Designing an Independent Panel on Evidence for Action on Antimicrobial Resistance: Lessons from Selected Bodies in Global Health, Climate Change and Biodiversity

Viviana Munoz Tellez, Francesca Chiara

I. Introduction

The United Nations General Assembly (UNGA) invited the Quatripartide organizations, namely the UN World Health Organization (WHO), the UN Food and Agriculture Organization (FAO), the UN Environment Programme (UNEP), and the World Animal Health Organization (WOAH), to establish an Independent Panel on Evidence for Action on Antimicrobial Resistance (IPEA) in 2025.

This paper advances a framework for thinking through how to design an IPEA, informed by a review of selected bodies that operate at the interface of science and policy in the areas of human health, climate change, environment, and biodiversity. The aim of the review is to draw lessons and insights from the operation of these bodies to help inform the design and operation of the emerging Independent Panel on Evidence for Action (IPEA) on antimicrobial resistance (AMR).

We purposely exclude from the scope of this review all international scientific advisory bodies established as part of a legally binding international instrument, with legal standing, irrespective of their degree of independence in their operation and scientific assessments. Unlike those bodies, the mandate for establishing the IPEA comes directly from a UNGA recommendation, which designates the Quatripartide organizations as executing agencies. Moreover, at present the IPEA cannot establish linkages with any international legally binding instrument specifically focused on AMR, as none currently exists. Accordingly, we consider that bodies that stem from legally binding international instruments hold limited relevance for the IPEA. Examples of these bodies include the Scientific Assessment Panel under the Montreal Protocol, the Scientific Advisory Committee of the Stockholm Convention on Persistent Organic Pollutants, the Scientific and Technical Body (STB) under the Biodiversity Beyond National Jurisdiction (BBNJ) Treaty, the Emergency Committee and IHR Review Committee under the International Health Regulations, and the scientific expert groups established under the WHO Framework Convention on Tobacco Control (FCTC).

We also exclude from the review, drawing on the UNGA mandate for the IPEA, international independent scientific organizations established independently of governments or IGOs, such as the International Science Council (ISC) and the World Climate Research Programme (WCRP) and Cochrane. Finally, we also exclude any intergovernmental scientific and technical policy body whose outputs do not include independent scientific syntheses or assessments, and is composed of

government representatives, such as the FAO Commission on Genetic Resources for Food and Agriculture (CGRFA).

This review includes selected international scientific and technical advisory bodies that aim at ensuring scientific independence in their work. Those included are the following:

1. Intergovernmental Panel on Climate Change (IPCC)
2. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)
3. Independent Panel for Pandemic Preparedness and Response (IPPPR)
4. Independent Monitoring Board (IMB) for Polio Eradication
5. Expert scientific, technical and advisory panels of the Quatripartide organizations, such as the WHO Strategic and Technical Advisory Group for Antimicrobial resistance (STAG-AMR), the WOAH Working Group on AMR and the and the Joint FAO/WHO Expert Meetings on Microbiological Risk Assessment (JEMRA).

The Intergovernmental Panel on Climate Change (IPCC) is included in the review, despite its formal connection to the United Nations Framework Convention on Climate Change (UNFCCC), a legally binding international instrument. The rationale for this inclusion is twofold: first, the IPCC's establishment predates the negotiation and adoption of the UNFCCC; and second, the UNFCCC's explicit referencing of the IPCC and assignment of specific roles to it demonstrates the Panel's substantial policy influence. This relationship offers valuable insights relevant to the design of the IPEA.

II. Background

The Interagency Coordination Group on AMR (IACG) in its report of 2019 to the UN Secretary General recommended the establishment of an Independent Panel for Antimicrobial Resistance (IPEA), emphasizing the need for independent scientific evidence to guide global AMR responses (1). A consultation process was advanced by the WHO in 2020 on proposed terms of reference for the IPEA (2) but this process failed to reach any agreement and was abandoned. The UNGA political declaration resolution on AMR of September 2024 (4) inviting the Quatripartide organizations to establish the IPEA, also reaffirmed by the 4th AMR Ministerial Meeting in October 2024 (5) now provides a fresh opportunity to advance the IPEA, while incorporating lessons from the earlier attempt. The UNGA recommends the establishment of the panel to facilitate the generation and use of multisectoral, scientific evidence to support Member States in efforts to tackle antimicrobial resistance, making use of existing resources (which can be interpreted as prioritizing and efficiently utilizing resources that are already available while new resources may be necessary) and avoiding duplication of on-going efforts. It is explicitly mandated that the panel is established after an open and transparent consultation with all Member States on its composition, mandate, scope, and deliverables.

