



Pathways to an Intergovernmental Panel on Pandemics: lessons from the IPCC and IPBES

Colin J Carlson, Christopher H Trisos, Ben Oppenheim, Shweta Bansal, Sara E Davies, Aida Diongue-Niang, Victoria Y Fan, John D Kraemer, Rachel Golden Kroner, Lawrence O Gostin, David T S Hayman, Marion Koopmans, Torre E Lavelle, Carlos G das Neves, Zoe O'Donoghue, Laura M Pereira, Benjamin Roche, Matiangai Sirleaf, Kayla Zamanian, Carlos Zambrana-Torrel, Alexandra L Phelan

Pandemics pose a global threat to human wellbeing, justice, economies, and ecosystems and are comparable with other planetary crises such as climate change and biodiversity loss in terms of urgency and impact. The global community would benefit from a dedicated scientific synthesis body to assess pandemic risks and solutions. In this Personal View, we explore proposals for an Intergovernmental Panel on Pandemics and assess potential pathways to its creation. Learning lessons from the Intergovernmental Panel on Climate Change (IPCC) and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) might help national governments and international organisations to chart a course through important decisions about format, governance, operations, scientific scope and process, and ability to recommend policies that make the world safer.

Introduction

The body of scientific literature relevant to pandemic risks, impacts, prevention, preparedness, response, and recovery has grown exponentially during the COVID-19 pandemic, creating an overwhelming problem for policy makers, practitioners, and diverse publics in terms of evidence synthesis and translation. Despite this surplus literature, long-standing key gaps persist in scientific knowledge regarding environmental and social drivers of pandemic risk, how these drivers are changing over time, and the effectiveness of mitigation measures to reduce spillover rates or pandemic spread.

An Intergovernmental Panel on Pandemics (IPP), formed on this core rationale, is a proposed scientific body analogous to two existing organisations: the Intergovernmental Panel on Climate Change (IPCC) and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES; panel 1). In comparison to previous and existing scientific bodies in global health (panel 2), the novelty of an IPP would be two-fold. First, the IPP would take a global, long-term view of pandemics as a planetary crisis. This view distinguishes an IPP from ad hoc bodies tasked with rapid risk assessment, policy advice, and public-facing communications (including efforts to combat misinformation and disinformation) during acute public health emergencies,⁶ in addition to retrospective commissions that report on lessons learned and provide accountability for response failures.⁷ Second, the IPP would conduct some form of consensus building across a large, globally representative sample of scientists, selected by means of a transparent nomination process. This consensus building process distinguishes an IPP from other expert advisory groups with a similar mandate but narrower scientific input, such as the Global Preparedness Monitoring Board (GPMB), Independent Panel on Pandemic Preparedness and Response, or some WHO technical advisory groups.

Some experts have questioned whether the creation of a new IPCC-like body is possible.⁸ However, calls for the

creation of an IPP have so far been endorsed by a G20-commissioned high-level expert panel,⁹ the IPBES Workshop Report on Biodiversity and Pandemics,¹⁰ and several independent coalitions of researchers.^{11–15} As conversations gradually shift from whether to how, we suggest that scientists and decision makers look to lessons learned from the IPCC and IPBES, the two existing intergovernmental science-policy bodies with a similar format and purpose. In this Personal View, we outline some of the most important considerations about the purpose, creation, and process of a new intergovernmental panel.

Inception and governance

Foundational choices about the creation and governance of a new intergovernmental panel will end up establishing the potential scope, impact, independence, and perceived legitimacy of the panel.

Path to creation

Three broad (and non-exclusive) paths exist to create a new intergovernmental panel. First, the panel could be established by a coalition of national governments (the 'IPBES model'). For comparison, IPBES is a stand-alone intergovernmental body established by an agreement among national governments. New members can join at any time, with four countries joining in 2024 at the 11th Plenary. IPBES is not an intergovernmental body of the UN but has received Secretariat support from the UN Environment Programme (UNEP) since 2013.

Second, the panel could be established through the UN, either by a specialised agency or programme (the 'IPCC model') or through a UN General Assembly resolution. For comparison, the IPCC was created by a memorandum of understanding between UNEP and the World Meteorological Organization and is an official UN intergovernmental body; the Secretariat is housed by the World Meteorological Organization. The IPCC was also endorsed and given a scientific mandate by the UN General Assembly in 1988.

Lancet Microbe 2025;

6: 101178

Published Online July 16, 2025
<https://doi.org/10.1016/j.lanmic.2025.101178>

Yale School of Public Health, Yale University, New Haven, CT, USA (C J Carlson PhD, T E Lavelle MSc, Z O'Donoghue PhD); African Synthesis Centre for Climate Change, Environment and Development, University of Cape Town, Cape Town, South Africa (C H Trisos PhD); Ginkgo Bioworks, Emeryville, CA, USA (B Oppenheim PhD); Center for Global Development, Washington, DC, USA (B Oppenheim, V Y Fan ScD); Department of Biology, Georgetown University, Washington, DC, USA (Prof S Bansal PhD); Griffith Asia Institute, Griffith University, Nathan, QLD, Australia (Prof S E Davies PhD); Agence Nationale de l'Aviation Civile et de la Météorologie du Sénégal, Dakar, Senegal (A Diongue-Niang PhD); Department of Health Management and Policy, Georgetown University School of Health, Washington, DC, USA (J D Kraemer JD); Oceans Team, World Wildlife Fund, Washington, DC, USA (R Golden Kroner PhD); Department of Environmental Science and Policy (R Golden Kroner) and Department of Environmental Science and Policy (C Zambrana-Torrel PhD), George Mason University, Fairfax, VA, USA; O'Neill Institute for National and Global Health Law, Georgetown University Law Center, Washington, DC, USA (Prof L O Gostin JD); Molecular Epidemiology and Public Health Laboratory, School of Veterinary Sciences, Massey University, Palmerston North, New Zealand (Prof D T S Hayman PhD);

