United Nations University
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Governing with Evidence
How the UN System Generates, Mobilizes and Uses Science

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Executive Summary

Science plays a central role in how the United Nations (UN) system understands global challenges and supports international decision-making. Across UN entities, scientific knowledge informs policy discussions, underpins international standards and guides development practice. Scientific activities within the UN are highly decentralized, unsurprisingly diffuse and numerous, reflecting the different mandates and governance structures of its agencies and programmes.

This report examines how science is generated, mobilized and applied across the UN system. It reviews the scientific mandates of UN entities, the mechanisms that ensure rigour and independence, key approaches to harnessing expertise and promoting open science, and many of the institutional structures linking evidence with policy processes. The analysis highlights both the strengths of the UN's scientific ecosystem and opportunities for strengthening coordination and impact.

Science Mandates and Institutional Roles

Scientific activities across the UN system cluster around five broad institutional functions.

1. **Creation, collection and dissemination of knowledge**. Many UN entities produce scientific data, statistics and analytical reports that inform international policy debates and negotiations. These include scientific assessments, statistical datasets and flagship publications that provide evidence on issues such as development, population trends, environmental change and economic performance.
2. **Hubs for international scientific cooperation**. Several agencies facilitate collaboration among researchers, governments and international organizations through research networks, expert panels, training initiatives and collaborative scientific programmes.
3. **Standard-setting and regulatory functions**. Scientific evidence underpins international standards and regulatory frameworks across a wide range of fields, including health, aviation, telecommunications, maritime safety, agriculture, energy, environmental protection and disaster risk reduction. In these contexts, scientific validation provides the technical basis for international norms and agreements.
4. **Application of science in policy practices**. Many organizations translate scientific knowledge into concrete interventions through technology transfer, innovation initiatives and evidence-based policy support across the three pillars of the UN's work: development, human rights and peace and security.
5. **Science–policy interfaces (SPIs)**. The UN hosts many institutional arrangement and processes designed to generate, assess, translate and communicate scientific knowledge for policymakers, including expert panels and assessments, as well as embedded advisory and operational mechanisms that connect scientific knowledge with policymaking at all levels.

Scientific Quality Assurance and Independence

Ensuring the credibility and integrity of scientific outputs is a central concern across the UN system. Organizations employ a range of mechanisms to safeguard scientific quality, including peer review, expert advisory panels and structured methodological assessment.

Many agencies also apply formal procedures for selecting experts and managing conflicts of interest, while seeking geographic representation and inclusion of diverse worldviews and contexts. Together, these measures help ensure impartiality and maintain confidence in scientific findings.

Although institutional models differ across agencies and disciplines, shared principles – transparency, methodological rigour and independence – form the foundation of scientific governance across the system.

Mobilizing Expertise and Promoting Open Science

The UN system relies extensively on both external and internal scientific expertise. Partnerships with universities, research institutions and international and national scientific bodies enable organizations to mobilize multidisciplinary knowledge and support global scientific cooperation. There remains nevertheless a need to better balance geographic representation and address how the dominant influence of expertise and informed perspectives, often from industrialized countries, still tend to shape the questions we ask, the data used and interpreted, and the outcomes produced.

In parallel, many UN entities have expanded access to scientific knowledge through open access policies, data platforms and institutional repositories. Initiatives such as open science frameworks and research access partnerships have improved the availability of scientific literature and datasets, particularly in developing countries. However, these practices remain uneven across agencies, and most knowledge platforms operate independently rather than as part of a unified system-wide infrastructure.

Tracking Impact and Strengthening Science–Policy Interfaces

While the UN produces a large volume of scientific knowledge, mechanisms for tracking the influence of these outputs on policy and practice remain limited. Existing approaches often rely on citation analysis, media monitoring or ad hoc evaluations, providing only partial insight into how UN science shapes international negotiations and national policies.

SPIs can play a critical role in bridging this gap. Across the UN system, these interfaces include independent scientific panels, expert advisory bodies and Chief Scientist offices within agencies. Chief Scientists and scientific advisers increasingly act as focal points for coordinating scientific activities, advising senior leadership and strengthening links between scientific communities and policy processes. Here, a recurrent weakness appears to be that most SPIs in the UN have few capacities to track the impact of scientific advice on international processes.

Recommendation Areas

Based on the analysis presented in this report, several areas emerge where strengthening coordination and institutional practice could enhance the role of science across the UN system to better support decision making:

1. **Strengthen coordination** among Chief Scientists and scientific advisers across UN entities, building on existing networks to support knowledge exchange and collaboration.
2. **Improve the integration of scientific expertise** in UN country-level operations, ensuring that Resident Coordinators, country teams and national actors can access relevant scientific resources.
3. **Enhance mechanisms for mobilizing global scientific expertise**, including stronger partnerships with academic institutions and international research networks, and improved geographical representation.
4. **Expand tools and capacities** that translate scientific evidence into practical decision-support, such as modelling platforms, scenario analysis and policy simulation tools.
5. **Increase stakeholder engagement** and meaningful uptake in science–policy processes, including collaboration with civil society, industry and local knowledge communities.
6. **Develop more systematic approaches** to monitoring the uptake and policy impact of UN scientific outputs, including bibliometric and policy tracking tools.
7. **Promote greater coherence in equitable open science and knowledge-sharing practices** across the UN system, including harmonized and stringent open access and data policies, interoperable repositories and shared data standards, building on the 2021 United Nations Educational, Scientific and Cultural Organization Recommendation on Open Science as the agreed international normative framework.

Taking action across these areas would help reinforce the UN's role as a global science-policy ecosystem capable of mobilizing credible scientific knowledge to address complex global challenges.

Introduction

In an era defined by planetary-scale challenges, from climate change and pandemics to food insecurity and technological disruption, the need for decisions grounded in strong, transparent science has never been greater.[1] This imperative is becoming harder to meet. Scientific practice itself is increasingly fragmented: disciplinary silos deepen just as the problems demand integration, the spread of misinformation and disinformation erodes public trust, and fractured geopolitics complicate collaboration across borders.[2] Within public institutions, growing specialization and opaque decision-making further distance scientific insight from policy processes.[3]

For the United Nations (UN) system, with its diverse mandates, agencies and programmes, but also for the multilateral system at large, this moment calls for introspection.[4] Improving our understanding of how science is embedded, governed and mobilized across the multilateral ecosystem is essential to strengthening both its credibility and its effectiveness.[5] This report explores that landscape. It begins by reviewing how science is framed in the foundational documents of UN entities and international organizations interfacing with the UN, then examines mechanisms for quality assurance, independence and conflict-of-interest management. It assesses and compares how these entities mobilize scientific expertise, provide access to scientific literature and disseminate their findings. Subsequent sections consider how scientific impact is tracked, and how the role and structure of Chief Scientists contribute to coherence and accountability. The report concludes with system-wide observations and recommendations aimed at fostering better scientific cooperation, learning and trust across the UN system. In doing so, it speaks to a broader community of multilateral institutions that share the challenge of governing and mobilizing science in the service of global public goods.

Science within the United Nations system refers to the systematic pursuit of knowledge through observation, measurement, experimentation, and critical analysis, aimed at generating reliable explanations and evidence to inform policy and practice. It encompasses the natural, social, and technical sciences, recognizing the interdependence of disciplines in addressing complex global challenges.

The scientific process denotes the methods and institutional norms through which such knowledge is produced, validated, and applied. It includes hypothesis formulation, data collection, peer review, transparency of methods, reproducibility of results, and the open dissemination of findings. Within the UN, this process extends beyond research to include assessment, synthesis, and knowledge sharing, ensuring that evidence is credible, independent, and accessible to decision-makers while respecting ethical standards and diverse epistemologies.

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[1] United National Environment Programme (UNEP), *Making Peace with Nature: A Scientific Blueprint to Tackle the Climate, Biodiversity and Pollution Emergencies* (UNEP, 2021). Available at unep.org/resources/making-peace-nature; Valérie Masson-Delmotte and others, "Climate change 2021: the physical science basis", *Contribution of working group I to the sixth assessment report of the intergovernmental panel on climate change 2.1* (2021), p. 2391; Ellen Johnson Sirleaf and Helen Clark, "Report of the Independent Panel for Pandemic Preparedness and Response: making COVID-19 the last pandemic", *The Lancet* vol. 398, No. 10295 (2021), pp. 101–103; Food and Agriculture Organization (FAO), International Fund for Agricultural Development (IFAD), United Nations Children's Fund (UNICEF), World Food Programme (WFP) and World Health Organization (WHO), *The State of Food Security and Nutrition in the World 2023: Urbanization, Agrifood Systems Transformation and Healthy Diets across the Rural–Urban Continuum* (FAO, 2023). Available at openknowledge.fao.org/handle/20.500.14283/cc3017en.

[2] Esperanza Diaz and others, "Impact of a changing political environment on research on migration and health", *The Lancet Regional Health–Europe* vol. 62, No. 101626 (2026); Jason Jabbour and others, "Navigating the winds of change: strategic foresight and the power of weak signals", *Sustainability Science* (2026), pp. 1–16; Jason Jabbour, *Navigating New Horizons: A global foresight report on planetary health and human wellbeing* (UNEP, 2024).

[3] See Kathryn Oliver and others, "A Systematic Review of Barriers to and Facilitators of the Use of Evidence by Policymakers", *BMC Health Services Research* vol. 14, No. 1 (2014), article 2. Available at 10.1186/1472-6963-14-2; Paul Cairney, *The Politics of Evidence-Based Policy Making* (Palgrave Pivot, 2016).

[4] United Nations Secretary-General, Our Common Agenda: Report of the Secretary-General (United Nations publication, 2021). Available at www.un.org/en/content/common-agenda-report/.

[5] Resolution A/RES/79/1; UNEP, *Strengthening the Science-Policy Interface: A Gap Analysis* (UNEP, 2015). Available at wedocs.unep.org/handle/20.500.11822/31036; David Cash and others, "Salience, Credibility, Legitimacy and Boundaries: Linking Research, Assessment and Decision Making", KSG Working Paper Series (Harvard University, 2003). Available at doi.org/10.2139/ssrn.372280.

Science Mandates in Foundational Documents

Across the UN system, science is central to many constitutions, conventions and foundational resolutions. To map how science is mandated across the UN system and associated multilateral bodies, we conducted a structured document analysis in two phases. The first phase focused on organizations represented in the informal UN Chief Scientists Network: Food and Agricultural Organization (FAO), United Nations Environment Programme (UNEP), United Nations Educational, Scientific and Cultural Organization (UNESCO), World Health organization (WHO) and World Meteorological Organization (WMO), alongside the International Union for Conservation of Nature (IUCN), which is part of the network and was included due to its relevance for multilateral governance. For each organization, we assembled a corpus of foundational and strategic documents, including constitutional texts and charters, strategic plans and selected governing body resolutions.

Each document was systematically searched for four terms: “science,” “scientific,” “research” and “evidence,” as a set of proxies for explicit references to science-related functions. Flagged passages were then reviewed manually to identify how each organization frames its science-related mandates and activities. Through a comparative analysis across organizations, five broad functional categories emerged inductively: (A) creating, collecting and disseminating knowledge; (B) acting as hubs for scientific cooperation and exchange; (C) setting or stewarding scientific standards, regulations and norms; (D) applying scientific knowledge into development practice; and (E) operating as science–policy interfaces (SPI). These categories were designed to be sufficiently distinct to support systematic comparison of how science is produced, governed and mobilized, while accommodating the institutional diversity of the UN system.

In the second phase, this typology was extended to approximately 60 UN bodies, specialized agencies, multilateral organizations and associated entities with significant interfaces with the UN system, including institutions such as the World Bank and the World Trade Organization (see Annex 1 for the full list). Given the scale of this expanded corpus, document analysis was supported by AI-assisted classification, using a prompt to review and map organizational mandates against the five functional categories based on explicit textual evidence. The resulting classifications were systematically reviewed, validated and refined by the research team to ensure consistency and interpretive accuracy. This two-phase approach combines the inductive rigour of close qualitative reading with the scalability required to assess the breadth of the multilateral system.

