

The next pandemic threat could emerge anywhere

It's time to understand the risks
and be certain we're ready

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The next deadly pathogen could emerge from a cave, forest, farm, or laboratory. It could even be intentionally released. Can people rely on governments and organisations to monitor and mitigate these risks, and be ready for a crisis? What does it mean to be ready, and how can we assess whether we are?

Current risk and readiness monitoring is fragmented, underfunded, largely self-reported or voluntary, and not sufficiently independent. Transparency is limited, and there are few incentives to comply. Nor are there any consequences for noncompliance with existing legal obligations, such as the International Health Regulations (IHR).

There are major gaps in monitoring systems, which do not assess the full scope of risks, including the environment, climate change, and biosecurity. Monitoring for prevention, response, and recovery are equally lacking. While much effort goes into country preparedness monitoring, gaps remain, and understanding of organisational preparedness is limited.

The geopolitical and economic context, including abrupt and planned decreases in development assistance, are exacerbating the challenges and making everyone less safe. Leaders rarely talk about pandemic preparedness anymore, despite the very recent devastation of COVID-19.

The pandemic agreement offers promise to consolidate a fragmented system, but work is required now as threats persist and the agreement may take years to come into force.

This policy brief examines the strengths and gaps in pandemic monitoring and accountability before and after the COVID-19 emergency. It includes proposed actions for the next 12 to 18 months for a more independent, integrated system—from risk detection to recovery—that policymakers can trust to guide investments and decisions.

Monitoring in the lead-up to and during COVID-19

Lessons from the tragedy of the West Africa Ebola outbreak (2014–2016) led to major shifts, including through the IHR Monitoring and Evaluation Framework,* the Global Preparedness Monitoring Board (GPMB), the World Health


* The IHR Monitoring and Evaluation Framework, released in 2016, contains four components: a mandatory annual reporting through the States Parties Self-Assessment Annual Report (SPAR) and three voluntary mechanisms: simulation exercises (SimEx), after-action reviews (AAR), and Joint External Evaluations (JEE). The outcomes of JEEs are to be incorporated into National Action Plans for Health Security (NAPHS) and operationalised with adequate financing.

Organization's Emergencies Programme, and its oversight body, the Independent Oversight and Advisory Committee (IOAC).


The IHR monitoring framework represented a step change in assessing disease outbreak readiness, but it remained focused on static health indicators.¹ The IHR has too rarely been incorporated into national legislation,² and investment in outbreak and pandemic preparedness has remained far too low.³

The prescient September 2019 GPMB report, *A World at Risk*, warned that countries were unprepared to manage a novel non-influenza respiratory virus,⁴ a warning echoed in October 2020, when the GPMB stated that "current measures of preparedness are not predictive" and should include focus outside the health sector, such as on social protection measures.⁵ While rigorously prepared, the Global Health Security Index⁶ did not accurately predict pandemic readiness in key high-income countries, and it undervalued readiness in some LMICs.⁷

In its December 2019 report, the IOAC stated that National Action Plans for Health Security and Joint External Evaluations have an unclear impact on strengthening IHR core capacities. It recommended that the World Health Organization work with countries to streamline processes and develop simpler, "impact-oriented" action plans.⁸



*"Are we prepared for the next pandemic threat?"
is a question that remains far too difficult to answer.*



Based on its assessment of the response to COVID-19, The Independent Panel made several recommendations in its May 2021 report.⁹ It called for the WHO to develop new pandemic readiness benchmarks and a universal peer review system. It recommended amendments to the International Health Regulations. To provide clear rules and enhance accountability, The Independent Panel and other experts recommended a new pandemic framework convention, an outcome-oriented political declaration from the UNGA High-Level Meeting, and a high-level Global Health Threats Council composed of political leaders. The G20 High-Level Independent Panel additionally recommended a Global Health Threats Board to catalyse and monitor financing for pandemic prevention, preparedness and response (PPPR).¹⁰

What has happened in the years since the COVID emergency

Since the COVID-19 emergency, some efforts have been made to strengthen monitoring and accountability systems, and numerous new initiatives have commenced. While these developments are promising, they also portend a monitoring system that is becoming more complex and cumbersome, is in parts duplicative, and doesn't always help to focus investments where they can have the greatest impact.

