, the World Bank Group and the IMF should consider how they can further strengthen support for PPPR, including through the IMF's Resilience and Sustainability Trust (RST).

UN Member States should consider proposals to reform the international financing system for PPPR as part of broader discussions during the 2024 UN Forum on Financing for Development in April 2024.

The 2024 Finance in Common Summit should advance proposals for reinforcing the role of Public Development Banks (PDBs) in supporting PPPR.

G20 countries at the G20 Summit in Brazil in July 2024 should consider strategies to continue efforts to support debt sustainability and to boost international surge financing, including for early R&D.

WHO Member States should review the target capitalization of the WHO Contingency Fund for Emergencies and increase it to US \$500 million at the 77th World Health Assembly (WHA77) in May 2024.

- Relevant regional organizations, including the African Union and the European Union, should conduct an exercise to map their regional R&D capacities by mid-2024.
- Building on the Quadripartite plan of action, the Quadripartite with relevant partners should initiate discussions to develop an approach to improving multisectoral, multistakeholder PPPR at their next meeting.
- WHO and the World Bank Group, should conduct an independent review of the work of the GPMB and its future role as the independent monitoring mechanism for PPPR in early 2024.



Nurse Ramatu registers participants at a mobile COVID-19 vaccination clinic in the remote farming community of Rofunta, Bombali District, Sierra Leone, December 2022. Credit: WHO/Michael Duff

GPMB PURPOSE AND MEMBERSHIP

The GPMB is an independent monitoring and accountability body to ensure preparedness for global health crises, co-convened by the World Health Organization and the World Bank Group. The Board provides an independent and comprehensive appraisal for leaders, key policy-makers and the world on system-wide progress towards increased preparedness and response capacity for disease outbreaks and other emergencies with health consequences. The Board monitors and reports on the state of global preparedness across all sectors and stakeholders, including the UN system, government, non-governmental organizations, and the private sector.

Co-Chairs



Ms Kolinda Grabar-Kitarović
Former President of Croatia



Ms Joy Phumaphi
Former Minister of Health
of Botswana

Members



Dr Palitha Abeykoon
Senior Advisor to the Ministry of
Health of Sri Lanka and a former
WHO Special Envoy for COVID-19
Preparedness and Response



Dr Ibrahim Abubakar
Dean of the University College
London Faculty of Population
Health Sciences and former
Head of Tuberculosis at Public
Health England



Ms Bente Angell-Hansen
Norwegian former diplomat
and former President of the
EFTA Surveillance Authority



Dr Maha El Rabbat
Former Egyptian Minister of Health
and Population; former WHO Special
Envoy for COVID-19 Preparedness
and Response; Professor of Public
Health, Cairo University; Member,
Recovery Working Group of the AU
COVID-19 Commission



Professor Victor J. Dzau
President of the United States
National Academy of Medicine
and Vice-Chair of the US
National Research Council



Dr Chris Elias
President of the Global
Development Program at
the Bill & Melinda Gates
Foundation and former
President and CEO of PATH

Members



Dr Zijian Feng

Secretary-General and Executive Vice President of the Chinese Preventive Medicine Association



Hon. Henrietta Fore

Former Executive Director of UNICEF; Former USAID Administrator and CEO & Chairman, Holsman International



Ms Bience Gawanas

Namibian lawyer and former Under-Secretary-General and Special Advisor on Africa to the UN Secretary-General



Dr Jayati Ghosh

Indian development economist and Professor of Economics at the University of Massachusetts Amherst



Professor Naoko Ishii

Former Deputy Vice Minister of Finance of Japan and Professor and Executive Vice President at the University of Tokyo



Professor Ilona Kickbusch

Founder and Chair of the Global Health Centre at the Graduate Institute of International and Development Studies in Geneva



Sir Mark Lowcock

Former Head of the UN Office for the Coordination of Humanitarian Affairs and former Permanent Secretary of the UK Department for International Development



Ms Susana Malcorra

Former Foreign Minister of Argentina, former Chef de Cabinet to UN Secretary-General Ban Ki-moon, former Chief Operating Officer of the World Food Programme



Dr Matthew Stone

Veterinary epidemiologist and former Deputy Director-General – International Standards and Science at the World Organisation for Animal Health