Erasmus University Medical Centre, Rotterdam, The Netherlands (Prof M Koopmans DVM PhD); European Food Safety Authority, Parma, Italy (C G das Neves PhD); The University of Tromsø–The Arctic University of Norway, Tromsø, Norway (C G das Neves); Global Change Institute, Wits University, Johannesburg, South Africa (L M Pereira DPhil); Stockholm Resilience Centre, Stockholm University, Stockholm, Sweden (L M Pereira); Maladies Infectieuses et Vecteurs: Écologie, Génétique, Évolution et Contrôle, Institut de Recherche pour le Développement, Centre National de la Recherche Scientifique, Université de Montpellier, Montpellier, France (B Roche PhD); University of Maryland Francis King Carey School of Law, Baltimore, MD, USA (Prof M Sirleaf JD MA); Department of Epidemiology and Public Health, University of Maryland School of Medicine, Baltimore, MD, USA (Prof M Sirleaf); Center for Health Security (K Zamanian MS, A L Phelan SJD) and Institute for Planetary Health (A L Phelan), Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA

Correspondence to: Dr Colin J Carlson, Yale School of Public Health, Yale University, New Haven, CT 06510, USA colin.carlson@yale.edu

or Dr Alexandra L Phelan, Johns Hopkins University, Baltimore, MD 21218, USA aphelan4@jhu.edu

Panel 1: Other intergovernmental science-policy bodies

This Personal View focuses on scientific synthesis bodies (two existing and one proposed) that are not simply international or multilateral but are truly intergovernmental—ie, a global group of governments establish a programme and set the agenda; a global network of independent scientists execute the work; and governments receive and, to some degree, approve the deliverables. At the time of writing this Personal View, only the IPCC and IPBES are following this precise template. However, two major bodies that are under construction have also considered the template.

The Intergovernmental Science-Policy Panel on Chemicals, Waste and Pollution

The process of creating an intergovernmental scientific body on pollution was started by the UN Environment Assembly resolution 5/8 in March, 2022, which recommended that “the panel should be an independent intergovernmental body with a programme of work approved by its member Governments to deliver policy-relevant scientific evidence without being policy prescriptive”. An ad hoc open-ended working group started meeting in 2022, and at its final meeting in June, 2025 (shortly after this article was finalised), Member States agreed to establish the Panel as an independent intergovernmental body with a Secretariat hosted by UNEP.¹

The Independent Panel for Evidence for Action against AMR (IPEA)

Calls for an IPCC-like body on antimicrobial resistance started over a decade ago.^{2,3} The Ad hoc Interagency Coordination Group on Antimicrobial Resistance recommended the creation of a new panel in a 2019 report to the UN Secretary General, and at the UN General Assembly high-level meeting on antimicrobial resistance in 2024, a political declaration was adopted that “Invite[d] the Quadripartite organisations to establish an independent panel for evidence for action against antimicrobial resistance in 2025”. At the time of writing this Personal View, the Quadripartite aims to launch the IPEA by the end of 2025. Discussions about the preferred format of the IPEA are ongoing,⁴ and whether the body will be intergovernmental in nature or whether the body will engage scientists on the same scale as the IPCC and IPBES remains undecided. Instead, the IPEA might follow a model more directly comparable to the One Health High-Level Expert Panel or the Independent Panel on Pandemic Preparedness and Response (panel 2).

IPCC=Intergovernmental Panel on Climate Change. IPBES=Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

Third, an intergovernmental panel could be established by a treaty. This path would be a break from precedent, given that both the IPCC and IPBES are connected to one of the Rio Conventions—IPCC to the UN Framework Convention on Climate Change (UNFCCC) and IPBES to the Convention on Biological Diversity—but neither was established by the respective treaty itself. The IPCC actually predates the UNFCCC, and the first assessment report of the IPCC was instrumental in creating the UNFCCC. The proposed WHO Pandemic Agreement could have broken this precedent and directly established a new intergovernmental panel.^{12,14} During the early stages of the drafting process, proposals from Bangladesh and the Africa Group included provisions for an Intergovernmental Panel on Pandemic Science and Technology; however, these proposals did not reappear in public comments or drafts after the sixth negotiating session, and a panel was not included in the final agreement adopted in May, 2025.

Nevertheless, an IPP could still be created at any time. Governments could agree to create an IPP separate from the UN or by a resolution at the UN General Assembly or the World Health Assembly (the decision-making forum of WHO). Following the IPCC model, WHO or a group of UN agencies could also initiate the process at any time, but without a mandate from Member States, they might be hesitant to do so; this path could also come with unique challenges related to legitimacy, financing, and policy relevance.