Country preparedness—many tools but no clear big picture

Country preparedness is assessed in several ways, but these don't provide a ready overview. The WHO has **updated benchmarks, published new dynamic preparedness metrics¹¹, and introduced the multisectoral peer-based Universal Health and Preparedness Review.** Yet in 2025, many of these have not been stress-tested or are not working at scale, and country preparedness monitoring remains heavily reliant on the self-reported SPAR, States Parties' annual reports. Far fewer countries are undertaking a Joint External Evaluation, simulation exercise, or after-action review. These are reported through a web portal that could be improved to provide a clearer overview¹² (see graphic).

Because intentional or unintentional release of a pathogen also presents future pandemic risks, monitoring implementation of the **Biological Weapons Convention** is relevant to PPPR, but it lacks a binding verification or monitoring mechanism. While the number of country reports has increased over time, less than half of State Parties have submitted a report in a single year.¹³

Organisational readiness—many responsibilities, little clarity on capacity to deliver

There is currently little joined-up monitoring or assessment of the capacities of all UN and other international programmes responsible for aspects of pandemic preparedness and response, including Gavi, the Vaccine Alliance; the Global Fund to Fight AIDS, Tuberculosis and Malaria; the Pandemic Fund; and UNICEF. While the IOAC's scope is limited to the WHO Emergencies Programme, its May 2024 report called for "a transparent monitoring system yielding a global picture of capacity levels."⁸

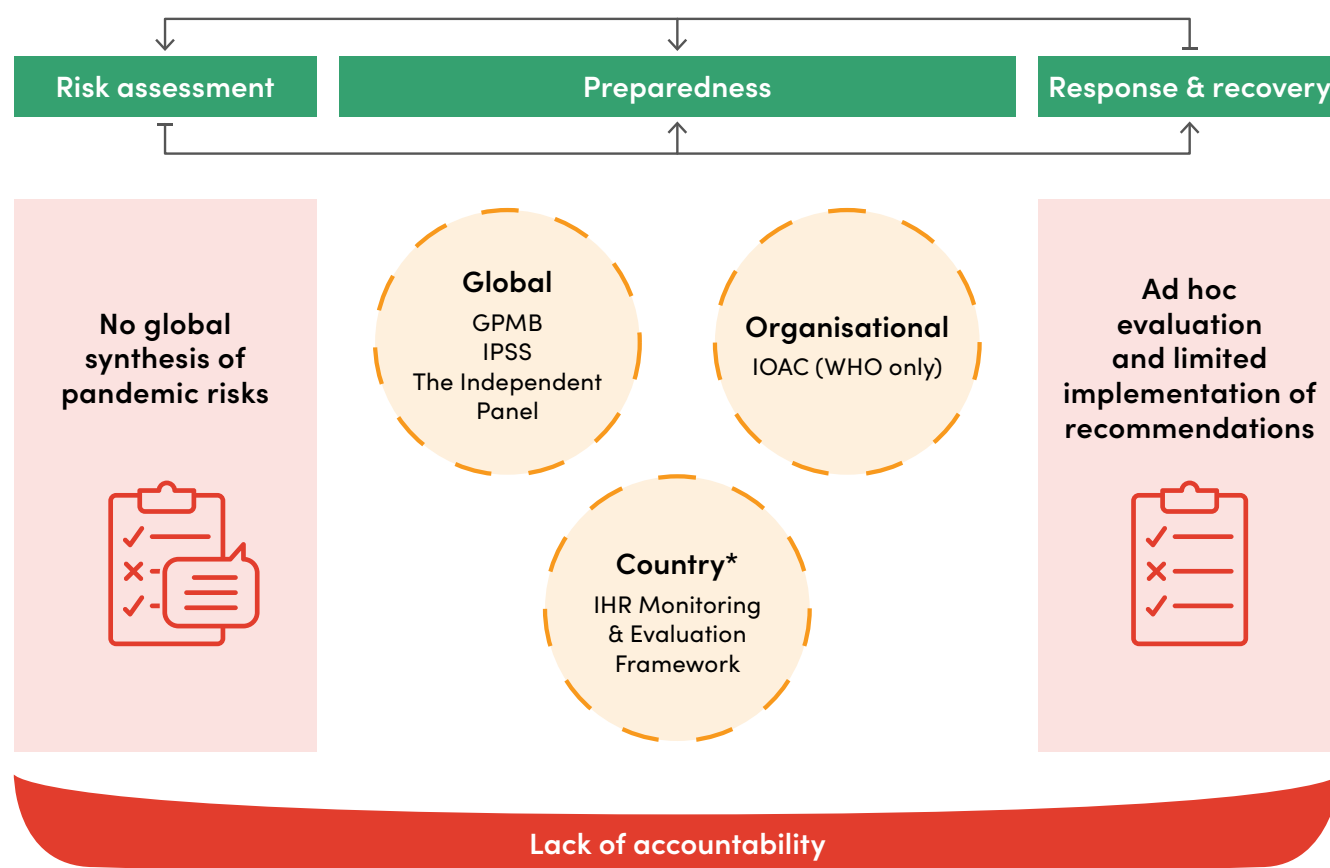
Global preparedness—ongoing efforts and an unclear future