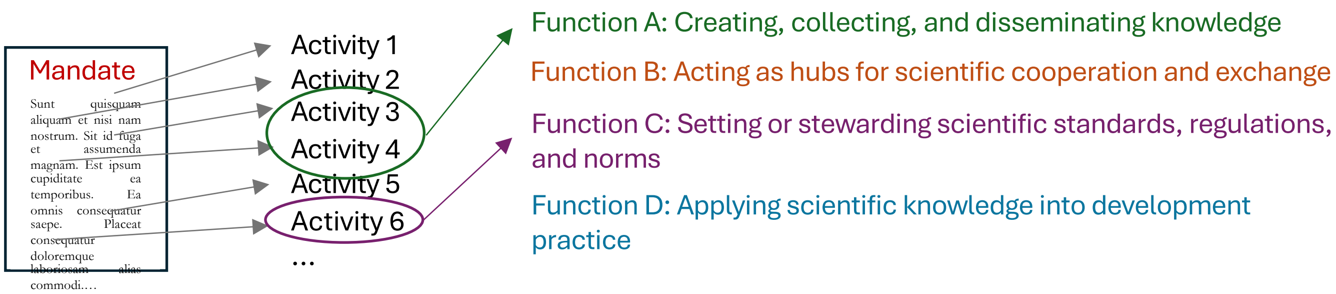
The definition and boundaries of Function E (SPIs), proved particularly challenging to operationalize consistently. This category was therefore further grounded in the conceptual framework developed by UNU-CPR as part of its Global Governance Innovation project, which provided analytical guidance and case-based insights into how multilateral institutions perform SPI roles.[6] This approach was complemented by substantive interviews with Chief Scientists and other experts to validate the main findings. While the functional categories produced may represent a simplification of complex institutional roles, we hope they are also useful ways to group the main kinds of work performed by scientists in the UN system.

[6] See https://unu.edu/cpr/project/global-governance-innovation-platform.

Summary of the Categorization and Clustering Process

We examine mandates and the foundational and strategic documents of multilateral entities and extract science-related activities. These activities are then clustered under broad functions. Each entity can perform more than one function.

For instance, entity X collects quantitative data on regional green finance flows (Activity 3), hosts a platform sharing information on sustainable trade (Activity 4) and leads a negotiation process to set standards on renewable plastic (Activity 6). Entity X performs Functions A and D.



Function A: Creating, Collecting and Disseminating Knowledge

This first cluster of practices corresponds to what can be described as the "UN epistemic function": producing the evidence base on which global norms and policy dialogues depend, and/or acting as a clearing house for scientific and technical knowledge.

Across the system, entities such as UNEP, FAO, WHO, International Organization for Migration (IOM), International Atomic Energy Agency (IAEA), WMO, International Labour Organization (ILO), United Nations Children's Fund (UNICEF), United Nations Development Programme (UNDP), Department of Economic and Social Affairs (DESA), UNESCO, United Nations Institute for Disarmament Research (UNIDIR), Office of the High Commissioner for Human Rights (OHCHR) and United Nations Population Fund (UNFPA) have founding mandates that explicitly reference the collection, analysis, interpretation and dissemination of knowledge within their respective domains, underscoring the centrality of scientific knowledge to their legitimacy. For example, FAO's constitution mandates it to collect, analyse and disseminate information on nutrition, food and agriculture. UNEP's founding mandate, as articulated in a UNGA resolution of December 1972, requires it "keep the global environment under continuous review" – explicitly tasking the organization with, among other things, the collection and assessment of environmental data, identifying emerging issues of environmental concern, and proving information and evidence to governments and the UN system based on the best available scientific knowledge (UNGA/XXVII/2997). In more recent years, following Rio+20, these functions were further fortified through *The Future We Want,* which reinforced UNEP's mandate to strengthen the science–policy interface, enhance monitoring and early warning, and improve access to environmental data for decision-making. UNICEF's mandate includes the generation of evidence on children's health. This epistemic function also extends to peace and security and human rights domains. For example, UNIDIR produces technical analyses on emerging security risks such as artificial intelligence (AI) and cyber technologies, while OHCHR systematically collects, verifies and analyses data on human rights conditions, embedding statistical and evidentiary approaches within international human rights monitoring.

The production and circulation of authoritative information involve both data collection, syntheses and regular assessments on the global or regional situation. Examples include longstanding reports such as UNEP's *Global Environment Outlook*, UNDP's *Human Development Report*, FAO's *State of Food Security and Nutrition in the World*, WMO's *State of the Climate*, UNEP's *Emissions Gap* and *Frontiers* reports and UNFPA's *World Population Report*. UNESCO contributes to global knowledge production through the UNESCO Science Report and STI policy monitoring tools (e.g. GO-SPIN), which track research systems, investments and policy frameworks across countries, complementing sectoral assessments such as the *World Water Development Report*.

While important sources of knowledge, there is a growing recognition that such assessments can be inefficient in curating and communicating science and have not always kept pace with advances in digital technologies (e.g. big data analytics, machine learning, AI) or with the speed and formats through which information is consumed. In response, many agencies are beginning to evolve their assessment approaches and knowledge offerings, leveraging more modern, digitally enabled tools and processes to make them more timely, accessible and fit for purpose.[7]

Many use frameworks from the UN Statistical Division to ensure data comparability (e.g. FAOSTAT, UNData, ILOSTAT). Outputs typically combine peer review with State validation, maintaining both technical integrity and political legitimacy. And some include partnerships with scientific bodies and academia. For instance, WMO's global observing systems rely on national meteorological services and research institutes, and UNESCO's Intergovernmental Oceanographic Commission coordinates long-term ocean observation across Member States.

The United Nations Department of Economic and Social Affairs (DESA) produces several scientifically grounded, data-driven flagship publications, including the *World Economic Situation and Prospects* (WESP), which provides macroeconomic forecasts and econometric analysis; the *World Population Prospects*, which delivers demographic projections using statistical modeling of fertility, mortality and migration; and the *Sustainable Development Goals Report*, which tracks global progress using indicator-based environmental, social and economic data. In addition, DESA produces analytical reports supporting the Commission on Science and Technology for Development, including technology and innovation policy reviews and assessments of emerging digital technologies, all of which rely on rigorous statistical and social-scientific methodologies to inform international policy.

Function B: Acting as Hubs for Scientific Cooperation and Exchange

The second cluster of activities involves serving as hubs of international scientific cooperation, mediating between researchers, governments and civil society. This is prevalent among agencies whose mandates make scientific inquiry itself part of their core function, such as UNEP, UNESCO, WHO, WMO, FAO, IAEA, United Nations Industrial Development Organization (UNIDO) and International Fund for Agricultural Development (IFAD). Their founding documents all contain language that refers directly to "research," "training," or the "exchange of scientific information".

UNESCO provides the broadest normative foundation: it treats science as a pillar of international understanding and cooperation across its organizational mandate, operating through more than 850 UNESCO Chairs and University Twinning and Networking (UNITWIN) networks, it's Management of Social Transformations programme, and several other intergovernmental scientific programmes. Together, these mechanisms form a multi-layered cooperation architecture

[7] Some of the literature has examined past and current practices in the environmental space. See for instance Niklas Wagner and Anna-Katharina Hornidge, "Unlearning modernity? A critical examination of the Intergovernmental Panel on Climate Change (IPCC)", *Climatic Change* vol. 178, No. 2 (2025), p. 32; Martin Kowarsch and Jason Jabbour, "Solution-oriented global environmental assessments: Opportunities and challenges", *Environmental Science & Policy* vol. 77 (2017), p. 187–192; Jason Jabbour and Christian Flachsland, "40 years of global environmental assessments: a retrospective analysis", *Environmental Science & Policy* vol. 77 (2017), pp. 193–202; Martin Kowarsch and others, "A road map for global environmental assessments", *Nature Climate Change* vol. 7, No. 6 (2017), pp. 379–382; Noel Castree, Rob Bellamy and Shannon Osaka, "The future of global environmental assessments: making a case for fundamental change", *The Anthropocene Review* vol. 8, No. 1 (2021), pp. 56–82; Veruska Muccione and others, "Integrating artificial intelligence with expert knowledge in global environmental assessments: opportunities, challenges and the way ahead", *Regional Environmental Change* vol. 24, No. 3 (2024), p. 121.

linking academic institutions, scientific communities and policymakers, and enabling sustained capacity-building and interdisciplinary knowledge exchange across regions. WHO embodies the applied health research dimension, turning medical science into global norms and operational guidance. WMO coordinates atmospheric research, IAEA focuses on nuclear science, FAO and IFAD address agricultural and rural research, and UNIDO promotes industrial science and technology. IUCN's network of experts is another example of large-scale distributed scientific collaboration, which mobilizes more than 19,000 scientists and practitioners across disciplines, including ecology, law, protected areas and species conservation.

While agencies engage with science in different ways, several common practices can be observed, including: (a) the creation of global or regional research networks (e.g. WHO's collaborating centres, UNESCO's science chairs, United Nations University (UNU) institutes, FAO's technical networks and IAEA's coordinated research projects); (b) expert panels and scientific advisory bodies (e.g. WHO's and WMO's science councils, IAEA's technical committees); and (c) training and capacity-development (e.g. FAO's and IAEA's joint laboratories).

Function C: Setting or Stewarding Scientific Standards, Regulations and Norms

A third cluster of activities focuses on the translation of scientific evidence into international standards and regulatory instruments, as well as scientific guidance and norms. While not typically regulatory bodies per se, the UN's role in stewarding standards and norms helps to broaden their adoption globally. Agencies like UNEP, International Civil Aviation Organization (ICAO), IMO, International Telecommunication Union (ITU), WHO, United Nations Economic Commission for Europe (UNECE), IAEA and the World Intellectual property Organization (WIPO) all have broadly similar references to regulation and norms. Their foundational texts refer to the "adoption of international standards," "technical regulations," or "principles and techniques," phrases that embed science in rulemaking. This standardization function extends beyond UN entities to include Multilateral Environmental Agreements, though these fall outside the scope of the present analysis. In peace and security contexts, scientific and technical expertise is similarly embedded in verification and compliance regimes. For instance, the IAEA applies nuclear science and engineering in its safeguards system to monitor compliance with non-proliferation commitments, while the Organisation for the Prohibition of Chemical Weapons (OPCW) relies on advanced chemical analysis and laboratory science to verify adherence to the Chemical Weapons Convention. These mechanisms illustrate how scientific standards underpin not only regulatory frameworks but also global security architectures.

Some of the common practices in this group include: (a) technical committees and expert working groups that convert research into regulatory guidance (e.g. ICAO Panels, IMO Committees, ITU Study Groups, WHO Guidelines Review Committee); (b) standard-setting processes with peer and stakeholder review, ensuring technical accuracy and consensus (e.g. UNEP-United Nations Institute for Training and Research (UNITAR)'s recent statistical *Guidelines for Measuring Flows of Plastic throughout the Lifecycle*[8]); (c) science-based risk assessment methods as procedural norms (notably in the World Trade Organization (WTO)'s SPS and Codex Alimentarius); and (d) interoperability frameworks for aviation, telecommunications, maritime safety and IP that rely on stable, scientifically validated metrics.

In addition to formal intergovernmental standard-setting, some organizations contribute to global norms through scientifically grounded classification systems and guidelines that function as de facto standards. For example, IUCN's Red List categories and criteria, as well as its frameworks for Key Biodiversity Areas and protected area classification, are widely adopted by governments, international conventions and financial institutions. Similarly, the Science Based Targets

[8] UNEP and United Nations Institute for Training and Research (UNITAR), *Statistical Guideline for Measuring Flows of Plastic throughout the Life Cycle* (2026). Available at https://wedocs.unep.org/items/33766ed8-d10a-4a49-8a7c-fd2abb5318d8.

initiative provides science-based methodologies for corporate emissions reduction targets aligned with global climate goals, increasingly shaping expectations for private sector climate action. These systems illustrate how scientific standardization can emerge through expert consensus and widespread uptake rather than formal treaty-based regulation.