Relationship with international organisations

For the IPCC and IPBES, international organisations (namely, UNEP and the World Meteorological

Organization) have had a narrow set of responsibilities, such as providing Secretariat support and supplementing the funding contributed by national governments. The scientific process itself is mostly separate; a defining feature of the intergovernmental panel model has been the ability to organise a global network of independent contributors and conduct scientific synthesis on a scale that would be impossible from within UNEP or the World Meteorological Organization.

A similar relationship between an IPP and WHO would be logical and probably expected. Under its constitution, WHO is the specialised agency of the UN that is responsible for coordinating international health work, which already includes providing technical assistance at the request of Member States; providing information and assistance in developing an informed public opinion on matters of health; and promoting and conducting research in the field of health. In exchange for Secretariat support (and some degree of financing), an IPP could be a valuable scientific resource for WHO. Although WHO often uses technical advisory groups and other expert panels for targeted input, these groups usually have a few dozen experts at most, and their work usually has a narrower mandate. An IPP could also function as an independent authority on evidence-based policy without the political baggage of WHO, although Member States might still introduce parallel political tensions into the scientific assessment process.

Other UN agencies and programmes could also be involved in a similar capacity, depending on the scope of an IPP with regard to prevention, preparedness, response, and

Panel 2: Other international science-policy bodies on pandemic risk

WHO relies on many advisory groups to synthesise scientific information and inform policy action on pandemic prevention, preparedness, and response. Active advisory groups include the Science Council (established in 2021), the Scientific Advisory Group on the Origins of Novel Pathogens (established in 2021), the Strategic and Technical Advisory Group on Infectious Hazards with Pandemic and Epidemic Potential (established in 2018), and the One Health High-Level Expert Panel (OHHLEP; established in 2021 and co-convened by the Quadripartite). Each advisory group consists of a small number (usually around 10–30) of experts selected by means of an open nomination process. These groups provide scientific advice to the WHO leadership and may also produce public-facing reports and peer-reviewed publications.

Several other internationally visible, independent science-policy bodies in global health have also addressed pandemic prevention, preparedness, and response in some capacity. Similar to the IPCC or IPBES, some of these bodies were created by a UN agency or group of countries (ie, the G7 or G20), with secretariat support from a UN agency or a non-governmental organisation. However, these bodies are invariably much smaller in scale than the IPCC or IPBES, with a core group of around 10–20 members from a mix of both scientific and political backgrounds. We discuss some notable examples of such bodies.

The Global Preparedness Monitoring Board (GPMB)

GPMB is an independent monitoring and accountability body to ensure preparedness for global health crises. GPMB was co-created by WHO and the World Bank in 2018, following the recommendation of the now-defunct UN High-Level Panel on the Global Response to Health Crises; the Secretariat for GPMB is housed by WHO. Although the board itself consists of only 15 independent experts, GPMB reports, which are published primarily on an annual basis, may be informed by technical consultations with several dozen external experts.

The Independent Panel on Pandemic Preparedness and Response (IPPPR)

The IPPPR was created by the WHO Director-General in 2020, following World Health Assembly resolution WHA73.1, which called for a stepwise process of impartial, independent, and comprehensive evaluation. The original panel included 13 members, although over 200 experts were involved in the Secretariat and the preparation of the initial report, which was presented back to the World Health Assembly in 2021. The IPPPR continues to publish reports at a roughly annual cadence. The scientific synthesis work conducted for the initial report also led to peer-reviewed publications.⁵

The International Pandemic Preparedness Secretariat (IPPS)

The IPPS acts as a catalytic organisation and convener for the 100 Days Mission, a decentralised initiative aimed at achieving development and deployment of vaccines, therapeutics, and diagnostics within the first 100 days of epidemics and pandemics. The first implementation report for the 100 Days Mission was produced for the G7 by the G7's chief scientific advisers in 2021; new implementation reports have been produced annually under the IPPS banner since 2023. The IPPS is housed by the Wellcome Trust and has also convened a Science and Technology Expert Group consisting of 20 independent experts.

The G20 High Level Independent Panel (HLIP) on financing the global commons for pandemic preparedness and response

The HLIP was created by the G20 and published its primary report on gaps in pandemic financing in 2021; however, the panel is no longer active. Although the panel had only 23 members, the report was informed by consultation with over 200 external experts. The role of the HLIP is now mostly addressed by the G20 Joint Task Force on Finance and Health, which was co-created by WHO and the World Bank and has a Secretariat housed by WHO; the Joint Task Force helped to establish the Pandemic Fund in 2022.

IPCC=Intergovernmental Panel on Climate Change. IPBES=Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

recovery. Since the start of the COVID-19 pandemic, WHO has worked with the rest of the Quadripartite alliance (the World Organization for Animal Health, the UN Food and Agriculture Organization, and UNEP) on pandemic prevention through the One Health approach (eg, through the One Health High-Level Expert Panel [OHHLEP] and the One Health Joint Plan of Action).¹⁶ Similarly, several UN bodies have a unique mandate related to pandemic response and recovery—eg, the Joint UN Programme on HIV/AIDS (UNAIDS), the only UN programme dedicated to a specific pandemic, and the UN Development Programme, which led the UN's socioeconomic response to the COVID-19 pandemic.¹⁷ Notably, the UN Development Programme also oversees progress towards Sustainable Development Goals, many of which (eg, eliminating poverty, improving sanitation, protecting biodiversity, stopping climate change, and achieving gender equality) have important co-benefits for the reduction of pandemic risk. Other agencies with an important stake in pandemic response and recovery include the Office for Disaster

Risk Reduction and the Office for the Coordination of Humanitarian Affairs.