ABBREVIATIONS

ACT-A	Access to COVID-19 Tools (ACT) Accelerator
AFRO	World Health Organization Regional Office for Africa
AI	Artificial intelligence
AIDS	Acquired Immune Deficiency Syndrome
AIRA	Africa Infodemic Response Alliance
AMR	Antimicrobial resistance
ASEAN	Association of Southeast Asian Nations
CBD	Convention on Biological Diversity
CDC	Centers for Disease Control and Prevention
CEPI	Coalition for Epidemic Preparedness Innovations
CERF	Central Emergency Response Fund
CFE	Contingency Fund for Emergencies
COP	Conference of Parties
COVAX	COVID-19 Vaccines Global Access
C-TAP	COVID-19 Technology Access Pool
DVCMN	Developing Countries Vaccine Manufacturing Network
ECRIN	European Clinical Research Infrastructure Network
EMA	European Medicines Agency
EU	European Union
EUL	Emergency Use Listing Procedure
EURO	World Health Organization Eastern Mediterranean Regional Office
FAO	United Nations Food and Agricultural Organization
FENSA	WHO Framework of Engagement for Non-State Actors
FIND	Global non-profit that works to accelerate equitable access to reliable diagnosis
G7	Group of Seven
G20	Group of Twenty
GAVI	Global Alliance for Vaccines and Immunisation
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GISAID	Global Initiative on Sharing All Influenza Data
GISRS	Global Influenza Surveillance and Response System
GLASS	World Health Organization Global Antimicrobial Resistance and Use Surveillance System
GLEWS	Joint FAO–OIE–WHO Global Early Warning System for health threats and emerging risks at the human–animal–ecosystems interface
GOARN	World Health Organization Global Outbreak And Response Network
GPMB	Global Preparedness Monitoring Board
IFRC	International Federation of Red Cross and Red Crescent Societies
IHR	International Health Regulations
IMF	International Monetary Fund

INB	Intergovernmental Negotiating Body
IPCC	Intergovernmental Panel on Climate Change
IPSN	International Pathogen Surveillance Network
JEE	Joint External Evaluation
LIC	Low-income country
LMIC	Low- or middle-income country
MERS	Middle East respiratory syndrome coronavirus
Mpox	Monkeypox
MPP	Medicines Patent Pool
mRNA	Messenger ribonucleic acid
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
OHCHR	United Nations Human Rights Office
PAHO	Pan American Health Organization (Inter-American System and World Health Organization)
PEPFAR	President's Emergency Plan for AIDS Relief
PHEIC	Public Health Emergency of International Concern
PIP	Pandemic Influenza Preparedness Framework
PPPR	Pandemic prevention, preparedness and response
R&D	Research and development
RST	Resilience and Sustainability Trust
SCHEPPR	Standing Committee on Health Emergency Prevention, Preparedness and Response
SDG	Sustainable Development Goal
SEARO	World Health Organization South-East Asia Regional Office
SPAR	State Party Self-Assessment Annual Reporting
TB	Tuberculosis
TFA	Trade Facilitation Agreement
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UHPR	Universal Health and Preparedness Review
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGA	United Nations General Assembly
UNICEF	United Nations Children's Fund
WB	World Bank Group
WHA	World Health Assembly
WHE	World Health Organization Health Emergencies Programme
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WOAH	World Organisation for Animal Health
WPRO	World Health Organization Western Pacific Regional Office
WTO	World Trade Organization

ACKNOWLEDGEMENTS

We extend our deep appreciation and thanks to the Director-General of the World Health Organization and to the President, World Bank Group for having co-convened the Global Preparedness Monitoring Board (GPMB).