In March 2025, the Quadripartite organizations presented the draft roadmap of the process to realize the panel (27). The first step will be a landscape analysis from January to April 2025 to assess existing AMR research and knowledge gaps based on the work delivered by other existing

scientific panels on AMR. At the same time, a stakeholder engagement and consultation process will take place on first draft of documents for consultations, to involve diverse stakeholders including from low and middle income countries (LMICs) in shaping the panel. Between February and August 2025, written inputs will be sought from stakeholders. From May to September 2025, the focus will be on developing guidance and operational documents, establishing procedures, and defining methodological and policy recommendation frameworks. Between May and September 2025, there will be final consultations, culminating with the launch of the panel and the first meeting of the governing body. Resource mobilization efforts will begin in July and continue until December 2025 to ensure sustainable funding for the panel.

The requirement of « open and transparent consultation with all Member States » suggests that all the Quadripartite organizations should involve their member states in the process, although there is no specification regarding how formal this process should be. The inputs from member states into the consultation process now organized by the Quadripartite will provide more information on their expectations. It appears from the roadmap plan and timeline at the draft documents for the proposed panel would not be submitted to the Assemblies of the Quatripartide organizations for their information or for their approval, prior to the establishment of the panel. The UNGA call for the establishment of the panel in 2025 creates a time constraint for formal review of the proposal by each of the assemblies of the Quadripartite organizations, which are scheduled to meet in May (WHO and WOAH), June (FAO) and December (UNEP).

Clarifying how member states of the Quatripartide organizations, and potentially other stakeholders, will be consulted to guide the panel's establishment is essential to uphold the integrity of the science-policy interface on AMR that the UNGA wants the panel to strengthen. As an example, in the context of UNEP, the assembly decision to establish a science-policy panel to contribute further to the sound management of chemicals and waste and prevent pollution was followed with a process of convening an ad hoc open-ended working group of governments for two years (still ongoing) to prepare proposals for the science-policy panel, to be followed by the convening of an intergovernmental meeting for the purpose of considering the establishment of a science-policy panel (28, 29).

III. Mandate of the independent Panel

The intended aim of the panel was clearly defined by the UNGA: to facilitate the generation and use of multisectoral, scientific evidence to support Member States in efforts to tackle antimicrobial resistance. How the panel will do this, strengthening the science-policy interface on AMR, will be defined by the mandate, scope and deliverables that are agreed for the panel.

The mandate for the panel will serve as the foundational element that will be critical for defining the details of its composition, scope, deliverables, governance structure, independence, operational procedures, and financial or other resource requirements.

The IACG envisioned an IPEA panel in a One Health context that would be convened by the UN Secretary-General, in close collaboration with the FAO, WHO, WOAH, UNEP and other international organizations, to monitor and provide member States with regular reports on the

science and evidence related to AMR, its impacts and future risks, and recommend options for adaptation and mitigation (1). The UNGA offers less guidance for the mandate and deliverables.

The mandate for the panel should articulate precisely how it will support strengthening evidence-based decision-making. The panel may focus on compiling, assessing, and synthesizing scientific evidence, as is the focus of the IPCC. For AMR, it is essential that the panel works across different sectors (such as healthcare, veterinary care, agriculture, and environment) and preferably is informed by various disciplines (i.e. microbiology, epidemiology, economics and other social sciences) and methodologies. This mandate would already be extensive and potentially requiring significant resources for implementation.

That said, the panel could additionally include a more directly policy-relevant mandate. This could include recommendations for policy action on AMR based on the assessed evidence-base and that may be context specific, helping policy makers to understand potential trade-offs (such as economic impacts versus public health and animal health benefits) and to leverage co-benefits of policy interventions (such as prevention measures, immunization, water/sanitation/hygiene, waste-water management). However, this work risks overlapping with the mandate of the Quadripartite organizations and other IGOs and entities working on AMR, potentially duplicating existing work. Similarly, the panel could support capacity building, as in the case of IPBES,which includes capacity building as one of the key pillars of its work.

Another approach would be to define a specific, focused mandate for the panel for a limited time period. This initial mandate could be reviewed and expanded in the future. For example, the initial proposed terms of reference for the IPEA in 2020 suggested that the mandate be reviewed every 5 years (2). As opportunities arise, member states and the Quadripartite organizations could suggest ways to further leverage the panel.