Though rare, some organizations develop binding or quasi-binding instruments. For example, WHO's International Health Regulations (2005) require Member States to base their surveillance and response systems on verifiable epidemiological and laboratory evidence. The International Convention for the Prevention of Pollution from Ships (MARPOL), administered by the International Maritime Organization (IMO), codifies engineering and environmental science into mandatory standards for ship design, emissions and waste management. Similarly, the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) of the WTO legally obliges countries to ground their food safety and biosecurity measures in "sufficient scientific evidence". And the Vienna Convention for the Protection of the Ozone Layer (co-hosted by UNEP and WMO) creates a dynamic science-policy system in which periodic expert assessments determine regulatory adjustments, exemplifying how treaty law can institutionalize ongoing scientific review as a governance mechanism.

A distinct mode of standardization concerns the governance of science itself, in the establishment of shared principles for how scientific knowledge should be produced, shared and applied. Here, UNESCO plays a leading role in the UN system. Through instruments such as the Recommendation on Science and Scientific Researchers, the Recommendation on Open Science, the Recommendation on the Ethics of Artificial Intelligence, the Recommendation on the Ethics of Neurotechnology, and the Universal Declaration on Bioethics and Human Rights, UNESCO has developed an internationally agreed normative framework covering scientific integrity, research governance, data openness and responsible technological development.

Function D: Applying Scientific Knowledge into Development Practice

The fourth cluster links science directly to development outcomes. Agencies such as UNIDO, WIPO, UNESCO, DESA, FAO, IFAD, UNDP and UNEP treat innovation, technology diffusion and applied research as instruments for achieving economic, social and environmental progress. These mandates translate scientific advancement into development practice. The UN's 2030 Agenda strengthened this orientation, with explicit emphasis on "science, technology and innovation (STI)" as enablers of the Sustainable Development Goals (SDGs). Most agencies in this group now align their programmes with the UN system's Technology Facilitation Mechanism and the STI. The International Decade of Sciences for Sustainable Development, proclaimed by the UN General Assembly in August 2023 and led by UNESCO in close collaboration with IAEA, FAO, WMO, WHO, UNEP, UNU, as well as Member States, ISC and WFEO illustrates a system-wide effort to strengthen the application of scientific knowledge to development outcomes. A similar approach was taken in the International Decade of Cryospheric Sciences (2025-2034), also led by UNESCO.

Some of the most common practices in this cluster include:

1. Dedicated SPIs (e.g. FAO Office of the Chief Scientist, UNEP's Office of Science, UNIDO's Research and Statistics Branch).
2. Innovation platforms and incubators. Examples include FAO's International Platform for Digital Food and Agriculture, UNDP's Accelerator Labs, and UNIDO's Global Cleantech Innovation Programme, as well as policy-oriented innovation support tools that strengthen national STI systems (e.g. UNESCO's GO-SPIN).
3. Technology transfer mechanisms (e.g. IAEA's technical cooperation programmes, WIPO's Technology and Innovation Support Centers, and UNEP's Climate Technology Centre and Network).
4. Intergovernmental scientific programmes that deliver applied tools directly to national authorities, combining research, monitoring and operational guidance. For instance, UNESCO's Intergovernmental Hydrological Programme (IHP) for water-resource management, the Man and the Biosphere (MAB) Programme for land-use

planning, biodiversity conservation and community-based developments, the Intergovernmental Oceanographic Commission (IOC) for tsunami early warning, or WMO's Multi-Hazard Early Warning Systems initiative for disaster preparedness. In disaster risk reduction, UNESCO's Global Geoparks also demonstrate how scientific research can be embedded in territorial governance, linking global knowledge frameworks with local implementation.

While most visible in development contexts, the application of scientific knowledge also extends to governance and human rights practice. For example, OHCHR applies data-driven methodologies and indicators to support national human rights implementation, while development-oriented entities such as UNDP integrate behavioural science, governance indicators and experimental approaches into programme design and policy support.

Function E: Operating as Science-Policy Interfaces

The fifth cluster consists of SPIs, understood as the set of institutional arrangements and processes through which scientific knowledge is generated, assessed, translated and integrated into policymaking. SPI represents a boundary function between scientific communities and decision-makers, helping to ensure that evidence is credible, policy-relevant and accessible for governance processes. In practice, this function encompasses a range of activities, including the synthesis of existing knowledge, the translation of evidence into policy-relevant formats, the facilitation of dialogue between scientists and policymakers, and in some cases, the co-production of knowledge.[9]

While often associated with formal expert panels and global assessments such as those conducted by the Intergovernmental Panel on Climate Change (IPCC), the International Resource Panel (IRP), the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), or the Persistent Organic Pollutants Review Committee (POPRC), SPIs in the UN system also operate through a broader set of mechanisms.

In domains such as peace and security and human rights, the interface function is often embedded in operational processes rather than stand-alone institutions. These include investigative mechanisms, technical advisory services and scientific verification regimes, through which evidence is collected, assessed and fed directly into intergovernmental decision-making and accountability processes. This highlights the extent to which SPIs should be understood not only as a set of formal bodies, but as a distributed function performed across diverse institutional settings.

Across the system, SPIs take a variety of institutional forms. Some are formal intergovernmental bodies with direct State participation, such as the IPCC or IPBES. Others are embedded within larger organizations, where scientific advice is provided through advisory bodies or internal structures, as in UNEP or WHO. In some cases, SPIs are linked to specific treaties or conventions, such as the SPI of the UN Convention to Combat Desertification (UNCCD), where scientific assessments directly inform negotiated processes. In other instances, they take the form of voluntary partnerships or coalitions, such as the Climate and Clean Air Coalition, where scientific input supports collective action without formal intergovernmental mandates. UNESCO's International Bioethics Committee and Intergovernmental Bioethics Committee constitute important bioethics SPIs within the UN system.

Beyond these institutional differences, there is also variation in how expertise is mobilized and how evidence is produced and used. While many SPIs rely on formal expert panels and structured assessment processes, others operate through more continuous and network-based forms of engagement, including expert commissions, technical networks, or advisory

[9] On the evolution of SPIs, see: UNEP, *Reflecting on the Past and Imagining the Future: A contribution to the dialogue on the Science-Policy Interface* (2022). Available at https://wedocs.unep.org/items/8c69a730-1074-4eff-8bdc-f63a01593e4d; Erlend A. T. Hermansen, Elin L. Boasson and Glen P. Peters, "Climate action post-Paris: how can the IPCC stay relevant?", *npj Climate Action* vol. 2, No. 1 (2023), p. 30; Benjamin Hofmann and others, "Knowledge cumulation at science-policy interfaces: Opportunities for environmental governance research", *Environmental Policy and Governance* vol. 35, No. 3 (2025), pp. 538–546; Niklas Wagner and others, "Effectiveness factors and impacts on policymaking of science-policy interfaces in the environmental sustainability context", *Environmental Science & Policy* vol. 140 (2023), pp. 56–67.

mechanisms embedded within operational programmes. These variations reflect different ways of performing the SPI function, depending on mandates, governance structures and the nature of the policy challenges addressed.

A distinct model of SPI is provided by IUCN, which operates through seven expert Commissions composed of scientists, legal experts and practitioners, formally mandated and elected by its membership of governments and non-governmental organizations. These Commissions synthesize scientific knowledge, develop policy-relevant guidance and contribute to international processes such as biodiversity conventions. Unlike intergovernmental panels such as the IPCC, this model embeds scientific expertise within a membership-based governance structure, enabling continuous interaction between science, policy and implementation communities.

The remainder of this report compares how these varying mandates are implemented across the UN system. It explores some of the recurring challenges, emerging good practices and translatable lessons that can be drawn for a more evidence-based UN going forward.

Scientific Quality Assurance

Ensuring the credibility, transparency and independence of scientific outputs is a defining concern across the UN system. Although the precise mechanisms differ by mandate and discipline, all major UN entities that produce or share scientific information operate within frameworks designed to guarantee methodological rigour, balanced expert input and protection from political interference. In this context, UNESCO has established international principles on scientific integrity, independence and research conduct through its Recommendation on Science and Scientific Researchers, contributing to a global framework for ensuring the quality, transparency and reliability of scientific outputs.

Mechanisms on quality assurance can be grouped broadly into three tiers: (i) structured expert review and peer assessment; (ii) formalized oversight through advisory or steering bodies; and (iii) institutional procedures for conflict-of-interest management and quality control.

Peer Review and Assessment Processes

SPIs represent the most formalized scientific review and assessment process in the UN system. The most well-known is the IPCC, hosted by UNEP and the WMO, which assesses and synthesizes existing evidence, and in doing so, produces integrative analyses that advance scientific understanding. Draft reports undergo multiple layers of peer review: first by nominated scientific experts, then by government focal points, and finally through line-by-line approval of the *Summary for Policymakers* by all member governments. Authors are selected through open calls and nominated by governments and observer organizations, ensuring disciplinary diversity and regional balance. The process is underpinned by codified procedures, including a Conflict of Interest Policy, Principles Governing IPCC Work, and review editors who ensure that all reviewer comments are addressed transparently. This multi-stage review system provides a unique blend of scientific independence and intergovernmental ownership. Other SPIs structure their relationship between policymakers and Member States differently but ultimately aim to avoid policy prescription in their work.

In contrast to SPIs, the WHO applies a continuous peer-review model embedded in its normative and technical work. WHO's Guidelines Review Committee oversees the development of all normative recommendations to ensure they are based on systematically appraised evidence and transparent methodologies. Each guideline development group includes content experts, methodologists and representatives from affected regions or stakeholder communities. Evidence is graded using the GRADE framework (Grading of Recommendations Assessment, Development and Evaluation), a globally recognized standard that rates the certainty of evidence and the strength of recommendations. This procedure allows WHO to maintain scientific integrity while responding to urgent health needs, balancing methodological rigour with operational agility.

UNEP conducts the Global Environment Outlook (GEO): an intergovernmental, expert-led global assessment with great emphasis on interdisciplinary knowledge, including regional perspectives. The recent GEO assessments have been overseen by an Intergovernmental and Multistakeholder Advisory Group and a Scientific Advisory Group that ensure, respectively, the policy relevance and scientific integrity of the process. GEO assessments undergo multiple cycles of intergovernmental and expert review. UNEP's process mirrors the IPCC's transparency principles but with greater integration of non-State stakeholders and interdisciplinary expertise, including diverse types of knowledge. UNEP also maintains guidelines that require every assessment and scientific report to undergo scientific, technical and policy review before clearance.

Comparable quality assurance mechanisms are also found in non-UN scientific institutions closely linked to multilateral processes. For example, the IUCN Red List assessment process combines internal and external peer review, standardized criteria and formal rules of procedure governing data validation and expert input. An independent Editorial Board and publishing guidelines further ensure consistency and scientific rigour across outputs. UNESCO applies similar principles across its major global assessments: the World Water Development Report and the UNESCO Science Report both undergo multi-stage review by external and internal experts, UN agencies and intergovernmental bodies, ensuring methodological integrity and regional balance. These processes demonstrate how robust quality assurance can be maintained in decentralized, network-based scientific systems.

Other UN agencies follow adapted versions of these principles. FAO and WHO jointly manage the Codex Alimentarius Commission, which relies on independent scientific advisory committees, notably the Joint FAO/WHO Expert Committee on Food Additives and the Joint Meeting on Pesticide Residues, to provide the evidence base for international food standards. These expert committees apply strict criteria for expertise, geographic balance and freedom from conflict of interest; their findings are then reviewed and debated by member governments before standard adoption. The IAEA applies a comparable model through its Safety Standards Committees, which develop and review technical safety requirements across radiation protection and nuclear engineering fields. Similarly, the WMO operates through technical commissions and scientific advisory panels, where draft standards and datasets undergo coordinated review by national meteorological services and external scientific communities before formal adoption by the WMO Congress.

