GSL Policy Brief

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Design Options for Building an Effective Independent Panel on Evidence for Action against AMR (IPEA)

Introduction

Antimicrobial resistance (AMR) poses an escalating threat to global health, development, and equity. As resistance continues to outpace policy action, more global efforts are needed to meet the global target of reducing AMR mortality by 10% by 2030 (1). Despite growing recognition of the need for coordinated, evidence-informed responses, global efforts have been hindered by fragmented knowledge systems, limited endorsement of scientific advice, and underdeveloped mechanisms for translating evidence into timely policy action.

In this context, the 2024 United Nations General Assembly (UNGA) High-Level Meeting (HLM) called for the establishment of an Independent Panel on Evidence for Action against AMR (IPEA). The panel is meant to support national and global AMR responses by delivering evidence that is credible, relevant, and legitimate.

Designing IPEA to be effective is a complex task that requires carefully navigating trade-offs between values such as inclusiveness and efficiency, scientific independence and political responsiveness, while balancing timely outputs with methodological rigor. These tensions and trade-offs are inherent in SPI design and must be managed

deliberately through design choices (2). Experiences from long-standing environmental SPIs, such as IPCC and IPBES, demonstrate that design features such as inclusive governance, structured stakeholder engagement, transparent operation, and stable public funding are critical for building trust and facilitating real-world impact by SPIs (3,4).

This policy brief outlines 11 policy options to support the institutional design of IPEA. The options are grouped across six key design domains: foundational discussion and mandate (PO1-2); funding models (PO3-4); governing body (PO5-6); scientific processes (PO7); external engagement (PO8-9); and equity mechanisms (PO10-11). Each option reflects real-world design lessons, drawing on learnings from established SPIs in global environmental governance, and highlights how trade-offs or complementarities between governance principles-inclusiveness, accountability, transparency, sustainability, equity, and independence-can be practically managed. Taken together, these options provide a roadmap for designing IPEA as a globally trusted, inclusive, credible, and effective platform to accelerate AMR action.

Key Takeaways



IPEA's Effectiveness Depends on Legitimacy, Credibility, and Relevance

These outcomes are interdependent and must be embedded through institutional design choices, such as inclusive governance, transparent evidence practices, and sustained engagement with diverse actors, particularly those from low- and middle-income countries (LMICs).



Designing IPEA Requires Navigating Trade-Offs between Governance Principles

Policymakers must deliberately balance values like inclusiveness and efficiency, as well as scientific independence and political responsiveness, when shaping the panel's institutional design. How these trade-offs are managed across IPEA's mandate, governance, funding, external engagement, and knowledge mobilization and products will determine its legitimacy and ability to influence global AMR policy.



Environmental Science-Policy Interfaces Offer Actionable Lessons for IPEA

IPEA can draw on lessons from existing science-policy interfaces (SPIs) in global environmental governance, such as the well-established Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the Intergovernmental Panel on Climate Change (IPCC). These SPIs highlight the importance of scientific independence, sustainable funding, inclusive expert nomination, and co-production of knowledge to ensure credible, trusted, timely, and policy-relevant outputs that can inform AMR action at global, regional, national, and community levels.



Equity Must Be Structurally Embedded across IPEA's Design

Equity cannot be an afterthought. Considerations of equity must be built into IPEA's decision–making processes, representation, funding, and capacity–building processes to ensure fair participation from underrepresented stakeholders and mitigate existing disparities in global AMR governance.

Criteria for Effective SPIs



An effective SPI requires more than a strong mandate. SPIs must be designed to deliver outputs that are credible, relevant, and legitimate. These output dimensions are interdependent and must be structurally embedded through careful institutional and procedural design (5,6).



Credibility refers to the scientific integrity and robustness of the panel's outputs. It depends on the use of rigorous, transparent, and methodologically sound processes for synthesizing evidence. For IPEA, credibility will require clear protocols for evidence appraisal, robust peer-review mechanisms, transparent documentation of dissenting views, and a well-defined institutional firewall that shields scientific assessments from political influence (7,8).