The Panels' mandate should also define a unique and complementary role it can play in the AMR evidence landscape, given the existing work and guidance of the Quadripartite organizations and other IGOs and their expert advisory bodies, and regional/national bodies. A description of some of these bodies is provided in the annex.

Some issues that remain underexplored in the work of existing bodies on science-policy interface on AMR and could be part of the scope of the panel at the interface of science and policy include:

1. Integration of One Health Approach:
    - Despite the focus of AMR stakeholders on the One Health framework, there is still a lack of cohesive research agendas (6). Two separate AMR research agendas, in human health and One Health, were published by the Quadripartite in 2023 (7,8), which raises concerns on coherence in implementation and whether there may be more competition than collaboration including to attract research funding. Developing integrated strategies is essential to address AMR effectively across all sectors and IPEA could have a role in finally creating a unified, cross-sectoral analysis in particular of AMR dynamics and how human mobility,

animals, microorganisms, water and pollutants contribute to the emergence and dissemination of AMR.

2. Strategies for AMR Mitigation:
    - There is a need for clarity on the most efficient pathways to address AMR. Identifying and prioritizing interventions and outcomes that provide the highest impact relative to their cost and resources available can guide policymakers in allocating limited resources effectively (9). Negative and positive outcomes are still not systematically captured, and the panel include developing methodologies to evaluate the effectiveness of various AMR interventions across different contexts, evaluating what has worked, for whom, and under which conditions. This approach could help in adapting successful strategies to diverse settings and communities.
3. Accountability for action on AMR:
    - Tracking global progress in combating AMR against agreed international targets is an area that needs strengthening. There could be a role for the panel in this regard. Increasingly, National Action Plans on AMR are including monitoring and evaluation frameworks (M&A). Moreover, the WHO European regional office is developing a monitoring, evaluation, and accountability framework, the AMR accountability index (10). The panel could have a role in supporting the M&A of NAPs, and the framework for a global AMR accountability index based on country/region specific targets.

IV. An independent panel

Another crucial design element requiring definition is the nature of the panel's 'independence,' which is highlighted in its proposed title: 'Independent Panel on Evidence for Action'. While there can be different interpretations of the independence requirement, at minimum it should ensure the scientific objectivity of the panel's work through freedom from undue influence such as political pressure, lobbying from special interest groups, or financial conflicts of interest.

An analysis of models of panels has also been conducted that classifies these by to their degree of relationship to government involvement, in particular in the panels' governance structure, as presented in Table 1 below.

Table 1. Comparisons of Models for Independent Assessments

STRUCTURE	GOVERNANCE	PROS	CONS
Intergovernmental IPCC IPBES	• Operates independently from the organization establishing it • Governments are part of the governing body of the panel, approve outputs such as reports.	• **Political Buy-In:** Participation by member states can foster global consensus. • **Resource Mobilization:** Governments are more likely to allocate resources. • **Policy Integration:** Recommendations are more likely to influence national policies and treaties.	• **Slow Decision Making:** Longer processes for consensus building,,delay due to national priorities overriding global priorities. • **Limited independence:** to dissent from governments or international bodies if

	• Governments, IGOs can nominate experts for the panel and are involved in the selection (IPCC), in addition stakeholders can nominate experts (IPBES) • IGOs and governments may provide some level of administrative and budgetary support for the operation.		outputs require review or approval.
Highly - Independent IPPPR	• Operates independently from the organization establishing it • Governments are not part of the governing body. • WHO Director General appointed co-chairs, co-chairs selected other members • Set out own work plan and procedures • Separate Secretariat, not provided by an IGO • Budgetary support from IGO	• **Neutral:** providing unbiased evaluations and recommendations that can openly critique governments and organizations when warranted by evidence • **Broad Stakeholder Engagement:** integrates diverse perspectives, including academia, civil society, and the private sector	• **Limited Influence:** Without official governmental backing, recommendations may be ignored by policymakers. • **Funding Challenges:** May struggle to secure sustainable financing without formal governmental or organizational support.
Subordinate **Expert, advisory, technical panels to IGO**	• May be a subsidiary body of an IGO, temporary or permanent • May or not operate independently from the IGO establishing it • IGOs may provide budgetary support for the operation	• **Policy relevance:** can be quickly adopted in internal IGO programs and as guidance to member states • **Timing - quick response:** aligned to identified time sensitive need and quick to establish • **Secured funding:** resources are provided by the IGO though participation in such panels is usually not remunerated	• **Potential bia:** favouring alignment to the institutional approach and potential for member state influence • **Limited transparency:** IGO may choose whether to filter reports, adopt the advise or recommendations and whether to make disseminate in the form provided

While insights for the panel can be drawn from this analysis, the fundamental question of independence is first and foremost of ensuring scientific independence and impartiality of the work of the panel for its credibility, while the relationship to governments as to other stakeholders is most relevant for linking the science to policy interface.