Selection and Governance of Scientific Advisory Bodies

Across the UN system, advisory board selection processes balance expertise, independence and representativeness. For instance, the IPCC's Bureau, comprising elected Working Group Co-Chairs and Vice-Chairs, is chosen by member governments but guided by principles of disciplinary and regional balance. UNEP's GEO Advisory Groups similarly use government and stakeholder nominations with final selection by the Secretariat to maintain credibility and ensure gender, geographic and disciplinary balance. WHO's Expert Advisory Panels are established under Article 2 of its Constitution; experts serve in a personal capacity, not as government representatives, and are appointed by the Director-General after evaluation of professional qualifications and conflict-of-interest declarations. FAO's expert rosters, IAEA's safety committees and WMO's panels follow comparable models, each maintaining transparent databases of appointed experts, as do UNESCO's scientific programme bodies such as the IHP Scientific Council and IOC scientific committees. Comparable principles apply in peace and security domains, where scientific and technical credibility underpins verification mechanisms. For instance, the IAEA and the Organisation for the Prohibition of Chemical Weapons maintain rigorous laboratory standards, inspection protocols and expert review procedures to ensure the reliability of their technical assessments.

In addition to formal boards, some agencies maintain Chief Scientist or Chief Science Adviser roles (e.g. UNEP, FAO, WHO, WMO), who oversee methodological coherence and act as custodians of scientific integrity across their organizations (see section on SPIs below). These offices coordinate cross-divisional quality assurance, manage peer review standards, and ensure that science-policy products meet established norms before publication or intergovernmental release.

Peer Review Cultures and Variations

Despite shared principles of independence and transparency, peer review cultures vary substantially across the system. Scientific assessments such as those led by the IPCC and UNEP emphasize collective authorship and traceable review processes, while technical agencies like WHO or FAO rely more heavily on structured methodological review and graded evidence appraisal. WMO and IAEA focus on consensus among expert committees rather than individual peer reviewers, aligning with their engineering and measurement-oriented mandates. Some entities, like UNDP or UNICEF, produce policy research rather than primary science; their quality assurance relies on external and internal expert reviewers, editorial guidelines and internal evaluation offices that apply standards analogous to academic peer review. UNESCO illustrates how this variation can exist within a single organization: peer review ranges from rigorous data validation for IOC oceanographic datasets, to interdisciplinary evaluation for MAB biosphere reserve assessments, to periodic external expert scrutiny for flagship publications such as the *UNESCO Science Report* and the *World Water Development Report*.

A further distinction lies in governance oversight. In some intergovernmental science policy interfaces (IPCC, GEO), scientific outputs are ultimately approved by governments, giving them political legitimacy but requiring careful protection of scientific neutrality. In contrast, technical organizations (WHO, FAO, IAEA) maintain scientific independence from political review, with technical committees serving as the final arbiters of evidence quality.

In conclusion, it is worth highlighting a trend across the UN toward harmonized quality assurance norms anchored in principles of transparency, reproducibility and equitable open science. Cross-agency collaboration through the Chief Scientists' Network and the Scientific Advisory Board to the Secretary-General provide opportunities to share standards for expert selection, conflict-of-interest management and data integrity. While the modalities differ, ranging from WHO's evidence grading to IPCC's open multi-stage peer review, the underlying goal is consistent: to maintain the credibility of UN science through processes that are methodologically robust, publicly transparent and institutionally accountable.

Safeguarding Scientific Independence

Scientific credibility within the UN system depends not only on methodological rigour but also on institutional safeguards that protect scientific processes from political, financial or institutional bias. Because most UN scientific outputs are produced within intergovernmental organizations, maintaining independence while preserving legitimacy requires carefully designed governance arrangements. Across the system, these safeguards typically operate through three main mechanisms: formal conflict-of-interest policies, procedural transparency in assessment processes and institutional separation between scientific evaluation and political decision-making.

Conflict-of-Interest Policy and Management

Many UN entities that convene expert bodies operate formal conflict-of-interest (COI) policies to ensure that scientific judgments remain impartial and that potential sources of bias are disclosed and managed transparently.

The IPCC offers one of the most detailed examples. Its COI policy requires all authors, review editors and Bureau members to disclose financial, professional and institutional interests that could affect their impartiality. A dedicated Conflict of Interest Committee reviews declarations and may recommend mitigation measures such as recusal from specific discussions, public disclosure in reports, or, in rare cases, replacement of authors. These procedures aim to balance openness with the practical reality that many leading experts operate within academic, governmental or private sector institutions. The IPBES also has a very strong and codified COI policy that is overseen by a Committee on Conflicts of Interest.

Similarly, the WHO maintains a structured expert management system governing participation in advisory committees and guideline development groups. Experts participating in WHO panels must submit detailed declarations of interest, which are reviewed by the Secretariat and, where relevant, by the Guidelines Review Committee. Depending on the nature of the declared interest, mitigation measures may include limiting participation in deliberations, excluding experts from voting on recommendations, or making disclosures publicly available alongside the resulting guidelines.

Comparable procedures exist across other technical organizations. FAO and WHO jointly apply COI screening in the scientific advisory committees supporting the Codex Alimentarius Commission; the IAEA requires similar declarations for experts serving on safety standards committees; the WMO implements disclosure and review procedures for experts participating in technical commissions and scientific assessments; and UNESCO maintains formal disclosure procedures for expert groups advising its intergovernmental scientific programmes, including IHP and IOC.

Procedural Transparency and Review

Transparency in scientific procedures provides an additional safeguard against political interference. Many UN SPIs rely on highly structured and documented processes to ensure that evidence assessments remain traceable and contestable.

The IPCC assessment cycle illustrates this principle clearly. Draft reports undergo several rounds of expert and government review, with every comment logged and responses documented by authors and review editors. This audit trail ensures that critiques are addressed systematically and that changes to scientific conclusions can be traced to documented evidence rather than external pressure.

Environmental assessments led by UNEP and biodiversity assessments undertaken through IPBES follow similar approaches, combining independent expert authorship with multi-stage government and expert review, and open documentation of revisions. UNESCO applies comparable principles across its flagship scientific assessments, where methodological decisions and reviewer inputs are documented to ensure traceability. Such procedures create transparency not only for governments but also for the broader scientific community and the public.

In technical standard-setting organizations, transparency often takes a different form. Agencies such as ICAO, IMO and ITU maintain formal committee procedures through which technical evidence is debated and documented before standards are adopted. Meeting records, working papers and draft recommendations provide a traceable evidentiary basis for regulatory decisions.

Institutional Separation between Science and Policy

Another mechanism protecting scientific independence is the institutional distinction between scientific assessment and political decision-making. Many UN SPIs explicitly define their role as providing policy-relevant but not policy-prescriptive knowledge.

For example, the IPCC assesses the state of climate science but does not recommend specific policies. Its reports provide evidence and scenarios that inform negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) but do not prescribe outcomes. Similarly, the IRP hosted by UNEP and the biodiversity assessments produced through IPBES synthesize research findings and explore policy options without endorsing specific policy choices. This is a difficult tension for SPIs as they seek to maintain credibility and legitimacy regarding their synthesis of evidence on challenging issues.

In technical organizations, the separation often occurs between expert committees and intergovernmental governing bodies. Scientific committees develop the evidence base and draft recommendations, while Member States formally adopt standards or guidelines. This structure allows governments to retain political authority while preserving the integrity of scientific deliberation. UNESCO's intergovernmental scientific programmes follow the same model, with scientific findings developed independently by expert panels before being considered by the intergovernmental bodies that exercise political oversight.

Emerging Practices and System-Wide Trends

Across the UN system, there is growing recognition that safeguarding scientific independence requires both institutional rules and organizational culture. Several recent developments reflect this trend.

First, many organizations have strengthened transparency through public disclosure of expert affiliations, open consultation processes, and publication of review comments. Second, the increasing presence of Chief Scientists or science advisory offices has created institutional focal points responsible for upholding scientific integrity across agencies. Third, cross-agency initiatives such as the UN Chief Scientists Network and the Secretary-General’s Scientific Advisory Board are beginning to promote shared standards for expert selection, data integrity and conflict-of-interest management. In this context, UNESCO's recommendations and guidelines provide a broader normative foundation for scientific independence that can inform practices across the UN system.

While these developments have improved safeguards in many areas, practices remain uneven across the system. Some entities operate highly formalized procedures, while others rely on internal guidelines or ad hoc arrangements. Strengthening coherence and transparency across these mechanisms remains an ongoing challenge for the UN’s scientific architecture.

Mobilizing Multidisciplinary Scientific Expertise

Addressing global challenges such as climate change, pandemics, food insecurity and technological disruption requires knowledge that spans multiple scientific disciplines. Recognizing this, the UN system has developed a range of mechanisms to mobilize expertise from diverse scientific fields and institutional settings. These mechanisms typically involve expert rosters, collaborative research networks, partnerships with academic institutions and inter-agency coordination structures.

Expert Rosters and Advisory Bodies

Many UN organizations maintain formal rosters of experts that allow them to rapidly convene multidisciplinary advisory groups when scientific input is required. These rosters typically include researchers from universities, national research institutes, government laboratories and specialized international organizations.

The WHO, for example, maintains extensive Expert Advisory Panels covering a wide range of health disciplines. These panels serve as the basis for assembling guideline development groups, technical consultations and emergency advisory committees. Experts are appointed based on scientific qualifications and geographic representation, ensuring that different fields and regional perspectives are represented in policy discussions.

Similarly, FAO maintains scientific and technical rosters spanning agriculture, food systems, biotechnology and environmental science. These rosters support expert committees that inform international standards, global assessments and technical guidance. UNESCO maintains comparable multidisciplinary expert pools through the scientific councils and advisory committees of its intergovernmental programmes, drawing on hydrologists, oceanographers, ecologists and social scientists from all regions and reflecting a strong institutional emphasis on interdisciplinary and cross-sectoral expertise.

SPIs such as the IPCC and IPBES represent more formalized examples of multidisciplinary engagement. Their author teams typically include hundreds of scientists drawn from multiple disciplines, including natural sciences, social sciences, economics and engineering. Many SPIs have also integrated Indigenous and local knowledge. The IPBES is particularly notable in this context because it has an explicit commitment to integrate these knowledges in pursuit of geographic and epistemic pluralism. It has a conceptual framework to manage the integration of knowledge, and it has a specific task force on Indigenous and local knowledge. Authors are nominated by governments and observer organizations, allowing for broad participation across scientific communities.

Beyond UN entities, IUCN represents one of the largest global mobilization platforms for environmental expertise, with a network of over 19,000 experts organized across thematic Commissions. These experts contribute on a largely voluntary basis to scientific assessments, standards and policy guidance, illustrating both the potential and limitations of reliance on distributed, non-remunerated scientific networks. The model highlights how large-scale expertise can be mobilized outside formal institutional staffing structures.

Partnerships with Academia and Research Institutions

Beyond individual experts, many UN entities rely on institutional partnerships with universities and research organizations to access specialized knowledge.

WHO's Collaborating Centres network provides one of the most extensive examples of this model. Hundreds of research institutions around the world are formally designated to support WHO programmes through research, technical advice and training. These centres function as extensions of WHO's scientific capacity, enabling the organization to draw on cutting-edge expertise without maintaining large internal research infrastructures.

UNESCO operates similar partnerships through its network of more than 850 UNESCO Chairs, UNITWIN Networks and 130 Category II centres, which link academic institutions to UNESCO's programmes in science, education and culture. UNU represents a further institutionalized form of collaboration, operating a global network of research institutes that conduct policy-relevant studies aligned with UN priorities, sometimes in direct partnership with universities. A recent initiative entitled the University Coalition for the Future (co-hosted by UNU and the Executive Office of the Secretary-General) aims to connect university research with the commitments of the 2024 Pact for the Future. And the UN Academic Impact network itself already connects 1,800 universities around the topic of sustainable development.

Technical organizations also rely heavily on national scientific institutions. WMO's global observing systems, for example, depend on national meteorological services and research laboratories to generate the atmospheric data used in global climate assessments. Likewise, IAEA coordinated research projects bring together scientists from Member States to advance nuclear science applications in fields such as medicine, agriculture and environmental monitoring.

