

# PANDEMIC RISK ASSESSMENT

An Initiative Convened by the United Nations Foundation  
and the National Academy of Medicine

## THE CHALLENGE

Pandemics remain among the most consequential threats to global health, economic stability, and societal well-being. While important progress has been made to strengthen surveillance systems and preparedness capacities, the global community still lacks a systematic way to assess pandemic risk – how the likelihood, drivers, and potential impacts of future pandemics are changing over time.

Changes in land use, climate, urbanization, global travel, and human–animal interactions are further accelerating the emergence and spread of infectious diseases. In this context, a more systematic and forward-looking approach to understanding pandemic risk is increasingly important.

Scientific evidence relevant to pandemic risk, from pathogen surveillance and ecological change to social, economic, and environmental drivers, is generated by many institutions across many disciplines. However, these insights remain fragmented. There is currently no widely recognized mechanism that synthesizes this evidence into forward-looking insights about pandemic risk to inform policy and investment decisions.

Without clearer insight into how pandemic risks are changing, governments and international institutions face significant uncertainty when prioritizing prevention strategies, preparedness investments, and broader efforts to reduce future pandemic threats.

## WHAT PANDEMIC RISK ASSESSMENT IS AND IS NOT

Pandemic Risk Assessment (PRA) refers to a structured process to synthesize scientific evidence on pandemic risk, in order to identify and analyze risk drivers, quantify risk from various pathogenic hazards, and understand plausible future scenarios. It is critical to clarify what PRA is not. It does not

attempt to predict the precise timing or location of the next pandemic, nor is it a surveillance system designed to detect outbreaks as they occur. It also does not replace preparedness assessments such as the Joint External Evaluation (JEE) or the State Party Self-Assessment Annual Reporting (SPAR), which focus on measuring national capacities.

PRA integrates evidence from multiple scientific fields, including epidemiology, ecology, genomics, climate science, economics, and social science. By synthesizing evidence across disciplines and data sources, PRA can help decision-makers better understand how pandemic risks are evolving and identify emerging threats. PRA can thus complement existing tools by helping policymakers anticipate pandemic risks and inform priorities for surveillance, prevention, and preparedness efforts.

## ADVANCING A SCIENTIFIC AGENDA FOR PANDEMIC RISK ASSESSMENT

The United Nations Foundation and the National Academy of Medicine are leading a collaborative initiative to advance a scientific agenda for pandemic risk assessment that is responsive to decision-maker needs.



Photo: Estefania Bravo / UN Foundation

This initiative addresses the growing recognition among scientists and policymakers that strengthening our capacity to understand pandemic risk can transform our ability to invest more effectively in prevention and preparedness. While many institutions generate valuable data and analysis, the global community lacks a shared framework for integrating these insights into structured, forward-looking risk assessments.

The initiative seeks to clarify the scientific foundations of pandemic risk assessment, identify priority research and policy questions, and explore potential institutional pathways for advancing this work at the global, regional, and country levels.

This work comes at a time of renewed global attention to pandemic prevention, preparedness, and response, including ongoing discussions on global health security reforms, negotiations on the Pathogen Access and Benefit Sharing (PABS) system, and preparations for the 2026 High-Level Meeting on Pandemic Prevention, Preparedness, and Response.

Work to date has included international consultations with scientific and policy leaders, including a multidisciplinary scientific workshop convened in Rio de Janeiro in 2024 and follow-on

stakeholder and scientific strategy meetings held in Washington, DC, in 2025.

These discussions helped clarify priorities for advancing pandemic risk assessment, identify key scientific questions, explore options for future assessment outputs, and catalyze early technical work now underway among Steering Group members and collaborators.

Building on these discussions, the initiative is now working to refine the scientific agenda for pandemic risk assessment, integrate emerging technical inputs already under development, and test illustrative structures for how a future assessment could organize and communicate evidence. This work aims to create the foundation that would enable the global community to develop grounded, regularly updated pandemic risk assessment products that can strengthen prevention, preparedness, and investment decisions.

A multidisciplinary Steering Group of scientific and policy leaders provide strategic direction and technical input to the initiative (see Steering Group members below).

**For more information, please contact [AskGlobalHealth@unfoundation.org](mailto:AskGlobalHealth@unfoundation.org).**

## STEERING GROUP MEMBERS

- **Cecilia Mundaca Shah**, Vice President, Global Health Strategy, United Nations Foundation (*Co-Chair*)
- **Victor Dzau**, President, National Academy of Medicine (*Co-Chair*)
- **Ben Oppenheim**, Non-Resident Fellow, Berkeley Risk and Security Lab, Non-Resident Fellow, Center for Global Development (*Technical Lead*)
- **Vijay Dhanasekaran**, Professor, School of Public Health & HKU-Pasteur Research Pole, LKS Faculty of Medicine, The University of Hong Kong (*Technical Lead*)
- **Anice Lowen**, Professor, Department of Microbiology and Immunology, Emory University
- **Ciro Ugarte**, Director, Health Emergencies, Pan American Health Organization
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- **Maria de Lourdes Aguiar Oliveira**, Vice-President of Global Health and International Relations, Oswaldo Cruz Foundation
- **Ngashi Ngongo**, Chief of Staff and Head of the Executive Office, Africa CDC (and representing AU PPPR Championship)
- **Serina Ng**, Executive Head, G20 Joint Finance-Health Task Force Secretariat
- **Sheetal Silal**, Director, Modelling and Simulation Hub, Africa (MASHA) and Professor, Department of Statistical Sciences, University of Cape Town
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