Experts (scientists and specialists) must serve in their personal capacity rather than representing their governments or organizations. While it is a choice to define whether governments, IGOs, and diverse stakeholders may or not participate in the nomination and appointment process, what is essential is to set robust safeguards —including transparent selection criteria, balanced representation across disciplines, geographies, and mandatory disclosure of potential conflicts of interest. These measures help ensure scientific independence and credibility of the evidence assessment.

The question of to whom the panel ultimately formally presents its deliverables to, is less critical as a factor of accountability as compared to the involvement of the actor -government, IGO, other stakeholders- in the review or approval of the panel outputs. Review and or approval requirements by governments or IGOs can condition the outputs of the panel, while these can also render the outputs more influential on the governments or IGOs. This is a fine balance that the existing models have tried to address, offering important learning to inform the design of the IPEA panel. The IPCC requires that the summary of the reports that are aimed to inform policy makers are reviewed line by line by the governing body (plenary) in which governments sit. The IPBES, taking lessons from IPCC but also considering the specific needs for informing the scientific-policy interface for biodiversity, maintained the intergovernmental nature of the plenary, but with more flexibility to include other stakeholder inputs and a less strict approval process. The IPPPR to evaluate the preparedness and response to the Covid-19 pandemic only presented its report formally to the WHO member states through the Director General, though the members of the panel disseminated more widely and transparently its findings.

The initial proposed terms of reference for the IPEA in 2020 suggested that the panel should be accountable to the UN Secretary General, considering that this level of accountability would reflect the urgency as well as the complex nature of AMR that reaches beyond the mandate of any one agency of the UN or other international organizations. While it may be the case that if the IPEA would be tasked to present its deliverables to the UN Secretary General, these as a result may have a higher level of visibility and dissemination among multiple IGOs, governments and stakeholders, a separate question is whether a governing body for the IPEA should sit with the UN Secretary General's office. There may be limited feasibility of this proposal as the Quatripartide organizations are tasked with establishing the IPEA, it is worth considering further the merits.

V. Conclusions: Critical questions to resolve for the establishment of the panel

Informed by the experiences of other panels and relevant bodies explored in the annex, the following framework is suggested to help define the critical elements of the IPEA.

ELEMENTS	Questions
Credibility	• Is the mandate of the panel clearly defined? • Have the expected panel deliverables been identified? • What criteria should guide the appointment of panel members? scientific excellence, multi-sectoral, multi-disciplinary, wide geographical representation, different knowledge systems, gender balance • Can the panel maintain objectivity in its work, free from undue influence by governments, IGOs, or special interests? • What are the basic operating procedures of the panel?

	○ Process for consensus-building among panel members on their findings (review/syntheses/assessments of scientific evidence) ○ Process for consensus-building among panel members on developing recommendations (if the panel mandate includes recommendations) • What will be the level of governmental, IGO or stakeholder involvement in reviewing or evaluating the panel's deliverables? • Are the outputs of the panel - syntheses, evidence reviews - freely and publicly available? • Does the panel serve to strengthen capacity in low and middle income countries (LMICs) to develop and use relevant scientific evidence and data on AMR? • Are the deliverables of the panel widely disseminated?
Scientific Integrity	• Do panel members have appropriate scientific expertise? • Are the codes of conduct and ethics to follow, i.e. data management, attribution? • Will agreements/disagreements among the panel in evaluating and synthesizing evidence be documented? • Are panel members required to disclose potential conflict of interests and are there other mechanisms to mitigate potential bias?
Authority / efficiency	• Does the panel provide unique deliverables, as compared to outputs produced by existing bodies and processes, and is not duplicative of other efforts? • To whom is the panel accountable for its outputs? whether the panel reports to its own independent governing body, the IGO(s) establishing the panel, to member states via the IGO(s) or as part of its governing body • Is there demand/interest for the panels' work from the scientific and policy community, IGOs, governments and stakeholders?
Policy Relevance	• How can the panel's deliverables support the mandates of the Global Leaders Group on AMR and the Multistakeholder Platform on AMR? • Is the scope of the panels deliverables limited to reviews, syntheses, and assessments of scientific evidence, or will it also develop specific policy recommendations? • Can the panel undertake policy advocacy based on its recommendations?
Sustainability	• Are the financial and other resources available to ensure the panel can follow the structure and processes proposed to ensure its credibility, scientific integrity, authority and policy relevance of its deliverables, and sustain its operations in time? • Have both costs and benefits been evaluated for different operational models? For example: (1) establishing an independent Secretariat versus using an IGO-provided Secretariat, and (2) funding mechanisms to ensure participation of experts from LMICs whose institutions cannot support their involvement.