The GPMB expresses its sincerest gratitude to the following for their contribution to the technical assessments:

Amal Saif Sulaiman Al-Maani, Strategic Technical and Advisory Group on Infectious Hazards (STAG-IH); **Daniel Bausch**, STAG-IH; **Lucille Blumberg**, STAG-IH; **Gian Luca Burci**, Graduate Institute of International and Development Studies; **Daria Danilenko**, STAG-IH; **Eve Dubé**, STAG-IH; **Sarah England**, Independent Consultant; **Delia Enria**, STAG-IH; **Ngozi Erondy**, The O'Neill-Lancet Commission on Racism, Structural Discrimination and Global Health; **Joseph François**, World Trade Institute; **George Fu Gao**, STAG-IH; **Johan Giesecke**, STAG-IH; **David Hayman**, One Health High-Level Expert Panel (OHHLEP); **David Heymann**, STAG-IH; **Daniel Jernigan**, STAG-IH; **Rebecca Katz**, **Becky Knowles**, International Pandemic Preparedness Secretariat (IPPS); Georgetown University; **Marion Koopmans**, One Health High-Level Expert Panel; **Clifford Lane**, STAG-IH; **Heidi Larson**, London School of Hygiene & Tropical Medicine; **Julie Leask**, University of Sydney; **Yee-Sin Leo**, STAG-IH; **Jakir H. B. Masud**, STAG-IH; **Jodie McVernon**, STAG-IH; **Ziad Memish**, STAG-IH; **Suerie Moon**, Graduate Institute of International and Development Studies; **Justice Nonvignon**, STAG-IH; **Folasade Oguniola**, STAG-IH; **Myoung-don Oh**, STAG-IH; **Hitoshi Oshitani**, STAG-IH; **Malik Peiris**, STAG-IH; **Gerson Penna**, STAG-IH; **Heulwen Philpott**, IPPS; **Helen Rees**, STAG-IH; **John-Arne Røttingen**, IPPS Science and Technology Expert Group; **Majdi Sabahelzain**, Ahfad University for Women; **Rana Safdar**, STAG-IH; **Amadou Alpha Sall**, STAG-IH; **Adam Kamradt-Scott**, Harvard University; **Mariangela Simao**, IPPS Science and Technology Expert Group; **Renu Swarup**, IPPS Science and Technology Expert Group; **Kumnuan Ungchusak**, STAG-IH; **Niteen Wairagkar**, IPPS Science and Technology Expert Group; **Claire Wardle**, STAG-IH; **Clare Wenham**, London School of Economics and Political Science **Lothar H. Wieler**, STAG-IH.

The GPMB would like to thank the following individuals for contributing their expertise to the development of this report:

Ombretta Baggio, IFRC; **Charlotte Baker**, IPPS; **Priya Basu**, Secretariat of the Pandemic Fund; **Chris Carter**, United Kingdom Foreign, Commonwealth & Development Office; **Lucy Cassels**, New Zealand Ministry of Health; **Helen Clark**, former Prime Minister of New Zealand and former Co-Chair, Independent Panel on Pandemic Preparedness and Response; **Elisabeth Deus**, Auswärtiges Amt; **Rania Eleessawi**, UNICEF; **Jeremy Farrar**, WHO; **Chikwe Ihekweazu**, WHO; **Hyunhee Jung**, WHO; **Ricardo Baptista Leite**, UNITE; **Sandra Machiri**, WHO; **Jaouad Mahjour**, WHO; **Laurent Muschel**, HERA project; **Serina Ng**, G20 Joint Finance & Health Task Force Secretariat; **Ngashi Ngongo**, Africa CDC; **Aurélia Nguyen**, GAVI; **Anders Nordström**, Swedish Ministry of Foreign Affairs; **Ranna Eardley-Patel**, CEPI; **Scott Pendergast**, WHO; **Nahoko Shindo**, WHO; **Barbara Stocking**, Chair, former chair of the Ebola Interim Assessment Panel and chair of the Panel for a Global Public Health Convention; **Theresa Tam**, Canada, Chief Public Health Officer; **Stephanie Williams**, Australia Department of Foreign Affairs and Trade; **Abigail Buchanan Wright**, WHO.

Finally, the Board is grateful for the financial support provided to the GPMB Secretariat from the Government of Germany, the Government of Norway and the World Health Organization.