Relationship with international law

The arrangement between the Rio Conventions and existing science-policy bodies (ie, between the UNFCCC and IPCC and between the Convention on Biological Diversity and IPBES) allows the Conference of Parties to receive reports and for countries to use reports as evidence in negotiations. However, the arrangement does not include a direct role for science-policy bodies in the negotiations themselves, except as observers. An IPP could have a similar standing relationship with the Conference of Parties of the Pandemic Agreement, as an observer and source of evidence. An IPP could also support work under existing international agreements. For example, the 2024 amendments to the International Health Regulations (4th edition) established a new States Parties Committee tasked with promoting and supporting learning and exchange of best practices among States Parties, with a subcommittee for technical advice. An

IPP could readily feed into this mechanism, particularly by following the policy-relevant approach but not the policy-prescriptive approach (discussed further in the following sections), given the committee's limitation to facilitative and non-punitive approaches.

Relationship with national governments

For both the IPCC and IPBES, national governments are involved at several stages of the assessment process, including agreeing on a report's scope, nominating the majority of authors, making review comments on report chapters, and approving the final language of some report summaries. This degree of involvement sometimes constrains the ambition and language of the reports (especially as they relate to policy) but confers legitimacy to the process and confers weight to reports in global negotiations and national policy making.

As a truly intergovernmental body, an IPP might be more successful in compelling policy action than previous international and independent bodies that were created to address pandemic risk (eg, GPMB), given that States would be active participants in the process, and multilateral bodies could formally receive and welcome reports. However, government involvement can be a double-edged sword. For example, in the processes of both the IPCC and IPBES, the Summary for Policymakers section of a report (which tends to be the most influential section in terms of public awareness and engagement) goes through a line-by-line process of government approval, both leading up to and during plenary sessions. This process can improve both clarity and policy relevance, in addition to engagement with the text, but can also create a staging ground for political conflicts about sensitive findings.¹⁸ The leadership and author nomination processes can also be influenced by political conflicts, discrimination, and inequity in resources among governments (although this influence is partly mitigated by the fact that not all authors need to be nominated by a government). These trade-offs are a persistent (and perhaps, only partly solvable) limitation of intergovernmental bodies.

Scope and structure

The work programme of a scientific synthesis body ultimately affects its potential range of benefits to the world. To create an IPP, scientists and policy makers will need to agree upon the scope, mechanics, and outputs of the scientific assessment process.

Scope of scientific assessment

By and large, the work of notable science-policy bodies in global health has been conducted in response to major public health emergencies and thus shows a recency bias, wherein the drivers, effects, and scientific questions that were most relevant to the last outbreak receive the most focus. For example, the COVID-19 pandemic brought unprecedented attention to the role of anthropogenic environmental change and human-wildlife contact as

drivers of zoonotic disease emergence and the (mostly untapped) potential for ecosystem-based interventions to reduce spillover risk;^{13,19–21} the fragility of pandemic preparedness plans and the disconnect between existing metrics of epidemic preparedness and observed outcomes;^{22–24} the scale of whole-of-society pandemic effects (eg, on educational attainment, livelihoods, and mental health) and the compound risks created by global inequity (including colonialism, racism, gender inequality, and poverty) and policy failures (particularly in relation to inequitable access to medical countermeasures); and the challenge of credible risk assessment and communication related to biosafety and biosecurity.

However, other outbreaks point to other important areas for synthesis. For example, the HIV/AIDS pandemic, the Zika virus epidemic in the Americas, and both the clade I and II global mpox epidemics highlight many of the same topics as COVID-19, but also underscore the relevance of discrimination and sexual and reproductive health and the risk that the next pandemic pathogen could be sexually transmitted.²⁵ Similarly, influenza A virus has caused more modern pandemics (including the deadliest) than any other pathogen; the 1918, 1957, 1968, and 2009 influenza pandemics all highlight the unique threat posed by this virus and the challenge of feeding the world while reducing pandemic risks related to animal agriculture.²⁰

An IPP has the unique opportunity to look past any one outbreak and conduct a truly comprehensive assessment of pandemic risks and solutions, including assessing present and future pandemic risks and associated impacts, including under future scenarios for planetary change; synthesising evidence on the contributions of epidemiological, ecological, economic, social, legal, and political risk factors; and assessing evidence in support of potential levers for intervention in each of those domains (panel 3). Importantly, the scope of interventions considered must include prevention, preparedness, and response; governments cannot manage pandemic risks without all three approaches.

Policy relevance and prescriptiveness

Both IPCC and IPBES reports traditionally walk the tight-rope of being policy relevant but not policy prescriptive. This boundary is both a political reality of the government endorsement process and a safeguard that frames the scientific process as independent and apolitical (for better or for worse).²⁶ Over time, both IPCC and IPBES have managed to issue bolder, evidence-based warnings about the urgency of rapid policy action and about the scope of societal transformation that will be necessary to achieve a sustainable and liveable future for all,^{27–29} without measurably losing public or policy maker confidence as a result. However, IPCC and IPBES reports are still understood to follow the convention of avoiding prescriptiveness,³⁰ and neither body can recommend specific actions to specific governments.