Annex. Analysis of Relevant Bodies to Inform the design of the IPEA

1. Intergovernmental Panel on Climate Change (IPCC)

Background

The IPCC was established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) as a United Nations body. Its mission is to provide policymakers with scientific assessments on climate change and strategies for adaptation (14).

The IPCC's organizational framework includes:

- *Plenary*: With representatives from 195 member states that work program and budget.
- *Bureau:* Elected by the Plenary to oversee activities
- *Working Groups and a Task Force*
- *Secretariat:* Located in Geneva to support operations.

It does not conduct original research but synthesizes findings from scientific studies. Experts volunteer their time to review and assess literature and publish reports.

Achievements

- *Reports:* Six assessment reports published.
- *Policy Influencing*: Findings have informed the Paris Agreement and national policies such as Nationally Determined Contributions. The 1.5°C target adopted in the Paris Agreement is largely based on IPCC scientific evidence (15).

Challenges

- *Objectivity and Inclusiviness*: Questions have arisen about potential biases in report content and methodology. Ensuring representation from developing countries remains an issue.
- *Operational Challenges*: Recommendations have been slow to translate into action.
- *Lack of accountability*: There is no mechanism to enforce or track the implementation.
- *Political resistance*: Economic interests, particularly in fossil fuel-reliant countries, have undermined implementation of recommendations.

Relevance for Establishing an Independent AMR Panel

- *Scientific and Policy Integration*: The IPCC demonstrates how multidisciplinary panels can produce evidence-based reports to guide global policy.
- *Global and National Impact*: The IPCC's reports influence both international agreements and national-level actions.

2. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

Establishment and scope

The IPBES was founded in 2012 to bridge the gap between science and policy on biodiversity and ecosystem. IPBES aims to address the global biodiversity crisis by guiding actions to mitigate biodiversity loss and its impacts on ecosystems and societies (17).

IPBES operates through:

- *Plenary*: with representatives from 140+ member states, which approve assessments, work programs, and budgets, elects the Bureau and establishes subsidiary bodies.
- *Bureau:* Oversees administrative functions and ensures equitable geographic representation. It comprises a Chair, four Vice-Chairs, and five additional members.
- *Multidisciplinary Expert Panel (MEP)*: Provides scientific and technical oversight of assessments.
- *Secretariat*: based in Bonn, Germany, it manages daily operations, communication, and logistical support for the Plenary, Bureau, and MEP.

It achieves its mission through four core functions: producing comprehensive reports on biodiversity, ecosystems, and their links to human well-being like the *Global Assessment Report on Biodiversity and Ecosystem Services (2019)*, developing tools and methodologies for integrating biodiversity considerations into policies and programs, identifying research gaps and providing training to enhance participation, particularly from developing countries (18).

Achievements

- *Global Influence**:*** Findings have informed negotiations under the Convention on Biological Diversity (CBD), including the Kunming-Montreal Global Biodiversity Framework (2022).
- *Policy Impact:* Contributed tools and methodologies adopted in global and national biodiversity policies.
- *Public Awareness*: Raised awareness of the critical links between biodiversity, human well-being, and sustainable development.

Challenges

- *Political Resistance:* Some member states hesitate to adopt recommendations that conflict with national priorities.
- *Funding Constraints:* Securing adequate funding remains a persistent issue.
- *Complexity of Biodiversity Issues*: An interdisciplinary collaboration adopting a One Health approach has been challenging to achieve in practice.