The **GPMB** in its 2023 report, "*A Fragile State of Preparedness*," **put a new monitoring framework** to the test and will publish a new report this year. It also noted that "there is a need for independent monitoring to complement self-assessment and peer review, at all levels."¹⁴ Hosted directly by the WHO, the GPMB is challenged by independence and is not resourced to the level required. Its mandate is scheduled to end in 2026.

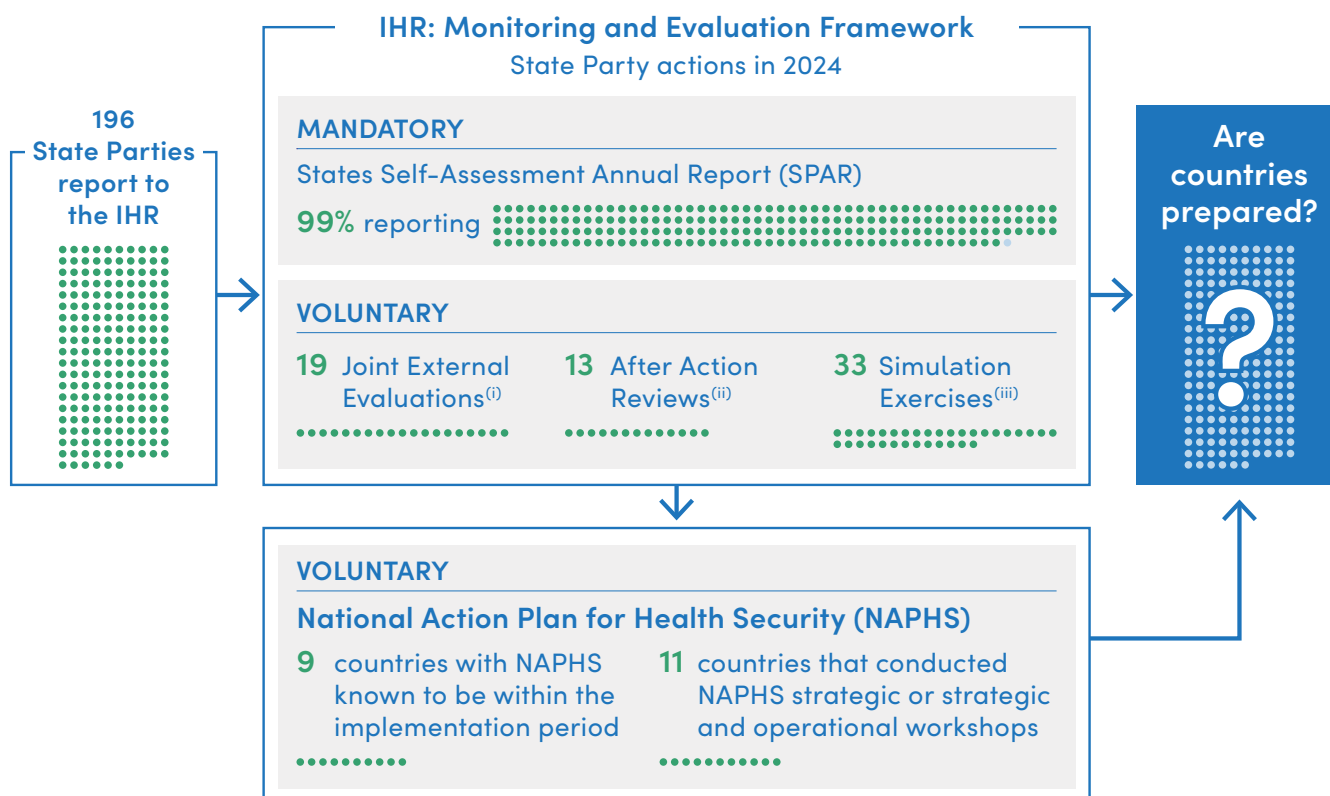
The **International Pandemic Preparedness Secretariat (IPPS)** monitors implementation towards the 100 Days Mission to make tests, treatments, and vaccines available within 100 days of a public health outbreak emergency. The IPPS accountability reports provide a thorough overview of strengths and gaps, and its stress test of the mpox response was appreciated.¹⁵ IPPS analysis would benefit from additional focus on equitable access in addition to availability of medical countermeasures (MCMs). The IPPS is slated to wrap its work in early 2027.