Inter-Agency Collaboration and Scientific Networks

Because many global challenges span multiple policy domains, scientific collaboration often extends across UN agencies. Inter-agency mechanisms allow organizations to combine expertise from different disciplines and operational mandates. For instance, UNESCO hosts the World Water Assessment Programme in collaboration with more than 30 UN entities and participates in the IOC-led ocean science partnership.

Joint scientific initiatives are common in areas where mandates overlap. The Codex Alimentarius Commission, jointly managed by FAO and WHO, integrates expertise from food science, public health and agricultural research to develop international food safety standards. Similarly, UNEP and WMO jointly support the IPCC, reflecting the intersection of atmospheric science, environmental policy and climate research.

More broadly, the UN system has increasingly relied on inter-agency scientific networks to coordinate research and evidence production. The UN Chief Scientists Network, established to strengthen collaboration among science leaders across the system, facilitates information exchange on scientific priorities, emerging technologies and methodological standards.

Role of Chief Scientists in Coordination

Several UN entities have created Chief Scientist or Chief Science Adviser positions to provide strategic oversight of scientific activities and to improve coordination across organizational divisions.

These roles typically include advising senior leadership on scientific matters, strengthening internal research governance and ensuring that scientific evidence informs programmatic and policy decisions. In agencies such as FAO, UNEP and WHO, the Chief Scientist also plays an external role, representing the organization within international scientific communities and inter-agency coordination mechanisms. UNESCO fulfils a comparable function through its Assistant Director-General for Sciences, who provides strategic scientific leadership and ensures coherence across the organization's intergovernmental scientific programmes.[10]

Beyond internal coordination, Chief Scientists often help connect UN institutions with global research networks, philanthropic foundations and academic partners. By acting as both scientific advisers and knowledge brokers, these offices contribute to bridging the gap between scientific research and multilateral policy processes.

Despite these advances, multidisciplinary collaboration remains uneven across the system. Differences in organizational mandates, funding models and research capacities can create barriers to integrated scientific engagement. Strengthening coordination mechanisms and fostering more systematic collaboration across disciplines therefore remains an important priority for the UN’s science architecture.

[10] In April 2026, UNESCO's Executive Board approved the merger of the Natural Sciences Sector and the Social and Human Sciences Sector into a unified Sciences Sector. This structural change reflects a deliberate shift toward integrated, interdisciplinary science governance.

Access and Open Science

One of the most important functions across the UN is to increase access to scientific information and expertise.[11]

Normative and Strategic Framework

The central reference point for open science across the UN system and a global normative anchor is the 2021 UNESCO Recommendation on Open Science, the first international standard-setting instrument on open science, adopted by all UNESCO Member States.[12] Beyond standard-setting, UNESCO also supports Member States in implementing these commitments through technical guidance, regional policy dialogues, capacity development and monitoring mechanisms that can help benchmark progress and share best practice across countries and institutions. UNESCO and its partners across the global open science community are working towards a global open science monitoring framework, developing good practices and guidelines that encourage pooling, comparison and reuse of results.[13] This framework directly supports the implementation of the Recommendation and has the potential to serve as a common benchmark for UN entities as well as Member States.[14]

Adopted in 2024, the *Pact for the Future* and the *Global Digital Compact* (GDC) also promote the development of open science and open innovation policies. The GDC does so explicitly through its promotion of digital public goods and digital public infrastructure, encompassing open-source software, open data, open AI models, open standards and open content.[15]

The Secretary-General's Scientific Advisory Board has recently adopted a statement on open science that explicitly calls on the UN system to embed open science in mandates and activities, implement obligations under the GDC, and develop shared infrastructures and interoperable data systems, signaling an expectation of a more coherent system-wide practice rather than isolated initiatives.[16]

In parallel, the UN Secretary-General's Data Strategy calls for greater data access and sharing, including open data, as a foundation for better decision-making and collaboration. While not framed solely as "open science," this data agenda functions as a key operational enabler of open science practices, particularly with respect to open data, interoperability and shared infrastructure.[17]

Current Practices

There are some emerging and current practices around open science across the UN system.

Access-Expanding Mechanisms for Scientific Knowledge

Access to external scientific literature is often supported through institutional subscriptions and global access partnerships, most notably Research4Life, a public-private partnership involving several UN agencies, including WHO, FAO and UNEP, alongside universities and commercial publishers. It provides free or low-cost access to academic and professional research content for institutions in eligible low- and middle-income countries. By reducing structural barriers

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[11] United Nations, Secretary-General's Scientific Advisory Board, "Open Science", statement, 15 September 2025. Available at https://www.un.org/scientific-advisory-board/en/open-science.
[12] United Nations Educational, Scientific and Cultural Organization (UNESCO), "UNESCO Recommendation on Open Science", 21 September 2023. Available at: https://www.unesco.org/en/open-science/about.
[13] United Nations Educational, Scientific and Cultural Organization, "A step towards global open science monitoring", 29 July 2025. Available at www.unesco.org/en/articles/step-towards-global-open-science-monitorin.
[14] Ibid.
[15] Resolution A/RES/79/1.
[16] United Nations, Secretary-General's Scientific Advisory Board, "Open Science", statement, 15 September 2025. Available at www.un.org/scientific-advisory-board/en/open-science.
[17] United Nations, "Data Strategy of the Secretary-General for Action by Everyone, Everywhere". Available at https://www.un.org/en/content/datastrategy/index.shtml.

to access, the initiative has contributed to measurable shifts in global knowledge production, including a reported 17 per cent increase in scientific publications originating from participating countries.[18]

The partnership includes sector-specific programmes such as AGORA (agriculture), HINARI (health), OARE (environment), ARDI (development and innovation) and GOALI (legal information), covering a broad range of scientific and policy-relevant disciplines.

While these mechanisms significantly expand access to scientific knowledge and support equity objectives, they do not constitute open access in the strict sense. Access is eligibility-based and does not entail open licensing or reuse rights, nor does it directly address underlying publishing models.

Open Access Policies and Data-Sharing Frameworks

Several UN agencies have adopted open access and open data policies or policy components, with the World Bank among the first to do so as early as 2012,[19] although articulation and scope vary widely and are rarely framed under a unified system-wide framework. In many cases, commitments to openness are embedded in organizational policies, library guidance or data strategies rather than stand-alone open science policies.

For example, FAO has implemented an open access policy under which its publications are made freely available through its institutional repository, with reuse permitted under defined licensing conditions.[20] UNESCO similarly maintains a formal Open Access Policy requiring its publications to be freely available through its Open Access Repository under Creative Commons licensing. However, in both cases, these policies primarily apply to agency-authored outputs and do not systematically extend to externally funded research. By contrast, WHO promotes open access to both its own and WHO-funded scientific outputs, supported by a long-standing institutional repository (the Institutional Repository for Information Sharing, IRIS) and complementary data policies.[21] Agencies such as UNICEF, UNDP, UNHCR and UNEP have also adopted open data or open access practices aligned with their respective mandates, particularly for assessments, flagship reports and operational datasets. IUCN provides an additional example of structured open access practice, with a formal Open Access Policy for publications and a framework governing biodiversity data management and use. These policies aim to balance accessibility with safeguards around sensitive ecological data and commercial use, highlighting the specific challenges of open science in biodiversity contexts.

Overall, while open access to institutional outputs is increasingly common, coverage remains uneven, particularly for commissioned research, background papers and joint publications, and enforcement mechanisms vary across entities.

Open Knowledge Infrastructures

Open science practices within the UN system are operationalized primarily through a diverse set of institutional repositories and open data platforms, developed at agency level to support dissemination, reuse and transparency.

Examples include WHO's IRIS which provides free access to WHO publications and technical documents in multiple languages,[22] and FAO's knowledge repository, which hosts publications, reports and related knowledge products under its open access policy.[23] UNEP maintains open environmental data and knowledge platforms, notably through the World

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[18] Research4Life, "Research4Life". Available at https://www.research4life.org/.
[19] World Bank, "World Bank Open Access Policy for Formal Publications". Available at https://documents.worldbank.org/en/publication/documents-reports/documentdetail/992881468337274796.
[20] Food and Agriculture Organization of the United Nations, "FAO launches Open Access for all publications". Available at https://www.fao.org/newsroom/detail/FAO-launches-Open-Access-for-all-publications/.
[21] World Health Organization, "Institutional Repository for Information Sharing (IRIS)". Available at https://iris.who.int/.
[22] Ibid.
[23] Food and Agriculture Organization of the United Nations, "FAO Knowledge Repository". Available at https://openknowledge.fao.org/home.

Environment Situation Room, its emerging federated knowledge platform – currently under development – which aims to evolve UNEP's data infrastructure from a repository of environmental information into a dynamic, integrated environmental intelligence platform that supports faster, more actionable decision-making at global and national levels.[24] UNECE provides open access to a wide range of statistical databases, standards and analytical outputs in support of economic, environmental and regulatory cooperation. UNESCO operates domain-specific open data infrastructures through its intergovernmental programmes.

In addition to publication repositories, several agencies operate open data platforms offering machine-readable datasets, such as the UN Global SDG Database, OCHA's Humanitarian Data Exchange and sector-specific data portals linked to health, environment and development mandates.[25] These infrastructures are generally agency-specific and mandate-driven, rather than components of a unified open science platform.[26]

Most repositories and data platforms rely on established metadata standards and indexing practices to support discoverability through search engines and external aggregators. Digital preservation and long-term stewardship are typically managed through library and knowledge-management functions, although practices and levels of technical maturity vary across the system, and no single preservation standard applies universally.

System-wide Discovery, Interoperability and Monitoring

At the Secretariat level, the UN Digital Library provides a central discovery interface for UN documents and publications, aggregating records from across Secretariat departments and selected entities. While it improves visibility and searchability, it does not function as a fully federated open science infrastructure across the UN system.

Beyond UN-managed platforms, many agency outputs are indexed by global scholarly discovery services such as Google Scholar and, where applicable, the Directory of Open Access Journals (DOAJ), which further enhances visibility and interoperability with external research ecosystems.

The UN system also plays a leading role in assessing global digital access inequalities, through the work of bodies such as UNESCO's Institute for Statistics and the ITU, as well as through SDG monitoring. Events such as UN Open Science forums highlight open science as a means to bridge digital and knowledge access gaps.[27] In this context, UNESCO is contributing to the development of a global Principles of Open Science Monitoring, which aims in the long-term to provide a set of harmonized quantitative and qualitative indicators to facilitate compatibility and collective learning. These Principles represent an opportunity for a more people-focused and purpose-driven framework for assessment and are highly relevant to open science objectives. However, there is currently no consolidated system-wide framework for monitoring how UN entities themselves address digital access inequality in their internal research, publishing and data-sharing practices, despite growing normative recognition of this issue. Since 2025, UNESCO has been developing the UNESCO Open Science Platform to serve as a federated infrastructure across its complex Sciences system and as an operational tool to support implementation of the 2021 Recommendation on Open Science. The platform will serve as a central knowledge hub, offering a simple, user-friendly search experience to explore research and outputs developed or supported by the UNESCO Sciences System.

[24] United Nations Environment Programme, "Data Resources". Available at https://www.unep.org/data-resources.
[25] United Nations Office for the Coordination of Humanitarian Affairs, "Humanitarian Data Exchange". Available at https://data.humdata.org/.
[26] Lisa DeLuca, "United Nations: Online data repositories and resources", *College & Research Libraries News* vol. 78, No. 1 (2017). Available at https://crln.acrl.org/index.php/crlnews/article/view/9607/11002.
[27] United Nations, Dag Hammarskjöld Library, "Open Science: A Human Right and Global Imperative". Available at https://www.un.org/en/library/open-science-human-right-and-global-imperative.

Tracking Uptake and Impact

Assessing the real-world impact of scientific outputs is a complex challenge for the United Nations system. While many agencies produce influential reports, datasets and assessments, measuring how this knowledge affects policy decisions, international negotiations and national implementation remains difficult. Current approaches to tracking impact generally fall into three categories: bibliometric analysis, policy uptake tracking and media or public engagement metrics.