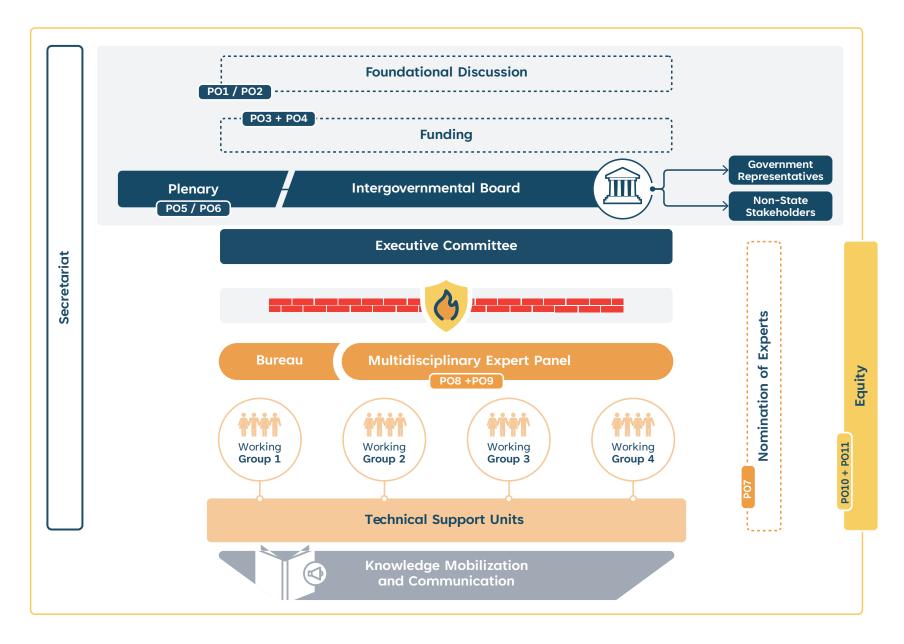


Relevance signifies the extent to which IPEA's work addresses the needs of policymakers across diverse geographies, institutional settings, and One Health sectors. SPI outputs must be timely, actionable, and responsive to both national AMR priorities and broader global frameworks. To ensure relevance, IPEA should align its scientific assessments with AMR national action plans and regional strategies as well as facilitate the co-design of research priorities with policymakers, particularly from low- and middle-income countries (LMICs) (9,10).



Legitimacy is derived from inclusive, accountable, and transparent processes that foster stakeholder trust and facilitate the uptake of SPI outputs. Enhancing legitimacy requires meaningful engagement with underrepresented groups, particularly from civil society, and non-state One Health stakeholders within LMICs. IPEA must also institutionalize inclusive and equitable expert nomination procedures, transparent stakeholder engagement frameworks, and mechanisms to monitor and address power imbalances in participation (4,11,12).

Design Options for the Independent Panel on Evidence for Action against Antimicrobial Resistance





PO1: Formalize IPEA as an intergovernmental body led by the Quadripartite

Establishing IPEA as an intergovernmental body coordinated through a coalition of national governments and under the leadership of the Quadripartite (WHO, FAO, UNEP, and WOAH) can facilitate alignment with One Health priorities and ensure sustained political commitment. This model, often described as an open membership model, would enable any UN member state to join without prerequisite commitments and promote widespread participation and integration of diverse state perspectives. While this approach would enhance efficiency and support the rapid establishment of the panel, the exclusive focus on states as founding agents may constrain broader legitimacy, with no engagement from non-state actors during IPEA's foundational discussions.

PO2: Form IPEA with both state and non-state actors in foundational governance

Alternatively, IPEA could be established through a coalition of willing national governments, with formal inclusion of non-state and One Health stakeholders, such as academic institutions, civil society organizations, and private sector representatives, in its foundational governance structure. This model promotes legitimacy and cross-sectoral collaboration by incorporating diverse expertise and perspectives during the panel's inception. This option is mutually exclusive with Policy Option 1 and directly influences the choice of Plenary design under Policy Options 5 and 6.



PO3: Establish a multi-source public funding mechanism

IPEA should consider establishing a multi-source public funding model, supported by voluntary contributions from governments, multilateral institutions, and philanthropic organizations. This structure can promote financial resilience and independence from private interests. A long-term trust fund or similar financing framework could serve to buffer against political shifts and ensure continuity in evidence production and policy engagement. This option can be pursued in combination with Policy Option 4.

PO4: Seek targeted private sector funding for specific activities

Public funding remains the most legitimate and sustainable foundation for IPEA's operations, helping ensure independence and stability over time. However, a possible complement could involve accepting private sector resources for activities less likely

to pose conflicts of interest, such as knowledge dissemination or logistical support. This could occur once IPEA's mandate and scope have already been clearly defined, and a policy for identifying and managing conflicts of interest, including funding disclosures, has been adopted. For example, in-kind contributions for travel by LMIC authors or for policy implementation initiatives could be explored. This mirrors practices adopted by the IPBES and IPCC, which receive such support under clearly defined conditions that protect scientific independence. This approach enables diversification of funding sources while maintaining strong safeguards around scientific integrity. This option can be pursued in combination with Policy Option 3.



PO5: Adopt a two-tier plenary structure with observer status for non-state stakeholders

IPEA will require an intergovernmental board, or plenary, and could adopt a twotier plenary structure in which decision-making authority resides with member state delegates, integrating civil society, community groups, and One Health private sector stakeholders in a non-voting observer capacity only.