In both the UNFCCC and the Convention on Biological Diversity, the role of prescribing policy has been assigned to a separate subsidiary body for scientific and technical

Panel 3: Major open questions in pandemic research and risk assessment

The COVID-19 pandemic has been an unprecedented chance for hypothesis testing and scientific synthesis, but has also highlighted several areas of ongoing scientific confusion or disagreement. An Intergovernmental Panel on Pandemics could critically evaluate the balance of evidence related to the following (non-exhaustive) list of important questions:

- Which pathogen species and lineages pose the greatest risk of pandemic emergence? For high-risk pathogens, how frequently do low-probability, high-impact events such as global epidemics occur? What are the greatest points of uncertainty in this risk assessment?
- What is the contribution of agriculture, climate change, biodiversity loss, habitat loss, wildlife trade, and invasive species to pandemic risk? What effects have related national policies and international agreements had on the reduction of pandemic risk? How will risks change under future scenarios for socioeconomic development and planetary transformation?
- How does social inequality contribute to pandemic outcomes? Which populations are at the greatest risk from future pandemics? What predicts or enables community resilience?
- Which emerging technologies could be most transformative for countermeasure development? What is the return-on-investment of countermeasure development and stockpiling? What are the epidemiological and economic consequences of inequitable access to countermeasures? Which proposed solutions would be most impactful?
- Which non-pharmaceutical interventions achieve the greatest reduction in pathogen transmission? How do pathogen transmission mode and other characteristics relate to optimal intervention strategies? What communication strategies lead to the greatest changes in behaviour?
- What are the net economic effects of restrictive public health measures, accounting for trade-offs among loss of life, disability, burden on health systems, and whole-of-society effects (eg, loss of educational attainment)? What are the broader impacts (eg, on mental health, gender equality, and other areas related to human rights)?
- Which communication strategies best combat public health misinformation and disinformation? Which strategies could rebuild long-term trust in public health agencies and organisations?
- What are the long-term prospects for the elimination of pandemic pathogens (eg, HIV, SARS-CoV-2, or Disease X), conditional on future social, economic, and technological change(s)?

advice, which serves as a platform for continued negotiations between governments, but has substantially less scientific engagement and nearly zero public-facing visibility, being open only to registered observer organisations and governments. Early drafts of the Pandemic Agreement would have established a potentially similar panel of experts as a subsidiary body of the Conference of Parties, with the mandate to provide “information, science-based and other technical advice”, but this language was reduced over several negotiating sessions and eventually removed.

Global health would benefit from a scientific body with the same level of global public trust as the IPCC. However, following the same blueprint for apolitical consensus building as the IPCC and IPBES might or might not produce the same kind of legitimacy, particularly given the public outrage about the political failures that dominated the response to the COVID-19 pandemic. Furthermore, if an IPP is truly intergovernmental, states might be unwilling to break from precedent and create a scientific body with the ability to challenge their decisions.

Process of scientific assessment

The IPCC and IPBES are tasked with evidence synthesis but not with evidence production (although some of the work conducted by Task Forces arguably blurs this distinction). However, their assessment processes and products act as priority-setting engines for the efforts of the broader scientific community. Report contributors also frequently draw on their experiences, in addition to their

global network of co-authors, to develop their own peer-reviewed publications that fill important knowledge gaps, synthesise available evidence, or make methodological recommendations to the broader field. An IPP will similarly help to set the agenda for future pandemic research (and funding) and stimulate integrative research across disciplines, both during crises and ‘peace time’ between major public health emergencies.

An IPP will face important decisions about how to navigate the high volume of relevant peer-reviewed literature, particularly in response to the COVID-19 pandemic, a considerable amount of which is of poor quality, and some of which contains misinformation or active disinformation. IPCC assessments have begun to incorporate work that uses machine learning-assisted literature annotation to identify the distribution of evidence and research effort and roughly summarise findings.^{31,32} These tools are promising in a restricted capacity but cannot replace expert judgement about the quality of evidence, and, even when handled carefully, the introduction of such tools could reduce the scientific rigour and reliability of recommendations, posing a potential risk to clinical medicine and public policy.

Reports and other outputs

One of the greatest points of difference between the IPCC and IPBES has been the level of priority given to the primary assessment report, which is usually slow to produce but authoritative and effective, versus more rapidly produced, topic-specific content. The IPCC assessment

cycle revolves around the four-part assessment report, with three working group reports (focused on climate science; climate change impacts and adaptation; and climate change mitigation) and a synthesis report. In each cycle, one or more special reports are also produced on cross-cutting topics (eg, the highly impactful Special Report on Global Warming of 1.5°C). IPBES has so far produced a global assessment report, four regional assessment reports on biodiversity and ecosystem services, and seven assessments on specific topics or methodologies (eg, the Assessment Report on Land Degradation and Restoration or the Assessment Report on Invasive Alien Species and their Control). Both bodies can also produce workshop reports (eg, the IPBES Workshop Report on Biodiversity and Pandemics, or the Scientific Outcome of the IPBES-IPCC Co-Sponsored Workshop on Biodiversity and Climate Change), which are assembled on a faster timescale because of a narrower scope and a less intensive evidence-review process; notably, workshop report synopses are not subject to approval (but are also not endorsed) by governments.