Citation and Bibliometric Analysis

Some UN entities use bibliometric indicators to evaluate the scientific reach of their publications. Citation counts in academic literature, references in policy documents, and inclusion in international reports provide indicators of how widely UN research is used within the global knowledge ecosystem.

Major assessment reports such as the *IPCC Assessment Reports* or UNEP's *Emissions Gap Report* are among the most cited sources in climate and environmental research. Similarly, reports produced by organizations such as FAO, UNDP and DESA frequently appear in academic publications and policy analyses addressing development, food security and economic governance. UNESCO's flagship assessments are likewise frequently cited in academic literature and international policy reviews.

Bibliometric analysis can provide useful insights into the diffusion of knowledge, but it has limitations. Citation patterns often reflect academic engagement rather than policy influence, and they may underestimate the impact of technical guidelines or operational datasets that are widely used by governments but less frequently cited in scholarly literature.

Uptake in Policy Processes and International Negotiations

Another indicator of impact is the use of scientific findings within international negotiations and policy frameworks. Many UN scientific outputs are explicitly designed to inform intergovernmental decision-making.

IPCC reports, for example, play a central role in informing negotiations under the UN Framework Convention on Climate Change. Scientific findings from these assessments frequently appear in negotiation texts, national climate strategies, and international agreements.

Similarly, scientific advisory bodies supporting the Codex Alimentarius Commission provide the evidence base for global food safety standards, which are subsequently referenced in trade agreements and national regulations. In public health, WHO guidelines often shape national health policies and clinical protocols worldwide.

Tracking this type of influence requires qualitative analysis of negotiation processes, policy documents and regulatory frameworks. While some agencies conduct internal reviews of policy uptake, systematic monitoring remains limited. The *UNESCO Science Report* is one of the UN reports that tracks policy uptake using bibliometric indicators, policy surveys and case studies to assess how national science policies evolve.

In peace and security and human rights contexts, impact often takes different forms. Scientific and technical analyses may inform verification decisions, investigative findings or compliance mechanisms rather than formal policy texts. For example, technical assessments by bodies such as the IAEA directly influence safeguards implementation, while evidence produced by human rights investigative mechanisms informs accountability processes within intergovernmental bodies.

Significant effort has gone into improving other peace and security impact tracking, such as the Comprehensive Planning and Performance Assessment System for UN peace operations, and the recent Peacebuilding Impact Hub.[28]

Some organizations are beginning to complement traditional bibliometric approaches with alternative metrics. For example, IUCN tracks the reach and influence of its scientific outputs using Altmetric tools through its library systems, capturing references in policy documents, media and online platforms. Such approaches provide a more granular understanding of how scientific knowledge circulates beyond academic literature.

Media Analysis and Public Engagement

Many organizations also track the broader visibility of their scientific outputs through media coverage, downloads and digital engagement metrics. Flagship reports often receive extensive attention in international media, policy forums and academic conferences.

For example, the release of major UN reports such as the *Human Development Report*, *Science Report*, or the *State of Food Security and Nutrition in the World* often generate global media coverage and extensive online discussion. Monitoring tools allow agencies to track mentions in news outlets, social media platforms and policy blogs.

While these indicators provide insights into public visibility, they do not necessarily reflect long-term policy influence or changes in governance outcomes.

Gaps in System-Wide Monitoring

Despite these various approaches, the UN system currently lacks a unified framework for tracking the policy impact of its scientific activities. Monitoring practices vary widely between agencies, and there is limited integration of bibliometric data, policy uptake analysis and evaluation systems. Some organizations have begun to address this gap by using tools such as Overton.io to track the uptake of research in policy documents, though these efforts remain uneven and not systematized.

Several factors contribute to this fragmentation. First, many UN organizations operate under different evaluation frameworks aligned with their programmatic mandates rather than research outputs. Second, scientific outputs often influence policy indirectly, through complex processes of negotiation and knowledge diffusion that are difficult to quantify.

Developing more systematic approaches to monitoring knowledge impact could help strengthen evidence-based decision-making across the UN system. Potential approaches include integrating bibliometric tools with policy document analysis, developing shared indicators for scientific influence and incorporating knowledge uptake metrics into existing evaluation frameworks.

Science-Policy Interfaces

SPIs represent one of the most important institutional mechanisms through which the UN system integrates scientific knowledge into policymaking. In recent years, the establishment of Chief Scientist roles across several UN entities has become a central mechanism for strengthening science–policy integration. While mandates differ across organizations,

[28] See United Nations Peacekeeping, "Impact assessment: The Comprehensive Planning and Performance Assessment System (CPAS)". Available at https://peacekeeping.un.org/en/impact-assessment-the-comprehensive-planning-and-performance-assessment-system-cpas; and United Nations Peacebuilding, "Peacebuilding Impact Hub". Available at https://www.un.org/peacebuilding/impact-hub. These initiatives fall largely outside the focus of this report.

these positions typically serve as institutional focal points responsible for coordinating scientific activities, ensuring scientific integrity and connecting external research communities with internal policy processes. There is great opportunity for increased integration collaboration between SPIs and Chief Scientists of other types of organizations.

Institutional Functions of Science–Policy Interfaces

Despite differences in organizational design, most science–policy interfaces within the UN system perform three core functions.

First, they synthesize and assess scientific knowledge relevant to global policy challenges. This often involves large-scale assessments of existing research rather than the production of original research. Assessment reports produced through science–policy interfaces are designed to provide policymakers with a comprehensive overview of the state of scientific knowledge, including uncertainties, emerging risks and potential policy options.

Second, SPIs translate scientific evidence into policy-relevant information. This translation process does not involve prescribing specific policies but rather clarifying the implications of scientific findings for decision-making. In practice, this may involve identifying policy-relevant scenarios, evaluating technological options or summarizing the consequences of different development pathways.

Third, SPIs facilitate dialogue between scientists and policymakers. Through expert meetings, advisory panels and consultations with governments, these interfaces provide structured channels through which scientific communities can inform multilateral negotiations and policy processes.

While independent assessment bodies such as the IPCC operate at a global intergovernmental scale, embedded SPIs within agencies often operate closer to operational decision-making, shaping programmatic priorities, technical guidance and development interventions. This is the case for many Multilateral Environmental Agreements (MEAs), for example.

The Emergence of Chief Scientist Roles across the UN System

In recent years, several UN organizations have created Chief Scientist or Chief Science Adviser positions as part of broader efforts to strengthen evidence-based policymaking. These roles reflect a recognition that scientific expertise must be integrated not only through external expert panels but also through internal leadership structures capable of coordinating scientific work across complex organizations.

Although the specific responsibilities vary, most Chief Scientist offices perform a combination of four key functions:

- Strategic scientific leadership, advising senior management on emerging scientific issues and research priorities.
- Coordination of scientific activities, ensuring coherence across different departments and programmes that produce or use scientific evidence.
- External engagement with scientific communities, including universities, research institutes and global scientific networks.
- Safeguarding scientific integrity, including oversight of scientific quality assurance, transparency and independence.

Chief Scientists therefore operate at the intersection of science governance, institutional strategy and international scientific collaboration.

Comparative Overview of Chief Scientist Roles

FAO – Office of the Chief Scientist. FAO established the Office of the Chief Scientist to strengthen the integration of science and innovation into global food systems governance. The Chief Scientist provides strategic leadership on scientific matters and works directly with senior management to ensure that FAO's technical advice and normative guidance reflect the best available evidence.

Within the organization, the Chief Scientist coordinates scientific activities across FAO's technical divisions, including agriculture, fisheries, forestry, nutrition and food systems. The Office promotes methodological coherence in research and knowledge production, oversees scientific advisory mechanisms and contributes to the development of FAO's Science and Innovation Strategy.

The Chief Scientist also plays a key role in translating scientific knowledge into policy-relevant guidance for Member States. FAO's scientific outputs – including global assessments of food security, agricultural innovation and sustainable food systems – are designed to inform both national policy frameworks and international negotiations related to food and agriculture.

Externally, the Office engages extensively with international research networks, including agricultural research systems, universities and global scientific partnerships. Through these relationships, FAO mobilizes multidisciplinary expertise to address emerging challenges such as climate-resilient agriculture, biodiversity conservation in food systems and sustainable land management.

UNEP – Chief Scientist and Environmental Science Leadership. Within UNEP, the Chief Scientist provides strategic scientific leadership, including advising senior management on priority-setting and ensuring that environmental science and evidence is effectively integrated across the organization's programmes and assessments.

The Chief Scientist also plays a critical role in providing expert advice on sensitive and contentious issues, including areas where the underlying science and policy debates are evolving, helping to ensure UNEP's positions and interventions remain scientifically robust, credible and impactful. In this capacity, the office ensures that institutional priorities and publications are informed by the best available evidence.

In addition, the Chief Scientist oversees the scientific credibility of major publications and assessments, including the GEO, emissions analyses and thematic environmental reports. This includes ensuring methodological rigour, consistency and alignment with current scientific understanding, as well as strengthening the coherence of UNEP's knowledge products across thematic areas.

Beyond internal functions, the Chief Scientist engages directly in international science-policy processes, including negotiations related to environmental agreements, and helps position UNEP within global scientific and assessment architecture. The office also coordinates with a wide range of external scientific institutions and expert networks, enabling UNEP to mobilize interdisciplinary expertise spanning environmental science, economics, engineering and social and behavioural sciences through collaborative, often voluntary, mechanisms.

WMO – Chief Scientist and Global Atmospheric Science Coordination. The WMO maintains a Chief Scientist position responsible for strengthening the integration of atmospheric science into global meteorological and climate services.

The Chief Scientist provides strategic scientific advice to the Secretary-General and supports coordination across WMO's scientific programmes and technical bodies. The role contributes to ensuring that advances in atmospheric research are reflected in operational meteorological services and international climate monitoring efforts.

Within WMO's institutional architecture, the Chief Scientist works alongside the organization's technical commissions, research programmes and global observing systems. These mechanisms coordinate collaboration among national meteorological and hydrological services, research institutions, and operational forecasting agencies worldwide.

The Chief Scientist also supports the translation of scientific research into policy-relevant information. WMO's scientific outputs – including global climate monitoring reports, early warning systems and atmospheric observation datasets – play a key role in informing international climate policy and disaster risk reduction strategies.

Externally, the office collaborates closely with global scientific initiatives and SPIs, including the IPCC, which is jointly sponsored by WMO and UNEP. Through these collaborations, WMO helps bridge atmospheric science research and international climate governance.

UNESCO – Scientific Leadership and Global Knowledge Networks. UNESCO maintains a distinctive model of scientific leadership in which scientific coordination is embedded within a broader architecture of global scientific programmes and research networks.

Scientific leadership within UNESCO is coordinated by the Assistant Director-General for Sciences, who effectively fulfils the Chief Scientist function, providing strategic direction across the organization's science portfolio. It focuses on coordinating international scientific cooperation programmes and supporting the translation of scientific knowledge into global policy frameworks. These activities span a wide range of scientific domains, including water science, geosciences, biosphere conservation, basic sciences and social transformations.

A central element of UNESCO's scientific work is its network-based approach to knowledge production. Rather than conducting large volumes of internal research, the organization mobilizes scientific expertise through international scientific programmes (including the IHP, the MAB and the International Geoscience and Geoparks Programme), research centres and academic networks. These include UNESCO Chairs, Category II research centres, and global scientific initiatives operating under UNESCO's auspices.

Through these networks, UNESCO contributes both to the generation of scientific knowledge and to the development of normative frameworks that guide scientific cooperation. The organization also plays a key role in promoting global norms related to science governance, including open science, ethics of science and technology, gender in science and the development of national science, technology and innovation systems.

In this model, scientific leadership functions primarily as a facilitator of global scientific collaboration and policy dialogue, connecting research communities, governments and international policy processes.

WHO – Scientific Leadership in Global Health Governance. WHO operates one of the most structured SPIs within the UN system, with scientific leadership embedded in its research coordination and normative guidance systems.