Relevance for Establishing an Independent AMR Panel

- *Science-Policy Integration*: IPBES demonstrates the value of bridging scientific evidence with actionable policy, which could be adapted to AMR.
- *Inclusiveness*: Its model of integrating diverse knowledge systems, including local and indigenous perspectives, highlights the importance of equitable representation.
- *Operational Independence*: Despite challenges, its interdisciplinary and collaborative structure offers valuable lessons for designing an AMR focused panel.

3. Independent Panel for Pandemic Preparedness and Response (IPPPR)

Establishment and Scope
The IPPPR was established by the Director General of the WHO in response to the mandate given by the World Health Assembly (WHA) in May 2020 through Resolution WHA73.1 to initiate a stepwise process of impartial, independent and comprehensive evaluation to review experience gained and lessons learned from the WHO coordinated international health response to the COVID-19 pandemic.

Its mandate was to evaluate the pandemic response and recommend strategies to strengthen preparedness, prevention, and response mechanisms for future health emergencies (19). It emphasized the importance of cross-sectoral interventions, aligning with the One Health approach relevant to AMR.

The IPPPR included:

- 2 Co-Chairs plus 13 global experts in public health, economics, international law, and governance, ensuring diverse regional and sectoral representation. The panelists drew from their expertise and experience and did not represent their institutions or governments.
- *An independent Secretariat* that coordinated operations.
- *Financing* from WHO's assessed contributions. It did not accept additional contributions in cash or kind. Panel members made their contributions on a voluntary and non-remunerated basis.

Achievements

- *Key Report*: *"COVID-19: Make it the Last Pandemic"* in May 2021, a review of systemic failures and actionable reforms.
- *Influence on Policy*: With the creation of the Pandemic Fund in 2022, the negotiation of a new internationally legally binding pandemic agreement.
- *Global Coordination:* Emphasized multisectoral approaches, integrating health, economic, and social policies to strengthen pandemic resilience.
- *Awareness and Advocacy*: Elevated the importance of equity and accountability in pandemic preparedness, response mechanisms and access to vaccines.

Challenges

- *Limited implementation:* Many recommendations remain unfulfilled by WHO member States and other stakeholders.
- *Time limited mandate:* The panel had a mandate that was limited to making an assessment and on that basis, advancing recommendations. In time, the relevance of the panel becomes questionable.

Relevance for Establishing an AMR Independent Panel

- *Credibility***:** An IPEA can draw from the IPPPR framework to ensure that it produces work that is considered as unbiased, transparent, and evidence based.
- *Interdisciplinary Focus:* The IPPPR ability to integrate sectors echoes the need for a multisectoral approach to AMR.

- *Equity and Access:* Recommendations on advancing equity including equitable vaccine distribution for future pandemics can guide strategies to ensure equity for addressing AMR, including ensuring equitable access to antimicrobials.
- *Objective scientific analysis:* The IPPPR governance model ensuring the panel members participated independently and carried out rigorous scientific assessment, and supported by an independent Secretariat, may be a blueprint for the IPEA.
- *Funding:* The dedicated financing mechanism for IPPPR from WHO assessed contributions may be a model for ensuring the sustainability of the IPEA.

4. Independent Monitoring Board (IMB) for Polio Eradication

Establishment and Purpose

The IMB was created by the Global Polio Eradication Initiative (GPEI) to independently, from countries and agencies, assess GPEI performance and provide strategic recommendations. Its primary role is to monitor progress toward eradicating polio and identify barriers impeding success (20). It comprises a small team of experts in epidemiology and policy. The IMB's recommendations focus on overcoming challenges specific to each region with country-specific assessments.

Achievements

- *Progress in Eradication and Addressing Barriers*: The IMB typically publishes a yearly report to highlight gaps in vaccine coverage, surveillance, and country's operational efficiency in preventing and controlling polio cases. It also provides in its reports tailored recommendations to countries, agencies (such as WHO) and other interested stakeholders (such as Gavi).

Challenges

- *Sustainability:* Ensuring sustained funding and political commitment is critical.

Relevance for Establishing an AMR Independent Panel

- *Independent Oversight to GPEI's work***:** The IMB is a model of an impartial body to monitor progress, identify challenges, and recommend strategic solutions.
- *Data-Driven Decision-Making:* IPEA could adopt the IMB's emphasis on evidence-based evaluations and country-specific recommendations.