REFERENCES

- 1 Political Declaration of the United Nations General Assembly High-level Meeting on Pandemic Prevention, Preparedness and Response. In: 78th Session of the United Nations General Assembly. New York: General Assembly of the United Nations; 2023 (A/RES/78/3, <https://research.un.org/en/docs/ga/quick/regular/78>).
- 2 GPMB Monitoring Framework for Preparedness: Technical Framework and Methodology. Global Preparedness Monitoring Board; 2023 (<https://www.gpmb.org/annual-reports/overview/item/gpmb-monitoring-framework-full>).
- 3 Ibid., 2
- 4 Prevention of Zoonotic Spillover: From Relying on Response to Reducing the Risk at Source. One Health High-level Expert Panel; 2023 (<https://www.who.int/publications/m/item/prevention-of-zoonotic-spillover>).
- 5 New analysis confirms world seeing an upsurge of cholera. World Health Organization; 22 September 2023 (<https://www.who.int/news/item/22-09-2023-new-analysis-confirms-world-seeing-an-upsurge-of-cholera#:~:text=While%20data%20for%20cholera%20remain,but%20the%20outbreaks%20were%20larger>).
- 6 A Global Deal for Our Pandemic Age. G20 High Level Independent Panel on Financing the Global Commons for Pandemic Preparedness and Response; 2021 (<https://pandemic-financing.org/report/foreword/>).
- 7 Demand for funding from Pandemic Fund exceeds expectations with requests totaling over \$7 billion. World Bank Group; 5 April 2023 (<https://www.worldbank.org/en/programs/financial-intermediary-fund-for-pandemic-prevention-preparedness-and-response-ppr-fif/brief/demand-for-funding-from-pandemic-fund-exceeds-expectations-with-requests-totaling-over-7-billion#:~:text=The%20Pandemic%20Fund%20launched%20the,%24300%20million%20by%2023%20times>).
- 8 Watson OJ, Barnsley G, Toor J, Hogan AB, Winskill P, Ghani AC. Global impact of the first year of COVID-19 vaccination: a mathematical modelling study. *Lancet Infect Dis* 2022; 22: 1293–302. [https://doi.org/10.1016/S1473-3099\(22\)00320-6](https://doi.org/10.1016/S1473-3099(22)00320-6).
- 9 2023 Edelman Trust Barometer Global Report. Edelman Trust Institute; 2023 (<https://www.edelman.com/sites/g/files/aatuss191/files/2023-03/2023%20Edelman%20Trust%20Barometer%20Global%20Report%20FINAL.pdf>).
- 10 One Health Joint Plan of Action (2022–2026): Working Together for the Health of Humans, Animals, Plants and the Environment. Rome: Food and Agriculture Organization of the United Nations, United Nations Environment Programme, World Health Organization and World Organisation for Animal Health; 2022 (https://wedocs.unep.org/bitstream/handle/20.500.11822/40843/one_health.pdf?sequence=1&isAllowed=y).
- 11 Compilation of Expert Assessments: 2023 Report on the State of the World's Preparedness. Geneva: Global Preparedness Monitoring Board Secretariat; 2023.
- 12 DRAFT Negotiating Text of the WHO convention, agreement or other international instrument on pandemic prevention, preparedness and response (WHO Pandemic Agreement). Advanced unedited version – 16 October 2023. Geneva: Seventh Meeting of the Intergovernmental Negotiating Body to Draft and Negotiate a WHO Convention, Agreement or Other International Instrument on Pandemic Prevention, Preparedness and Response; 2023. (A/INB/7/x).
- 13 Ibid., page 2.
- 14 Universal Health and Preparedness Review: concept note. In: Seventy-Fifth World Health Assembly. Geneva: Director-General of the World Health Organization; 2022 (A75/21, https://cdn.who.int/media/docs/default-source/health-security-preparedness/uhpr/a75_21-en-uhpr-concept-note.pdf?sfvrsn=e80f9008_1&download=true).
- 15 Mapping Pandemic Response Financing Options and Gaps. New Delhi: World Health Organization and World Bank Group; 2023 (https://www.g20.org/content/dam/gtwenty/gtwenty_new/document/aug_docs/JFHTF%20Response%20Financing.pdf).
- 16 Data cited by Sarah England [Reference provided by Sarah England in Compilation of Expert Assessments: 2023 Report on the State of the World's Preparedness. Geneva: Global Preparedness Monitoring Board Secretariat; 2023, p.37]
- 17 Communiqué: G20 Finance Ministers and Central Bank Governors Meeting. Jakarta: G20; 2022. (<https://www.bi.go.id/en/G20/Documents/G20-Communique.pdf>).
- 18 Data from the World Health Organization Contingency Fund for Emergencies (CFE). (<https://www.who.int/emergencies/funding/contingency-fund-for-emergencies>, accessed 20 October 2023).
- 19 Data from United Nations Central Emergency Response Fund (CERF) (<https://cerf.un.org/our-donors/contributions>, accessed 20 October 2023).
- 20 Unpublished data from the G20 Joint Finance and Health Task Force. [Reference provided by Sarah England in Compilation of Expert Assessments: 2023 Report on the State of the World's Preparedness. Geneva: Global Preparedness Monitoring Board Secretariat; 2023, page 36]