For an IPP, assessment reports could be split into working groups along organic lines (eg, drivers of disease emergence and upstream pandemic prevention; outbreak preparedness and downstream pandemic prevention; and pandemic impacts, response, and recovery), with substantial literature to synthesise under each umbrella. Alternatively, integration across these areas could help governments to adopt comprehensive reforms and ensure that no approach is secondary to another. Special reports could address cross-cutting problems (eg, barriers to equitable access to medical countermeasures and their epidemiological consequences), and workshop reports could allow for rapid assessment on urgent issues (eg, H5N1 avian influenza) or areas of synergy with the IPCC and IPBES communities (eg, zoonotics).

Process and operations

IPCC and IPBES reports capture the collective expertise of hundreds or thousands of contributors from around the world, who spend years researching, drafting, and consensus building. This process is slow and sometimes expensive and does not always facilitate equitable participation and representation.

Equity

An IPP could be more representative and diverse than smaller, less-transparent expert advisory groups in global health, which often fail to achieve equitable representation across gender, geography, or expertise; for example, 85% of ad hoc advisory bodies created to respond to the COVID-19 pandemic consisted of a majority of men.³³ Equity has been an express objective in the processes of both IPCC and IPBES, but both have only been partly successful.^{34,35}

A notable limitation of the IPCC and IPBES models is that authorship is traditionally an uncompensated volunteer position. This arrangement substantially reduces the

operating cost of these bodies and protects against (real and perceived) conflicts of interest but requires a commitment of unpaid time and effort that is often prohibitive, especially for early-career researchers and scientists based in low-income and middle-income countries. Many governments also have limited capacity or interest to put experts forth for nominations, creating an additional barrier to participation. An IPP could be more ambitious than its predecessors but, at a minimum, should be created with concrete plans to support more participation from low-income and middle-income countries. Potential solutions could include grants to provide partial salary coverage; travel support for meetings (eg, the IPBES process recruits a cohort of unpaid early-career Fellows, and Global South-based Fellows receive travel support); and a system to provide contributors with access to paywalled peer-reviewed literature.

Timelines

Scientific synthesis bodies face a trade-off between comprehensiveness and timeliness. The IPCC's 5-to-7-year assessment cycles are thorough but slow, particularly in comparison to the exponential growth of climate change-related research. As a result, the volume of literature published during each cycle is becoming progressively harder to synthesise and summarise, and the contents of any given assessment report are also becoming obsolete more quickly. The 3-year timeline of IPCC special reports, the similar timescale on which IPBES produces its more targeted reports, and the fast turnaround of IPBES and IPCC workshop reports are all substantially faster, although this is sometimes at the expense of perceived significance and the attention of the public and policy makers on the findings.

An IPP will face similar trade-offs between speed and impact. Any near-term publications could disappear into the tidal wave of post-COVID-19 pandemic reports,⁵ making many of the same recommendations with minimal advantage on credibility or reach (especially if the IPP reports do not have government involvement and endorsement). However, if an IPP follows the IPCC model for the assessment process, the first report might not be published until the late 2030s. The world cannot afford to wait this long for action on pandemic risk reduction. One solution would be to operate on multiple timescales at once, with a short-turnaround process to produce initial landscaping assessments early in the first assessment cycle. An IPP could also explicitly work in tandem with existing advisory bodies that operate on faster timescales; for example, WHO technical advisory groups could curate living reviews that capture new evidence on issues raised by IPP assessments, which would, in turn, support the eventual revision of IPP report findings related to these topics.

Financing

Multilateral investment is a prerequisite for a Secretariat, technical staff and bodies (eg, IPCC Technical Support Units), meetings, and numerous other sources of operating

costs. The operating budgets of both the IPCC and IPBES are on the order of US\$7 million per year each and rely entirely on voluntary contributions from governments, international organisations, and, in the case of IPBES, philanthropy and the private sector. This financing supports the core programmes of both the organisations but is still restrictive, especially in terms of the support provided for equitable participation.

A comparable budget for an IPP would be equivalent to roughly 0.1% of the annual budget of WHO prior to US withdrawal; philanthropic organisations could also play a substantial role in financing the IPP, as they do for IPBES. An IPP could also draw on recent investments in pandemic prevention and preparedness. For example, although the Pandemic Fund's primary focus is on financing capacity-building projects, an amendment to the Fund's governance framework could allow the Fund to support scientific synthesis and translation to inform policy. In turn, an IPP would be able to support the Fund regarding decisions about the allocation of project financing on the basis of scientific assessment of pandemic risks and potential project impact. This approach would align with the World Bank's broader investments in research synthesis to inform policy via the Development Research Group and other internal research functions. Whatever the source, financing for an IPP must be transparent, equitable, accountable, and participatory.

Several paths to a common goal

To establish an IPP, national governments and international organisations will need to navigate difficult decisions about scope, governance, and operations. Existing organisations with a relevant mandate, such as GPMB, could serve as a forum for transparent conversations and consensus building and can apply their collective expertise (and existing mandate for policy recommendations) to help the global community to navigate these decisions. Learning lessons from previous organisations, involving experts from the IPCC and IPBES leadership, and engaging with a substantial body of critical scholarship on the strengths and weaknesses of those bodies^{36,37} will also help to build a stronger organisation from its inception. This process will almost certainly take multiple years; if the world wants a new scientific synthesis body, it needs to act quickly to begin the slow and arduous process of its creation, or the next pandemic might arrive first.