5. Scientific and Technical Advisory Panels to IGOs

There are various scientific, technical and advisory panels established by the IGOs that form the Quatripartide organizations (WHO, FAO, UNEP and WOAH) to provide expert knowledge and analysis to the agency. Through their assessments they can inform the development of their technical guidance to member states, policies, regulatory frameworks, and intervention strategies. The nature of their reports and recommendations are advisory to the agency and operate without direct involvement or oversight from member States. These scientific, technical advisory panels are usually composed of scientists and experts participating in their independent capacity (not representing the institution or government by which they are employed).

Within WHO, some of these include the Strategic and Technical Advisory Group on Antimicrobial Resistance (STAG-AMR) to provide strategic and technical advice with experts serving in their personal capacities (21). While the STAG-AMR provides essential guidance to WHO on AMR, its mandate is limited to advising WHO programs and initiatives. Other examples are the Quadripartite Technical Group on Economics for AMR (QTG-EA), the Strategic and Technical Advisory Group of the Global Tuberculosis Programme (STAG-TB) (22), the Immunization and Vaccines-related Implementation Research Advisory Committee (IVIR-AC) (23), and the WHO Advisory Group on Integrated Surveillance of Antimicrobial Resistance (AGISAR) to support WHO in its effort to minimize the public health impact of AMR associated with the use of antimicrobials in food animals, now dissolved (26).

Within WOAH, a working group on AMR (AMR WG) composed of specialists provides support and advice to the agency on its work on AMR regarding animal health and the interface with human health, food production and the environment.

Examples of expert Committees established to provide scientific advice also include the Joint FAO/WHO Expert Committee on Food Additives (JECFA) (24) and the Joint FAO/WHO Expert Meetings on Microbiological Risk Assessment (JEMRA) (25), that advise the Codex Alimentarius Commission and its Ad hoc Codex Intergovernmental Task Force on AMR (TFAMR), now dissolved.

References

1. Interagency Coordination Group on Antimicrobial Resistance (IACG). No time to wait: securing the future from drug resistant infections. 2019. Retrieved from: https://www.who.int/docs/default-source/documents/no-time-to-wait-securing-the-future-from-drug-resistant-infections-en.pdf?sfvrsn=5b424d7_6. Accessed March 14, 2025.
2. World Health Organization (WHO). Terms of Reference for the Independent Panel 2020. Retrieved from https://global1hn.ca/wp-content/uploads/2020/06/Evidence-panel-Action-against-AMR.pdf Accessed March 14, 2025.
3. Interagency Coordination Group on Antimicrobial Resistance (IACG). Discussion Paper: Future Governance of Antimicrobial Resistance. 2018. Retrieved from https://www.who.int/docs/default-source/antimicrobial-resistance/amr-gcp-tjs/iacg-future-global-governance-for-amr-120718.pdf Accessed March 14, 2025.
4. United Nations. Political declaration of the high-level meeting on antimicrobial resistance. New York: United Nations; 2024. Retrieved from https://documents.un.org/doc/undoc/ltd/n24/278/35/pdf/n2427835.pdf?_gl=1*1ujft9b*_ga*MTgzOTA2MzAzMy4xNzQxOTUxMTU5*_ga_TK9BQL5X7Z*MTc0MTk1MTE1OC4xLjAuMTc0MTk1MTE1OC4wLjAuMA Accessed March 14, 2025.
5. Ruckert A, Hoffman SJ, Bishop et al. Intergovernmental or fully independent? Designing a scientific panel on evidence for action against antimicrobial resistance. PLOS Glob Public Health. 2025 Jan 3;5(1):e0004039.