This design enhances efficiency and may improve policy relevance by ensuring direct governmental control over policy summaries. However, it also introduces potential tensions, particularly if political interests influence scientific integrity, raising concerns about credibility related to political interference. *This option builds on PO1*.

PO6: Implement a tiered model with structured non-state stakeholder participation

To promote inclusiveness and build credibility, IPEA could adopt a tiered plenary model that allows non-state stakeholders to participate as non-voting contributors through structured stakeholder networks. This model provides greater integration of civil society, Indigenous knowledge holders, private sector actors, and other One Health stakeholders into IPEA's deliberative processes. This option would thereby enhance legitimacy and relevance while preserving the accountability associated with state-led decision-making but may lead to less efficient political deliberation. This model builds on PO2 and offers greater inclusiveness than Policy Option 5, while maintaining a state-led governance structure. PO5 and PO6 are mutually exclusive and build on the institutional model selected under PO1 and PO2.



PO7: Strengthen inclusiveness and transparency in expert nomination and evidence processes

IPEA should promote balanced and transparent expert selection by enabling non-state stakeholders to nominate a limited proportion of experts, up to one-third, alongside state nominations. To avoid the dominance of high-income countries or specific disciplines, regional, gender, and disciplinary quotas should be applied to ensure diverse representation across One Health sectors.

An inclusive nomination process would help foster trust in the panel's work by demonstrating openness, contestability, and broad participation in shaping the scientific agenda. For example, the IPBES framework integrates multiple knowledge systems through inclusive stakeholder representation, which strengthens both deliberation and contestation in evidence synthesis.

Beyond expert selection, transparency must also be embedded across IPEA's evidence synthesis processes. Transparency in how evidence is evaluated, weighed, and adjudicated is critical for maintaining both credibility and legitimacy. The IPCC peer-review system, for instance, enhances credibility by documenting contested perspectives, providing public access to review comments, and allowing multiple interpretations of evidence to be made visible throughout its assessment process. Transparency in how experts are selected and how evidence is adjudicated will be essential to IPEA's success. *This option aims to strengthen both credibility and legitimacy through structural transparency and inclusiveness.*



PO8: Establish public feedback loops for external stakeholder input

IPEA could institutionalize public feedback mechanisms that allow policymakers, researchers, and civil society actors to comment on draft reports and contribute to deliberations. These feedback loops should be designed to target the most relevant sectors and disciplines, ensuring that IPEA's outputs remain responsive and grounded in diverse perspectives.

While such feedback processes enhance transparency and legitimacy, an alternative or complementary approach would be to engage stakeholders earlier and more systematically, through co-design of knowledge synthesis processes

(as outlined in Policy Option 9). This option enhances legitimacy through transparency and inclusive review mechanisms.

PO9: Co-produce research and policy priorities with relevant stakeholders

To maximize policy relevance, IPEA could co-produce its research and policy priorities in partnership with national policymakers, civil society, and other relevant One Health stakeholders. This collaborative process would help ensure that IPEA's outputs directly inform AMR national action plans and regional strategies, and feed into international governance frameworks such as WHO policy instruments, FAO and WOAH guidelines, and UNEP initiatives.

This model aligns with the IPBES approach, which integrates Indigenous and local knowledge systems alongside scientific assessments through co-production processes. Such engagement strengthens the legitimacy, credibility, and practical impact of SPI outputs. Structured co-production also increases the likelihood that IPEA's assessments will be taken up in policy processes at both national and global levels. This option strengthens the relevance and legitimacy of IPEA's outputs by aligning them with real-world governance needs and priorities, and can be pursued in combination with PO8.



PO10: Establish quotas to ensure regional, gender, and disciplinary balance

To promote equity and diverse representation across IPEA's governance structures, expert groups, and advisory bodies, regional, gender, and disciplinary balance quotas should be embedded into the panel's design. These measures are essential not only for fairness in participation but also for ensuring that the panel's outputs reflect a multiplicity of perspectives across One Health domains.

Representation alone, however, is insufficient. Meaningful participation requires addressing structural barriers that prevent underrepresented groups from fully engaging in SPI processes, especially those from LMICs. Without complementary support measures, such as travel support, time compensation and training, (see PO11), equity quotas may have limited impact on IPEA's overall inclusiveness or effectiveness. This option addresses structural equity and should be implemented alongside targeted support mechanisms.

PO11: Develop targeted capacity-strengthening programs

IPEA should implement targeted capacity-strengthening programs to reduce technical, financial, and logistical barriers to participation for underrepresented stakeholders.

This may include fellowship programs, travel grants, mentorship initiatives, and language-access services. Such efforts are critical for enabling full engagement from LMIC representatives, early-career researchers, and other groups historically marginalized within global SPI processes.

Examples from existing SPIs underscore the value of these initiatives. The IPBES Fellowship Programme, for instance, funds participation of early-career researchers, especially from developing countries, allowing them to contribute meaningfully to assessment processes. Similarly, UNEP's International Resource Panel provides funding to support the participation of LMIC members in its meetings.