The **Independent Panel for Pandemic Preparedness and Response** has called for existing monitoring tools to be streamlined and for the creation of an independent monitoring body—such as a wholly independent GPMB- or IPCC-type mechanism—and a high-level political champions group.¹⁶ The **Elders** repeated this call in its pandemic position paper released in January 2025.¹⁷ The Independent Panel does not intend to be a permanent body.

Fragmented monitoring of pandemic risk, preparedness and response



Are countries prepared?*



(i) recommended every 4–5 years; (ii) within 3 months of a public health event; (iii) regularly

Source: WHO (<https://extranet.who.int/sph/ihr-monitoring-evaluation>) and NAPHS (<https://extranet.who.int/sph/naphs>)

Efforts leave us blind to some threats and uncertain of our readiness

Pandemic risk assessment—a major gap

Today there is no synthesised scientific assessment of pandemic risks and their drivers—as for example the Intergovernmental Panel on Climate Change (IPCC) does for climate—leaving knowledge gaps across geographies and sectors. Countries may be blind to the evolving risk landscape and what they need to do to prepare for and mitigate these risks.

Response and recovery—a lack of systematic learning

There is no independent system now to monitor response to major disease outbreaks. In-action and after-action reviews are essential, but, ideally, they would be better resourced, documented lessons would be shared more systematically, and recommended improvements would be financed.

Recovery assessments require more work to agree what entails successful recovery across health, social, and economic dimensions. Moreover, there is little standardised support for countries to facilitate recovery; many LMICs continue to suffer the compounding economic consequences of COVID-19 years after the emergency.

Countries also undertake individual assessments. These can provide insights for pandemic readiness globally, but there is no systemic drawing on these learnings.

Accountability—persistent gaps

Today there is little robust accountability within the PPPR ecosystem for countries in relation to their obligations and commitments. While State Parties to the International Health Regulations do have legal obligations, there are few to no consequences for noncompliance. The 2024 amendments to the IHR provide for a facilitative and assistive implementation committee, with scope limited primarily to coordination and a new financing mechanism.¹⁸

The pandemic agreement could eventually provide overall accountability if State Parties allow for this. When the agreement comes into force, State Parties could streamline functions with the IHR Implementation Committee. The pandemic agreement text includes provisions to “regularly take stock of implementation” and review its functioning every five years. At its second meeting, a Conference of the Parties may approve a facilitative, nonbinding and self-reporting mechanism to strengthen implementation of the provisions of the Agreement. For the agreement to make a real difference, State Parties must agree to independent monitoring and more accountability. Another challenge is that at the current pace, the agreement may not come into force for several more years, and not all Member States will necessarily become State Parties.

The High-Level Political Declaration on PPPR agreed by the UN General Assembly in September 2023 contained many provisions, though few clear obligations.¹⁹ Nevertheless, the UNGA will hold another PPPR meeting in 2026, and this will continue to be a forum at which leaders can make bold, measurable commitments—and be held accountable for them.

Ongoing efforts to address enduring gaps and blind spots

A November 2024 workshop on pandemic risk assessment organised by Wellcome Trust, the UN Foundation, PAX *sapiens*, Fiocruz, the GPMB, and the US National Academy of Medicine explored methods for assessing pandemic risk and its intersection with climate change. A forthcoming synthesis paper from the National Academy will provide more detail.