6. Fieldman T, Mossialos E, Anderson M. Enhancing global insight into AMR spread and generation: prospects and limitations of the WHO and quadripartite research agendas. *J* Antimicrob Chemother. 2024;79(2):207-210.
7. World Health Organisation (WHO). Global research agenda for antimicrobial resistance in human health. 2023. Retrieved from https://www.who.int/publications/m/item/global-research-agenda-for-antimicrobial-resistance-in-human-health Accessed March 27, 2025
8. World Health Organisation (WHO). A one health priority research agenda for antimicrobial resistance. 2023. Retrieved from https://www.who.int/publications/i/item/9789240075924 Accessed March 27, 2025
9. Wernli D, Jørgensen PS, Parmley EJ, et al. Evidence for action: a One Health learning platform on interventions to tackle antimicrobial resistance. Lancet Infect Dis. 2020;20(12):e307-e311. doi:10.1016/S1473-3099(20)30392-3
10. Anderson M, Kluge HHP, Lo Fo Wong D, Butler R, Mossialos E. Promoting sustainable national action to tackle antimicrobial resistance: a proposal to develop an antimicrobial resistance accountability index. Lancet Microbe. 2024;5(11):100997.
11. Global Leaders Group (GLG). Information session on establishment of the Independent Panel on Evidence for Action (IPEA) Against AMR. Summary Note, 2025.
12. World Health Organisation (WHO). Models to Inform the Development of Terms of Reference for the Independent Panel on Evidence for Action Against AMR. 2020. Retrieved from https://cdn.who.int/media/docs/default-source/antimicrobial-resistance/introduction-ag-background-paper-26-02-20.pdf Accessed March 14, 2025.
13. World Health Organisation (WHO). Public discussion - draft terms of reference of the independent panel on evidence for action against antimicrobial resistance. 2020. Retrieved from https://www.who.int/publications/m/item/public-discussion-draft-terms-of-reference-independent-panel-on-evidence-amr
14. ReAct. Comments on Terms of Reference for the Independent Panel. 2020. Retrieved from https://www.reactgroup.org/wp-content/uploads/2020/06/ReAct-Feedback-ToR-of-the-Independent-Panel-on-Evidence-submitted.pdf
15. Intergovernmental Panel on Climate Change, History. Retrieved from https://www.ipcc.ch/about/history/ Accessed March 14, 2025.
16. United Nations Climate Change. The Paris Agreement. Retrieved from https://unfccc.int/process-and-meetings/the-paris-agreement Accessed March 14, 2025.
17. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), About. Retrieved from https://www.ipbes.net/history-establishment Accessed March 14, 2025.
18. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (editors). IPBES secretariat, Bonn, Germany. 1148 pages.
19. Independent Panel for Pandemic Preparedness and Response (IPPPR), About. Retrieved from https://theindependentpanel.org/about-the-independent-panel/ Accessed March 14, 2025.
20. Independent Monitoring Board (IMB) for Polio Eradication, Our Strategy. Retrieved from https://polioeradication.org/who-we-are/our-strategy/ Accessed March 14, 2025.

21. Strategic and Technical Advisory Group on Antimicrobial Resistance (STAG-AMR). Terms of Reference. Retrieved from https://cdn.who.int/media/docs/default-source/antimicrobial-resistance/amr-stag/stag-amr-terms-of-reference.pdf?sfvrsn=1aac0e06_5&Status=Master Accessed March 14, 2025.
22. Global Tuberculosis Programme's Strategic and Technical Advisory Group (STAG-TB). Terms of Reference. Retrieved from https://www.who.int/publications/m/item/terms-of-reference-for-the-strategic-and-technical-advisory-group-for-tuberculosis-(stag-tb) Accessed March 14, 2025.
23. Immunization and Vaccines-related Implementation Research Advisory Committee (IVIR-AC). Terms of Reference. Retrieved from https://www.who.int/publications/m/item/terms-of-reference-for-the-immunization-and-vaccines-related-implementation-research-advisory-committee-(ivir-ac) Accessed March 14, 2025.
24. Joint FAO/WHO Expert Committee on Food Additives (JECFA), About. Retrieved from https://www.who.int/groups/joint-fao-who-expert-committee-on-food-additives-(jecfa)/about Accessed March 14, 2025.
25. Joint FAO/WHO Expert Meetings on Microbiological Risk Assessment (JEMRA), About. Retrieved from https://www.who.int/groups/joint-fao-who-expert-meetings-on-microbiological-risk-assessment-(jemra)/about Accessed March 14, 2025.
26. WHO Advisory Group on Integrated Surveillance of Antimicrobial Resistance (AGISAR) Integrated surveillance of antimicrobial resistance: guidance from a WHO Advisory Group. World Health Organization 2013, Geneva, Switzerland. Retrieved from https://iris.who.int/bitstream/handle/10665/91778/9789241506311_eng.pdf?sequence=1 Accessed March 14, 2025.
27. Roadmap for Establishing an Independent Panel for Evidence for Action against Antimicrobial Resistance (IPEA), Quatripartide Organizations, updated as of 14 March 2025, Roadmap.
28. United Nations Environment Assembly, Resolution 5/8, 2 March 2022, Information on reports and updates by the Technology and Economic Assessment Panel
29. UNEP Ad hoc open-ended working group on a science-policy panel to contribute further to the sound management of chemicals and waste and to prevent pollution, Report of the first part of the third session, 17-21 June 2024, k2401592.pdf