Contributors

CJC and ALP conceived the idea for the project and secured funding; CJC, CHT, TEL, KZ, and ALP organised the workshop. CJC, CHT, BO, and ALP wrote the first draft; CJC, CHT, BO, SB, SED, AD-N, VYF, JDK, RGK, LOG, DTSH, MK, TEL, CGdN, ZO, LMP, BR, MS, KZ, CZ-T, and ALP contributed to writing and approved the final manuscript.

Declaration of interests

CJC, CHT, AD-N, and LMP have been involved in some capacity in the Intergovernmental Panel on Climate Change, and CJC, CHT, DTSH, RGK, CGdN, LMP, and CZ-T have been involved in some capacity in the

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. CJC has received relevant funding support from the Rockefeller Foundation, the Coalition for Epidemic Preparedness Innovations (CEPI), and PAX Sapiens and has been a consultant for the US Department of State. BO has received relevant funding support from the UN Foundation. SB has received funding from CEPI and the Merck Investigator Studies Program. CGdN and DTSH are current members and MK is a former member of the One Health High-Level Expert Panel (OHHLEP) and they provide advice to the Quadripartite (FAO, UNEP, WOA, and WHO) alliance under the OHHLEP terms of reference; however, the authors do not speak on behalf of, or represent, the Quadripartite, individually or collectively. MK has received relevant funding on pandemic preparedness research from the EU and national funders. LMP, in her role as an Earth Commissioner, has received funding from Future Earth and, as an IPBES Task Force member, has received benefits from the IPBES Fund for scholars from the Global South to enable her to travel to IPBES meetings. KZ is a consultant for CEPI and was a representative of an Annex E Relevant Stakeholder (Johns Hopkins Center for Health Security) in negotiations for the Pandemic Agreement. ALP is a representative of an Annex E Relevant Stakeholder (Johns Hopkins Center for Health Security) in negotiations for the Pandemic Agreement and amendments to the International Health Regulations and has advised countries on the negotiations; in addition, ALP has contributed to reports by the Independent Panel on Pandemic Preparedness and Response. SED, VYF, JDK, LOG, TEL, ZO, BR, and MS declare no competing interests.

Acknowledgments

This work was made possible by the generous support from the Carnegie Corporation of New York, which supported our virtual workshop on The Case for an Intergovernmental Panel on Pandemics on April 20, 2023. We also thank the other workshop participants, including Peter Figueroa, Christine Johnson, Rebecca Katz, and Minal Pathak, for a lively discussion and their helpful comments, which shaped this manuscript. This work has also benefited greatly from a workshop on Pandemic Risk Assessment and its Intersection with Climate Change: Needs, Opportunities, and Design Considerations organised by Fundação Oswaldo Cruz, the National Academy of Medicine, the Global Preparedness Monitoring Board, and the UN Foundation and held in Rio de Janeiro, Brazil, on Oct 28–29, 2024. We also thank the participants in that workshop for the lively discussions and helpful comments. CJC thanks Anna Bezruki for additional feedback and helpful conversations. CJC, KZ, and ALP were supported by the Carnegie Corporation of New York and the National Science Foundation (NSF 2314520). CJC, TEL, and ZO were supported by the National Science Foundation (NSF 2515340). CHT was supported by the Future Leaders Programme at the University of Cape Town. SED was supported by the Australian Research Council (DP220100587). VYF was supported by the Rockefeller Foundation (2022 GLO 002) and the Bill & Melinda Gates Foundation (OPP1202541, INV-003239). DTSH was supported by Bryce Carmine and Anne Carmine (née Percival) through the Massey University Foundation (RM25412). The views expressed in this paper are those of the authors alone and should not be attributed to their respective organisations.

References

- 1 Ågerstrand M, Arinaitwe K, Backhaus T, et al. Key principles for the intergovernmental science-policy panel on chemicals and waste. *Environ Sci Technol* 2023; **57**: 2205–08.
- 2 Woolhouse M, Farrar J. Policy: an intergovernmental panel on antimicrobial resistance. *Nature* 2014; **509**: 555–57.
- 3 Rochford C, Sridhar D, Woods N, et al. Global governance of antimicrobial resistance. *Lancet* 2018; **391**: 1976–78.
- 4 Ruckert A, Hoffman SJ, Bishop J, Van Katwyk SR, Fafard P, Poirier MJ. Intergovernmental or fully independent? Designing a scientific panel on evidence for action against antimicrobial resistance. *PLoS Glob Public Health* 2025; **5**: e0004039.
- 5 Singh S, McNab C, Olson RM, et al. How an outbreak became a pandemic: a chronological analysis of crucial junctures and international obligations in the early months of the COVID-19 pandemic. *Lancet* 2021; **398**: 2109–24.