Scientific leadership within WHO focuses on ensuring that global health policies and guidelines are grounded in rigorous scientific evidence. This includes overseeing the development of evidence-based health recommendations, coordinating global research agendas and mobilizing expert networks in response to emerging health challenges.

WHO relies heavily on a network of expert advisory panels and collaborating centres that contribute scientific expertise across a wide range of health disciplines. These mechanisms allow the organization to synthesize scientific evidence and translate it into normative guidance for national health systems.

The organization's SPI is particularly visible in its guideline development processes, which involve systematic evidence reviews, structured expert consultation and transparent evaluation of scientific findings before recommendations are issued.

Externally, WHO works closely with academic institutions, research organizations and national health authorities to coordinate global health research and ensure that scientific evidence informs public health decision-making worldwide.

IUCN - Scientific Leadership in a Hybrid Organization. The Chief Scientist role within IUCN provides an example of scientific leadership embedded in a hybrid organization. The position combines strategic advisory functions with oversight of knowledge generation, quality assurance and flagship assessments, while also helping to frame policy-relevant narratives on biodiversity loss and conservation. This reflects a model in which scientific leadership spans both internal coordination and external influence across policy and public domains.

System-Wide Coordination of Scientific Leadership

Beyond individual agencies, several mechanisms aim to coordinate scientific leadership across the UN system. One of the most prominent is the UN Chief Scientists Network, which brings together Chief Scientists and scientific advisers from multiple UN entities.

The network facilitates the exchange of information on emerging scientific issues, promotes collaboration on cross-cutting research priorities, and supports the development of shared approaches to scientific integrity and evidence use. It also contributes to system-wide initiatives such as the Secretary-General's Scientific Advisory Board.

The Scientific Advisory Board to the UN Secretary-General, composed of independent scientists from around the world, provides strategic advice on major scientific and technological developments affecting global governance. While not embedded within a single agency, the Board complements the work of agency-level Chief Scientists by offering a system-wide scientific perspective.

Structural Variations and Governance Implications

Despite growing recognition of the importance of SPIs, the institutional structures supporting them remain highly heterogeneous across the UN system. Some organizations maintain centralized scientific leadership through Chief Scientist offices, while others rely on distributed networks of technical experts and advisory committees.

Each model offers different advantages. Centralized Chief Scientist offices may provide clearer strategic leadership and stronger coordination across departments. Distributed expert networks may allow for greater disciplinary specialization and flexibility in responding to emerging scientific challenges.

However, these structural differences can also complicate cross-agency coordination and knowledge sharing. The absence of a unified framework for science governance means that scientific leadership structures evolve largely independently within each organization.

Conclusions and Recommendations

This report has examined how science is embedded, governed and mobilized across UN system. The analysis highlights both the breadth of scientific activity across UN entities and the diversity of institutional arrangements through which science informs policy and practice. The UN does not operate as a single scientific institution; rather, it constitutes a distributed ecosystem of scientific production, assessment and knowledge brokerage across agencies with highly varied mandates.

Across this system, science performs multiple roles simultaneously. Some entities produce original research or maintain large scientific networks. Others synthesize global evidence to support international negotiations, set technical standards based on scientific expertise or translate knowledge into operational guidance for development programmes. Many organizations combine several of these roles. Taken together, these activities form a complex architecture through which scientific knowledge contributes to global governance.

Interviews with Chief Scientists and senior scientific advisers confirm that this distributed structure is both a strength and a challenge. It allows the UN to mobilize expertise across a wide range of disciplines and sectors, but it also creates fragmentation in how science is coordinated, communicated and applied across the system.

Several cross-cutting themes emerged consistently across interviews and document analysis:

- The importance of scientific credibility and independence;
- The central role of networks in mobilizing expertise;
- The difficulty of translating scientific evidence into policy-relevant forms; and
- The lack of systematic mechanisms to track the influence of UN scientific outputs.

The following recommendation areas synthesize these findings and highlight potential directions for strengthening the role of science within the UN system.

Strengthening System-Wide Coordination of Scientific Leadership

One of the most consistent observations across interviews was the value of informal coordination among Chief Scientists and scientific advisers across the UN system. The existing Chief Scientists Network was frequently cited as a useful platform for sharing experiences, identifying collaboration opportunities, and coordinating responses to emerging scientific issues.

This suggests an opportunity to further strengthen such mechanisms as platforms for strategic coordination. Rather than creating new institutional structures, building on existing networks could allow Chief Scientists to:

- Share best practices on scientific governance and quality assurance;
- Coordinate cross-agency responses to emerging scientific issues;
- Identify opportunities for joint assessments or collaborative initiatives; and
- Facilitate learning across agencies with different scientific mandates.

More systematic exchanges among scientific leadership across agencies could also support greater coherence in approaches to expert engagement, peer review practices and knowledge dissemination.

Improving Integration of Science in UN Country-Level Work

Another recurring theme in interviews was the relative absence of science from UN country-level coordination mechanisms, particularly within Resident Coordinator systems and UN Country Teams, but also directly with national leaders. Interviewees noted that scientific expertise often remains concentrated at headquarters or global programme levels, while country-level operations tend to focus primarily on socioeconomic and humanitarian issues.

Several interviewees suggested that stronger integration of science at the country level could significantly enhance the practical impact of UN knowledge. This could involve:

- Improving awareness among Resident Coordinators of scientific resources available across the UN system;
- Facilitating access to technical expertise for country teams facing science-related policy questions;
- Strengthening collaboration among agencies that generate or apply scientific knowledge in country contexts; and
- Ensuring that scientific evidence informs the design of cooperation frameworks and development programmes.

Strengthening the science dimension of UN country operations could help bridge the gap between global scientific assessments and national-level implementation.

Expanding Mechanisms for Mobilizing Global Scientific Expertise

A central strength of the UN system lies in its ability to convene global networks of scientific expertise. Many agencies maintain extensive expert rosters, collaborating centres or scientific networks that connect academic institutions, national research bodies and international organizations.

However, interviews suggested that mobilizing this expertise remains uneven and often relies on informal networks or ad hoc arrangements. In some cases, expert contributions are provided largely on a voluntary basis, reflecting limited institutional resources to systematically support scientific engagement.

Recommendation areas in this domain include exploring ways to:

- Better map existing scientific networks across the UN system;
- Facilitate access to expert communities for agencies that lack large internal research capacities;
- Strengthen partnerships with academic institutions and global research networks; and
- Ensure broader geographic representation in scientific advisory processes.

Particular attention may be needed to address the persistent challenge of achieving geographic diversity in expert participation, which several interviewees identified as more difficult than other forms of representation. Gender diversity nevertheless remains a critical gap.

Enhancing the Translation of Science into Decision-Support Tools

A recurring theme in the interviews was the importance of translating scientific knowledge into forms that decision-makers can directly use. Scientific assessments alone do not necessarily lead to policy change; decision-makers often require tools that allow them to explore policy options, evaluate trade-offs, and understand the implications of different choices.

Chief Scientists emphasized that successful science-policy engagement often involves moving beyond diagnostic reports toward decision-support tools, scenario modelling and policy simulation frameworks. These tools allow policymakers and other stakeholders to interact with scientific evidence in ways that inform practical decision-making.

Strengthening this dimension of UN science could involve:

- Developing more interactive tools and platforms that translate scientific evidence into policy options;
- Integrating economic, environmental and social data to support cross-sectoral decision-making;

- Designing scientific outputs with specific user communities in mind; and
- Ensuring that scientific findings are communicated in accessible and actionable formats.

Such approaches may also help address the growing demand from policymakers for evidence that is not only credible but also operationally relevant.

Expanding Stakeholder Engagement in the Science–Policy Process

Interviewees emphasized that scientific evidence is most influential when it is developed through inclusive processes involving multiple stakeholders. Successful international environmental agreements and global policy initiatives have often involved collaboration between scientists, governments, industry actors and civil society.

Engaging stakeholders early in the scientific process can improve both the relevance of research and the legitimacy of its findings. It also helps ensure that policy options are grounded in practical realities rather than purely theoretical models.

Potential areas for further development include:

- Involving policy actors and practitioners earlier in scientific assessment processes;
- Strengthening engagement with industry and private-sector actors where technological transitions are required;
- Incorporating local knowledge and community perspectives into scientific assessments; and
- Ensuring that scientific communication reaches diverse stakeholder groups.

These approaches can help bridge the gap between scientific analysis and real-world policy implementation.

Strengthening Approaches to Monitoring Scientific Impact

Finally, the analysis highlights an important gap in how the UN system tracks the uptake and impact of its scientific outputs. While some organizations are beginning to use bibliometric tools, policy databases and media monitoring systems, there is no system-wide approach to evaluating the influence of UN science on global governance.

Developing more systematic approaches to impact monitoring could support institutional learning and help organizations better understand how scientific knowledge contributes to policy outcomes.

Potential areas for further exploration include:

- Integrating bibliometric analysis with policy document tracking tools;
- Developing shared indicators for measuring policy uptake of scientific outputs;
- Incorporating knowledge impact metrics into evaluation frameworks; and
- Exploring new digital tools that enable real-time tracking of knowledge dissemination.

At the same time, interviews emphasized that scientific influence often unfolds through complex and indirect pathways. Impact assessment approaches may therefore need to reflect the full science–policy cycle, from agenda-setting and awareness-building to regulatory change and long-term societal outcomes.

Promoting Greater Coherence in Open Science and Knowledge-Sharing Practices

Ongoing efforts to adopt open access and open data policies have highlighted significant variation in scope, implementation and interoperability. Scientific knowledge is not easily transmitted across organizations and communities. Differences across organizations can limit the accessibility, comparability and reuse of scientific outputs.

Promoting greater coherence in open science practices and building on existing normative frameworks, including the UNESCO Recommendation on Open Science (2021), could strengthen the visibility and impact of UN knowledge. Potential areas for further development include:

- Improving alignment of open access and data-sharing policies across agencies;
- Enhancing interoperability between institutional repositories and data platforms;
- Developing shared standards for data management, metadata and reuse; and
- Facilitating access to scientific outputs produced or supported by UN entities, including externally funded research.

Strengthening open science practices could support more effective knowledge dissemination, reduce duplication, and enable broader use of UN scientific outputs in policy and practice.

Toward a More Coherent UN Science Ecosystem

Taken together, these recommendation areas point toward a broader objective: strengthening the UN's role as a global science-policy ecosystem. The UN already possesses many of the institutional components required to support evidence-based decision-making, including global scientific networks, authoritative assessment bodies and specialized technical agencies.

The challenge going forward is less about creating new institutions and more about improving coordination, visibility and accessibility across existing structures. Strengthening connections between scientific leadership, operational programmes and policy processes could significantly enhance the impact of UN science in addressing global challenges.

Annex: Science-Related Mandates in Foundational Documents of UN Entities

This annex provides verbatim or near-verbatim excerpts from the founding instruments of United Nations entities and related specialized agencies that explicitly reference science, research, technology, data collection or the diffusion of knowledge. Each entry includes the article or clause, a short contextual note, and the source link to the authoritative version of the document.

This should not be read as a comprehensive record of science-related activities. The examples included are intended to be illustrative. The focus is on *how* activities are conducted rather than *what* they consist of. The broader goal of the report is to offer a systemic perspective on the distribution of functions across the UN system and the difficulties encountered, not a comprehensive inventory of all ongoing activities.