In response to the shortcomings of previous preparedness metrics, the National University of Singapore/Lancet Commission, introduced in June 2023 as the Pandemic Readiness, Implementation, Monitoring and Evaluation (PRIME) Commission, is developing an independent monitoring framework. It is taking a community-led, bottom-up approach and will create dynamic indicators, including measures of trust, population health, and the ability to reach vulnerable populations in an emergency.²⁰ The commission is expected to report in September 2026 and will deliver a unifying manifesto for action alongside its research and recommendations.

With the aim to support the reporting detailed for the pandemic agreement Conference of the Parties (COP) (Articles 21 and 23), Spark Street Advisors and the O'Neill Institute for National and Global Health Law have developed a zero draft framework to track the eventual implementation of this treaty. The framework is intended as a living tool which can evolve as key provisions are finalized and guidelines are adopted by the COP.²¹

What can now happen in a fraught geopolitical landscape?

Monitoring of pandemic prevention, preparedness and response must be broad in scope, evidence-based, and transparent. It needs to assess pandemic risks and their drivers, take a comprehensive One Health approach, and account for biosafety and biosecurity. The system needs to be politically and financially independent, to incentivise participation, and to hold national and organisational leaders accountable.²² Assessments should be based on universally agreed metrics and benchmarks that governments trust to guide their investments.

Critically, the system must measure impact and foster accountability from leaders, who must continue to make investments that keep their citizens protected and safe while also participating in a mutually accountable global system.

What can happen to improve monitoring

A common, unified plan and vision to address a fragmented, patchy system.

Countries, multilateral agencies, civil society, philanthropies, and other interested stakeholders should come together this year to agree essential functions and a unified plan. This process should start with considering the scope and essential functions of the system. It also should consider gaps, including in organisational preparedness, response and recovery, and should consider the strengths and weakness of current approaches and where major gaps exist. It can also explore the form of such a system, including reviewing those from other sectors such as human rights monitoring, which includes a peer review mechanism and independent monitors. Importantly, this should lead to an action-oriented path forward that a broad group of stakeholders can align around.

Consider a sustained “global observatory,” including regional functions as a solution. Because the GPMB and IPPS are slated to finish their work, an independent body will be required to fill these functions and existing gaps. This could be modelled on the IPCC or the Lancet Countdown on health and climate change. It could identify and fill gaps in monitoring today, draw conclusions from new and existing information including the IHR Monitoring and Evaluation Framework, and build on the principle of “one set of indicators, and one scorecard” with a view towards helping to inform a Conference of the Parties to the Pandemic Agreement. **The work of the Lancet PRIME Commission should be fully taken into account.**

Serious consideration should be given to the feasibility and value of a standardised, multisectoral annual report on pandemic risks. This would draw on science from across sectors and geographies and could help to direct policy-makers and finance ministries to most effectively invest in pandemic prevention and readiness. **Monitoring must also robustly incorporate One Health**, and a monitoring framework will evolve as the evidence base grows in effective policy and operations.

Improve clarity of reporting on country preparedness. The current online IHR reporting is difficult to parse, with a focus on the number of countries that have undertaken exercises and little analysis of the results or follow-up. The WHO should work to improve this so that anyone interested can rapidly understand country preparedness. Member States should pay for this function.

The IHR implementation committee should be established within 12 months of entry into force of the amended IHRs in September 2025. Members should work with a view towards implementation monitoring across the IHR and the pandemic agreement.

Build closer ties between the monitoring and financing architecture.

The outcomes of JEEs, peer reviews, and after-action reviews must lead to investments in areas of weakness and gaps. Domestic resource mobilisation is a key to addressing many of these gaps, but for many low- and lower-middle-income countries, international finance will continue to be essential. The Pandemic Fund could more systematically include funding for country priorities identified by reviews, as could the Africa Epidemics Fund once it is operational.

Establish leadership for accountability. The Independent Panel continues its call for a Champions Group comprising current and former Heads of State and Government to promote investment and accountability. Without leadership, the world will simply not be ready for a new pandemic threat.

Closing message— a streamlined system that is independent, transparent and accountable

Leaders can never successfully prevent or respond to a pandemic threat without fully understanding where the major risks loom, or without knowing whether countries and organisations are equipped and ready. Efforts to support country preparedness are ongoing, but these can be streamlined, made more transparent, and have more impact if there is funding and support to fix weak spots. Improving the system will take time, and an independent, evidence-based monitoring system can help to guide priorities and investments, including for a future pandemic agreement Conference of the Parties.

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