- 6 Delfraissy J, Horgan M, Mølbak K, et al. Scientific advisory councils in the COVID-19 response. *Lancet* 2024; **403**: 510–12.
- 7 Chyba CF, Cassel CK, Graham SL, et al. Create a COVID-19 commission. *Science* 2021; **374**: 932–35.
- 8 Nature. Will the world ever see another IPCC-style body? *Nature* 2023; **615**: 7–8.
- 9 The G20 high level independent panel on financing the global commons for pandemic preparedness and response. A global deal for our pandemic age. June, 2021. <https://cms.wellcome.org/sites/default/files/2025-04/G20-HLIP-Report.pdf> (accessed June 10, 2025).
- 10 IPBES. Workshop Report on Biodiversity and Pandemics of the Intergovernmental Platform on Biodiversity and Ecosystem Services. In: Daszak P, Amuasi J, das Neves CG, et al., eds. Bonn, Germany: IPBES secretariat, 2020. <https://doi.org/10.5281/zenodo.4147317>; <https://zenodo.org/records/4158500>.
- 11 Oppenheim B, Brown K, Waldman R. The world needs an intergovernmental panel on pandemic risk. *Nat Med* 2021; **27**: 934.
- 12 Phelan AL, Carlson CJ. A treaty to break the pandemic cycle. *Science* 2022; **377**: 475–77.
- 13 Plowright RK, Ahmed AN, Coulson T, et al. Ecological countermeasures to prevent pathogen spillover and subsequent pandemics. *Nat Commun* 2024; **15**: 2577.
- 14 Vinales J, Moon S, Le Moli G, Burci G. A global pandemic treaty should aim for deep prevention. *Lancet* 2021; **397**: 1791–92.
- 15 Hobeika A, Stauffer MH, Dub T, et al. The values and risks of an Intergovernmental Panel for One Health to strengthen pandemic prevention, preparedness, and response. *Lancet Glob Health* 2023; **11**: e1301–07.
- 16 One Health High-Level Expert Panel. One Health action for health security and equity. *Lancet* 2023; **401**: 530–33.
- 17 UNDP. United Nations Development Programme Strategic Plan 2022–2025. Sept 2, 2021. <https://www.undp.org/publications/undp-strategic-plan-2022-2025> (accessed June 10, 2025).
- 18 Mach KJ, Freeman PT, Mastrandrea MD, Field CB. A multistage crucible of revision and approval shapes IPCC policymaker summaries. *Sci Adv* 2016; **2**: e1600421.
- 19 Gibb R, Franklinos LH, Redding DW, Jones KE. Ecosystem perspectives are needed to manage zoonotic risks in a changing climate. *BMJ* 2020; **371**: m3389.
- 20 Carlson CJ, Brookson CB, Becker DJ, et al. Pathogens and planetary change. *Nat Rev Biodivers* 2025; **1**: 32–49.
- 21 One Health High-Level Expert Panel (OHHLEP), Markotter W, Mettenleiter TC, et al. Prevention of zoonotic spillover: from relying on response to reducing the risk at source. *PLoS Pathog* 2023; **19**: e1011504.
- 22 Stoto MA, Nelson CD, Kraemer JD. Does it matter that standard preparedness indices did not predict COVID-19 outcomes? *Global Health* 2023; **19**: 72.
- 23 Ledesma JR, Papanicolas I, Stoto MA, et al. Pandemic preparedness improves national-level SARS-CoV-2 infection and mortality data completeness: a cross-country ecologic analysis. *Popul Health Metr* 2024; **22**: 12.
- 24 Dowell SF, Wang H, Blazes D. Better pandemic preparedness does correlate with lower COVID-19 mortality. *Gates Open Res* 2022; published online July 5. <https://doi.org/10.12688/gatesopenres.13649.1> (preprint).
- 25 Pley C, Jung L, Nurdin N, et al. Duration of viral persistence in human semen after acute viral infection: a systematic review. *Lancet Microbe* 2025; **6**: 101013.
- 26 Fuentes A. Scientists as political advocates. *Science* 2024; **386**: eadt7194.
- 27 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Summary for policymakers of the global assessment report on biodiversity and ecosystem services. 2019. https://files.ipbes.net/ipbes-web-prod-public-files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf (accessed June 10, 2025).
- 28 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Methodological assessment of the diverse values and valuation of nature of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. April 26, 2022. <https://zenodo.org/records/7687931> (accessed June 10, 2025).
- 29 Intergovernmental Panel on Climate Change. Climate Change 2023: synthesis report. 2023. https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf (accessed June 10, 2025).
- 30 Pollitt H, Mercure J, Barker T, Salas P, Scricciu S. The role of the IPCC in assessing actionable evidence for climate policymaking. *npj Clim Action* 2024; **3**: 11.
- 31 Berrang-Ford L, Siders AR, Lesnikowski A, et al. A systematic global stocktake of evidence on human adaptation to climate change. *Nat Clim Change* 2021; **11**: 989–1000.
- 32 Callaghan M, Schleussner C, Nath S, et al. Machine-learning-based evidence and attribution mapping of 100,000 climate impact studies. *Nat Clim Change* 2021; **11**: 966–72.
- 33 van Daalen KR, Bajnoczki C, Chowdhury M, et al. Symptoms of a broken system: the gender gaps in COVID-19 decision-making. *BMJ Glob Health* 2020; **5**: e003549.
- 34 Montana J, Borie M. IPBES and biodiversity expertise: regional, gender, and disciplinary balance in the composition of the interim and 2015 multidisciplinary expert panel. *Conserv Lett* 2016; **9**: 138–42.
- 35 Gay-Antaki M, Liverman D. Climate for women in climate science: women scientists and the Intergovernmental Panel on Climate Change. *Proc Natl Acad Sci U S A* 2018; **115**: 2060–65.
- 36 De Pryck K, Hulme M. A critical assessment of the Intergovernmental Panel on Climate Change. Cambridge University Press, 2022.
- 37 Slade R, Pathak M, Connors S, Tignor M, Okem AE, Leprince-Ringuet N. Back to basics for the IPCC: applying lessons from AR6 to the Seventh Assessment Cycle. *npj Clim Action* 2024; **3**: 48.

© 2025 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).