In addition to implementing targeted capacity-strengthening programs and representation quotas, the leadership of IPEA should embed reflexive governance practices from the panel's early inception. Continuously monitoring and adjusting for imbalances in representation, decision-making authority, and resource access is paramount to sustaining equity over time. Embedding such reflexivity into IPEA's institutional processes ensures that equity considerations remain dynamic, adaptive, and integrated into both daily operations and long-term governance structures. This option strengthens both equity and legitimacy by enabling meaningful participation from underrepresented stakeholders and can be combined with PO10.

Conclusion

Designing IPEA requires more than institutional determination, it demands careful and intentional governance choices. As this brief has outlined, embedding governance principles to achieve credibility, relevance, and legitimacy into IPEA's structure is essential for its long-term effectiveness (5,6). These attributes must be reinforced through inclusive participation, transparent processes, independent evidence appraisal, and equitable access to decision-making power (2,7).

Each policy option presented reflects not only institutional trade-offs but also opportunities to adapt proven design features from existing SPIs. If approached deliberately, these options offer a clear path toward establishing IPEA as a trusted, responsive, and globally inclusive platform capable of guiding urgent, evidence-informed action on AMR. As AMR rates continue to rise and projections warn of devastating health and economic consequences, the need for a robust, independent panel that can catalyze coordinated, evidence-informed action has never been more urgent.

References

- 1. Pungartnik PC, Abreu A, dos Santos CVB, Cavalcante JR, Faerstein E, Werneck GL. The interfaces between One Health and Global Health: A scoping review. One Health. 2023 Jun 1;16:100573.
- 2. Parkhurst J. The Politics of Evidence: From Evidence-Based Policy to the Good Governance of Evidence [Internet]. Routledge, Abingdon, Oxon, UK: Routledge Studies in Governance and Public Policy; 2017 [cited 2024 Aug 26]. Available from: https://www.researchgate.net/publication/309264330_The_Politics_of_Evidence_From_Evidence-Based_Policy_to_the_Good_Governance_of_Evidence
- 3. Borie M, Gustafsson KM, Obermeister N, Turnhout E, Bridgewater P. Institutionalising reflexivity? Transformative learning and the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES). Environ Sci Policy. 2020;110:71–6.
- 4. Gustafsson KM, Hysing E. IPBES as a transformative agent: opportunities and risks. Environ Conserv. 2023;50(1):7–11.
- 5. Sarkki S, Tinch R, Niemelä J, Heink U, Waylen K, Timaeus J, et al. Adding "iterativity" to the credibility, relevance, legitimacy: A novel scheme to highlight dynamic aspects of science-policy interfaces. Environ Sci Policy. 2015;54:505–12.
- 6. Wagner N, Sarkki S, Dietz T. More than policy neutral: Justifying the power of science-policy interfaces through legitimacy. Earth Syst Gov [Internet]. 2024;21. Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85200814472&doi=10.1016%2fj.esg.2024.100219&partnerID=40&md5=18b8eb6ea877178f0a760cc225261d3b
- Cvitanovic C, Shellock RJ, Mackay M, van Putten EI, Karcher DB, Dickey-Collas M, et al. Strategies for building and managing 'trust' to enable knowledge exchange at the interface of environmental science and policy. Environ Sci Policy. 2021;123:179–89.
- 8. Heink U, Marquard E, Heubach K, Jax K, Kugel C, Neßhöver C, et al. Conceptualizing credibility, relevance and legitimacy for evaluating the effectiveness of science–policy interfaces: Challenges and opportunities. Sci Public Policy. 2015;42(5):676–89.
- 9. Koetz T, Farrell KN, Bridgewater P. Building better science-policy interfaces for international environmental governance: Assessing potential within the Intergovernmental Platform for Biodiversity and Ecosystem Services. Int Environ Agreem Polit Law Econ. 2012;12(1):1–21.
- 10. Borie M, Mahony M, Obermeister N, Hulme M. Knowing like a global expert organization: Comparative insights from the IPCC and IPBES. Glob Environ Change [Internet]. 2021;68. Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85104122542&doi=10.1016%2fj.gloenvcha.2021.102261&partnerID=40&md5=5942673f786474505382390fb148eed7
- 11. Díaz-Reviriego I, Turnhout E, Beck S. Participation and inclusiveness in the Intergovernmental Science—Policy Platform on Biodiversity and Ecosystem Services. Nat Sustain. 2019;2(6):457–64.
- 12. Krug CB, Sterling E, Cadman T, Geschke J, Drummond de Castro PF, Schliep R, et al. Stakeholder participation inIPBES: connecting local environmental work with global decision making. Ecosyst People. 2020;16(1):197–211.

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