- 21 Agarwal R, Gopinath G, Farrar J, Hatchett R, Sands P. A Global Strategy to Manage the Long-Term Risks of COVID-19. International Monetary Fund; 2022 (<https://www.imf.org/en/Publications/WP/Issues/2022/04/04/A-Global-Strategy-to-Manage-the-Long-Term-Risks-of-COVID-19-516079>).
- 22 Ibid., page 9.
- 23 Federspiel F, Borghi J, Martinez-Alvarez M. Growing debt burden in low- and middle-income countries during COVID-19 may constrain health financing. *Global Health Action*. 2022; 15(1):2072461. doi: 10.1080/16549716.2022.207246.
- 24 Data from the United Nations Conference on Trade and Development. World of Debt Dashboard. (<https://unctad.org/publication/world-of-debt/dashboard>, accessed 20 October 2023).
- 25 Data from the Georgetown Global Health Security Tracking tool. [Reference provided by Rebecca Katz in Compilation of Expert Assessments: 2023 Report on the State of the World's Preparedness. Geneva: Global Preparedness Monitoring Board Secretariat; 2023, page 84, <https://tracking.ghscosting.org/>]
- 26 WHO Director-General's remarks at the opening ceremony of the World Health Summit, Berlin, Germany – 15 October 2023. In: World Health Summit. Berlin: Director-General of the World Health Organization; 2023 (https://www2.worldhealthsummit.org/fileadmin/user_upload/4_Documents/4.15_2023/WHO_Director-General_Tedros_Adhanom_Ghebreyesus_Opening_Speech_World_Health_Summit_2023.pdf, accessed 20 October 2023).
- 27 Ibid., page 6.
- 28 Data from the WHO Global Health Observatory on Health Research and Development. [Reference provided by International Pandemic Preparedness Secretariat (IPPS) Science and Technology Expert Group and implementation partners in Compilation of Expert Assessments: 2023 Report on the State of the World's Preparedness. Geneva: Global Preparedness Monitoring Board Secretariat; 2023, page 18, <https://www.who.int/observatories/global-observatory-on-health-research-and-development/monitoring/health-products-in-the-pipeline-from-discovery-to-market-launch-for-all-diseases>]
- 29 Data from the UNESCO Institute for Statistics. [Reference provided by International Pandemic Preparedness Secretariat (IPPS) Science and Technology Expert Group and implementation partners in Compilation of Expert Assessments: 2023 Report on the State of the World's Preparedness. Geneva: Global Preparedness Monitoring Board Secretariat; 2023, page 18, <https://uis.unesco.org/apps/visualisations/research-and-development-spending>]
- 30 World Health Organization. Ebola trial candidate vaccines arrive in Uganda in record 79 days after outbreak declared. 9 December 2022 (<https://www.who.int/news/item/09-12-2022-ebola-trial-candidate-vaccines-arrive-in-uganda-in-record-79-days-after-outbreak-declared>).
- 31 Guzman J, Pincombe M, Yadav P, Glassman A. Expanding Emergency Vaccine Manufacturing Capacity in Latin America and the Caribbean. Center for Global Development; 2022 (<https://cgdev.org/sites/default/files/expanding-emergency-vaccine-manufacturing-LAC.pdf>).
- 32 Regional Strategic and Action Plan for ASEAN Vaccine Security and Self-Reliance (AVSSR) 2021-2025. Association of Southeast Asian Nations; 2021 (https://asean.org/wp-content/uploads/2021/10/AHMM-ADOPTED_AVSSR-Strategic-and-Action-Plans-2021-2025-cleaned-version_FINAL.pdf).
- 33 Pan American Health Organization. Special Program, Innovation and Regional Production Platform (RP) in the Department of Innovation, Access to Medicines and Health Technologies (IMT). (<https://www.paho.org/en/special-program-innovation-and-regional-production-platform-rp-department-innovation-access>).
- 34 Data from the Electronic IHR States Parties Self-Assessment Annual Reporting Tool. World Health Organization; 2023 (<https://extranet.who.int/e-spar/>).
- 35 World Bank Group. Citizen Engagement (<https://www.worldbank.org/en/topic/citizen-engagement>, accessed 21 October 2023).
- 36 Towards a Common Understanding of Community-based Monitoring and Advocacy. Geneva: The Global Fund to Fight AIDS, Tuberculosis and Malaria; 2020 (https://www.theglobalfund.org/media/9632/crs_2020-02cbmmeeting_report_en.pdf).
- 37 Report of the Review Committee regarding amendments to the International Health Regulations (2005). In: Second Meeting of the Working Group on Amendments to the International Health Regulations (2005). Geneva: Director-General of the World Health Organization; 2023 (A75/WGIHR/2/5, https://apps.who.int/gb/wgihrr/pdf_files/wgihrr2/A_WGIHR2_5-en.pdf).
- 38 Borges do Nascimento IJ, Pizarro AB, Almeida JM, Azzopardi-Muscat N, Gonçalves MA, Björklund M, Novillo-Ortiz D. Infodemics and health misinformation: a systematic review of reviews. *Bulletin of the World Health Organization*. 2022;100(9):544-561. <https://doi.org/10.2471/BLT.21.287654>.
- 39 State of Science Index: 2023 Global Report. 3M; 2023 (<https://multimedia.3m.com/mws/media/22940440/3m-state-of-science-index-2023-global-report-sosi.pptx>).
- 40 World Health Organization. Early AI-supported Response with Social Listening (<https://www.who-ears.com/#/>).
- 41 Report of the Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, Irene Khan. In: Forty-seventh session of the Human Rights Council. Geneva: United Nations Human Rights Council; 2021 (A/HRC/47/25, <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G21/085/64/PDF/G2108564.pdf?OpenElement>).

- 42 World Health Organization. WHO Civil Society Commission. (<https://www.who.int/about/collaboration/civil-society-and-ngo-engagement/civil-society-commission>).
- 43 Ibid., page 21.
- 44 Ibid., page 21.
- 45 Ibid., page 10.
- 46 Our Common Agenda – Report of the Secretary-General. New York: United Nations; 2021 (https://www.un.org/en/content/common-agenda-report/assets/pdf/Common_Agenda_Report_English.pdf).
- 47 Framework of engagement with non-State actors. In: Sixty-Ninth World Health Assembly. Geneva: World Health Assembly; 2016 (WHA69.10, https://apps.who.int/gb/ebwha/pdf_files/wha69/a69_r10-en.pdf).
- 48 Stiglitz J. What Pandemic Preparedness Would Look Like. 4 October 2023 (<https://www.project-syndicate.org/commentary/pandemic-preparedness-response-un-agreement-lacking-concrete-solutions-by-joseph-e-stiglitz-2023-10>).
- 49 Trust in public institutions: Trends and implications for economic security. United Nations Department of Economic and Social Affairs; 2021 (https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2021/08/PB_108.pdf).
- 50 Ibid., page 10.
- 51 United Nations. With clock ticking for the SDGs, UN Chief and Barbados Prime Minister call for urgent action to transform broken global financial system. 26 April 2023 (<https://www.un.org/sustainabledevelopment/blog/2023/04/press-release-with-clock-ticking-for-the-sdgs-un-chief-and-barbados-prime-minister-call-for-urgent-action-to-transform-broken-global-financial-system>).



Global Preparedness Monitoring Board Secretariat
c/o World Health Organization
20, Avenue Appia
1211 Geneva 27 | Switzerland
gpmbscretariat@who.int | www.gpmb.org



[@TheGPMB](https://twitter.com/TheGPMB)

[@global-preparedness-monitoring-board](https://www.linkedin.com/company/global-preparedness-monitoring-board)