Name of Organization	Description of science role	Reference Documents
General Assembly/ECOSOC Subsidiary Organs and Advisory Bodies (Boards, Commissions, Committees, Councils and Panels, and Working Groups)		
Human Rights Council / investigative bodies	General Assembly Resolution 60/251 (2006) establishes the Human Rights Council as a subsidiary organ of the General Assembly responsible for promoting universal respect for human rights and addressing situations of violations. While the Council is not a scientific body, its mechanisms, including commissions of inquiry and fact-finding missions, institutionalize evidence-gathering, documentation and analysis of human rights situations to inform intergovernmental deliberation and accountability processes. Functions: **A (Knowledge):** Human Rights Council investigative mechanisms collect, verify, analyse and report information on human rights violations. **E (Science–Policy Interface):** The Council's investigative bodies provide evidence-based findings and recommendations to inform intergovernmental decision-making and accountability processes.	UN General Assembly Resolution 60/251 (2006)[29]
Independent International Scientific Panel on AI	General Assembly Resolution A/RES/79/325 establishes the Independent International Scientific Panel on AI as a body mandated to provide policy-relevant scientific advice on AI. The Panel is tasked with assessing and synthesizing scientific knowledge on AI, including its risks, opportunities and governance implications, in order to inform intergovernmental deliberations and support evidence-based global governance. This mandate embeds the Panel within a structured science–policy interface, where scientific expertise is mobilized to inform international policy processes on emerging technologies. Functions: **A (Knowledge):** The Panel contributes to the synthesis and	UN General Assembly Resolution A/RES/79/325 (2024)[30]

[29] Resolution A/RES/60/251. Available at https://docs.un.org/en/a/res/60/251.
[30] Resolution A/RES/79/325. Available at https://docs.un.org/en/A/RES/79/325.

	dissemination of scientific knowledge on AI through assessments and analytical outputs, supporting a shared evidence base for global policy discussions. **E (Science–Policy Interface):** The Panel is explicitly designed to provide policy-relevant scientific advice to Member States, functioning as a bridge between scientific knowledge and intergovernmental decision-making on AI governance.	
Secretary General's Scientific Advisory Board	The UN Secretary-General's Scientific Advisory Board was established in 2023 to provide independent scientific advice to the Secretary-General on issues of science, technology and innovation relevant to sustainable development and global governance. The Board brings together leading scientists to assess emerging issues, identify knowledge gaps, and support the integration of scientific evidence into UN decision-making. While it does not conduct primary research, it synthesizes existing knowledge and provides strategic guidance to inform policy processes. This mandate embeds the Board within a system-wide science–policy interface linking scientific expertise with UN leadership. <u>Functions:</u> **A (Knowledge):** The Board synthesizes and communicates scientific knowledge through advisory reports and statements on global challenges.	Scientific Advisory Board to the Secretary-General, United Nations, 2023[31]
Committee on the Peaceful Uses of Outer Space (COPUOS)	General Assembly Resolution 1472 A (XIV) (1959) established COPUOS to review international cooperation in the peaceful uses of outer space, encourage space research programmes, and study legal and technical issues arising from space activities. Through its Scientific and Technical Subcommittee and Legal Subcommittee, the Committee provides a forum for the exchange of scientific and technical information and supports the development of international space governance. While it does not conduct primary research, its mandate embeds the use of scientific and technical knowledge within intergovernmental deliberation and coordination processes. <u>Functions:</u> **A (Knowledge):** COPUOS facilitates the collection and exchange of scientific and technical information on space activities, supporting shared understanding of space-related developments. **B (Cooperation):** The Committee promotes international cooperation in space science and technology through intergovernmental dialogue and coordination mechanisms. **C (Standards/Norms):** COPUOS contributes to the development of international legal and normative frameworks governing outer space activities.	UN General Assembly Resolution 1472 A (XIV) (1959)[32]

[31] United Nations, *The United Nations Secretary-General's Scientific Advisory Board, Terms of Reference* (United Nations publication, 2023). Available at https://www.un.org/scientific-advisory-board/sites/default/files/2025-01/tor.pdf.
[32] Resolution 1472 A (XIV). Available at: https://docs.un.org/en/A/RES/1472(XIV).

Scientific Committee on the Effects of Atomic Radiation (UNSCEAR)	General Assembly Resolution 913 (X) (1955) established UNSCEAR to assess and report on the levels and effects of exposure to ionizing radiation. The Committee compiles and evaluates scientific data from Member States and the research community to produce authoritative assessments that inform international understanding of radiation risks and protection measures. Functions: **A (Knowledge):** UNSCEAR collects, evaluates and disseminates scientific data and assessments on radiation exposure and its effects, providing a global evidence base. **E (Science–Policy Interface):** The Committee functions as an expert assessment body that synthesizes scientific evidence to inform policy and regulatory frameworks on radiation protection.	UN General Assembly Resolution 913 (X) (1955)[33]
United Nations Environment Assembly (UNEA)	UNEA's mandate, as articulated in General Assembly Resolution 2997 (XXVII), includes promoting "the contribution of the relevant international scientific and other professional communities to the acquisition, assessment and exchange of environmental knowledge and information and, as appropriate, to the technical aspects of the formulation and implementation of environmental programmes within the United Nations system." This language embeds UNEA within a structured science–policy system, where scientific knowledge is mobilized, assessed and integrated into global environmental governance. Functions: **A (Knowledge):** UNEA anchors the epistemic function of the UN environmental system, relying on scientific assessments and knowledge synthesis as inputs to decision-making. This function is operationalized through its reliance on major assessment processes (e.g. Global Environment Outlook, IPCC/IPBES inputs) feeding into deliberations. **E (Science policy interface):** UNEA mandate explicitly links scientific communities with policy formulation and implementation, making it a core institutional interface between science and global environmental governance (see related SPIs: IPCC, IPBES).	General Assembly Resolution A/RES/67/251[34] General Assembly Resolution 2997 (XXVII)[35]
Funds and Programmes		
UNDP	General Assembly Resolution 2029 (XX) (1965) established UNDP as the UN's central development assistance body, consolidating technical cooperation functions. While the founding instrument does not explicitly assign a scientific mandate, UNDP has institutionalized a strong analytical and innovation role, producing development knowledge and applying science, technology and innovation to development practice. Functions:	UN General Assembly Resolution 2029 (XX) (1965)[36]

[33] Resolution 913 (X). Available at https://docs.un.org/en/A/RES/913(X).
[34] Resolution A/RES/67/251. Available at https://docs.un.org/en/a/res/67/251.
[35] Resolution 2997 (XXVII). Available at https://docs.un.org/en/a/res/2997(XXVII).
[36] Resolution 2029 (XX) (1965). Available at https://digitallibrary.un.org/record/203477?ln=en&v=pdf.

	A (Knowledge): UNDP produces authoritative analytical outputs such as the Human Development Report, embedding statistical and social-scientific analysis in development governance. **D (Application):** UNDP operationalizes science, technology and innovation through development programming (e.g. Accelerator Labs, digital and innovation initiatives).	
UNEP	UNEP's founding resolution gives it a system-wide science/assessment role: the General Assembly created UNEP "to serve as a focal point for environmental action and coordination", including reviewing "the world environmental situation", an explicit mandate for global environmental assessment and early warning. The 1997 Nairobi Declaration reaffirmed and sharpened this science–policy interface, tasking UNEP to analyse global and regional environmental trends and provide policy advice based on "the best scientific and technical capabilities available". <u>Functions:</u> **A (Knowledge):** UNEP institutionalizes global environmental assessment through flagship outputs such as the GEO, synthesizing scientific evidence on environmental trends. **B (Cooperation):** UNEP serves as a focal point for international environmental cooperation, convening governments, scientific communities, UN entities, and expert networks around environmental knowledge, assessment, and action. **C (Norms/standards):** UNEP contributes to the development and stewardship of environmental norms, guidelines, and multilateral environmental agreements, although formal standard-setting authority often lies with UNEA or treaty bodies. **D (Application):** Mandated to apply scientific and technical knowledge to environmental programmes, operationalized through technical assistance and technology mechanisms (e.g. Climate Technology Centre and Network). **E (Science–Policy Interface):** UNEP anchors major SPIs, including co-sponsorship of the IPCC (with WMO) and hosting bodies such as IPBES and the International Resource Panel.	GA Res. 2997 (XXVII) (1972), para. 2(b)[37] Nairobi Declaration (1997)[38]
UNFPA	The mandate emerging from the International Conference on Population and Development (ICPD, 1994) assigns UNFPA a central role in supporting population data, research and analysis, calling for the "collection, analysis and dissemination of population and development data". This embeds demographic science and statistical analysis within its institutional purpose, while linking evidence to reproductive health and development practice. <u>Functions:</u> **A (Knowledge):** UNFPA institutionalizes demographic and population research through global data systems and flagship publications such as the State of World Population report.	ICPD Programme of Action

[37] Resolution 2997 (XXVII). Available at https://docs.un.org/en/a/res/2997(XXVII).
[38] UNEP, Nairobi Declaration on the Role and Mandate of the United Nations Environment Programme. Available at https://documents.un.org/doc/undoc/gen/k97/190/40/pdf/k9719040.pdf.

	D (Application): UNFPA translates demographic and health research into policy support and programme implementation in reproductive health and population planning.	
United Nations Human Settlements Programme (UN-HABITAT)	General Assembly Resolution 32/162 (1977) tasks UN-Habitat "to monitor, evaluate and disseminate information on human settlements conditions and trends" and "to promote the exchange of information on appropriate technologies in the human settlements sector", a mandate reaffirmed when Resolution 56/206 (2001) designates it as the UN system's focal point for human settlements coordination. While not framed as a science body, this constitutional language embeds urban data, environmental assessment and technical planning expertise at the core of UN-Habitat's authority. **Functions:** **A (Knowledge):** UN-Habitat produces analytical and statistical outputs such as the *World Cities Report*, grounded in urban data and spatial analysis. **D (Application):** UN-Habitat is mandated to promote and apply urban technologies and planning approaches, translating knowledge into operational urban development programmes.	UNGA Resolution 56/206 (1977)[39] Vancouver Declaration on Human Settlements[40] Istanbul (Habitat II) Declaration and Habitat Agenda[41] UNGA Resolution 56/206[42]
UNICEF	General Assembly Resolution 57 (I) (1946) establishes UNICEF as a fund to provide emergency and long-term assistance to children. While the founding instrument does not explicitly articulate a scientific mandate, UNICEF has institutionalized a strong evidence function, grounded in the systematic collection and analysis of child-related data, and in the application of health, nutrition and social science research to child welfare programmes. **Functions:** **A (knowledge):** UNICEF produces global data and analysis on children's wellbeing through systems such as the Multiple Indicator Cluster Surveys (MICS) and flagship publications including The State of the World's Children, based on statistical and epidemiological methodologies. **D (application):** UNICEF translates evidence from health, nutrition and social sciences into large-scale programme implementation (e.g. immunization, education, child protection systems).	UNGA Res. 57 (I), 1946[43]

[39] Resolution 56/206. Available at https://docs.un.org/en/a/res/56/206.
[40] United Nations, *The Vancouver Declaration on Human Settlements: From the Report of Habitat: United Nations Conference on Human Settlements*, *Vancouver, Canada, 31 May to 11 June 1976*. Available at https://unhabitat.org/sites/default/files/download-manager-files/1396335538wpdm_Vancouver_Declaration_EN.pdf.
[41] United Nations, *Istanbul Declaration on Human Settlements*, adopted at the United Nations Conference on Human Settlements (Habitat II), Istanbul, Türkiye, 3–14 June 1996. Available at https://unhabitat.org/sites/default/files/download-manager-files/Istanbul_Declaration_EN.pdf.
[42] General Assembly resolution 56/206 of 21 December 2001, *Strengthening the mandate and status of the Commission on Human Settlements and the status, role and functions of the United Nations Centre for Human Settlements (Habitat)*. Available at https://unhabitat.org/sites/default/files/download-manager-files/1396336025wpdm_Res%2056-206.pdf.
[43] Resolution 57 (I). Available at https://docs.un.org/en/A/RES/57(I).

WFP	WFP's founding instrument does not contain an explicit science mandate.	UN General Assembly Resolution 1714 (XVI), World Food Programme, 19 December 1961[44] FAO Conference Resolution 1/61 (1961)[45] General Regulations
	Science-Policy Interfaces Hosted by or Linked to UNEP or Conventions	
IRP	The IRP, established by UNEP, is mandated to provide independent, authoritative scientific assessments on the sustainable use of natural resources and their environmental, economic and social impacts. The Panel brings together leading experts to assess global resource use, identify trends and risks, and develop policy-relevant analyses to support decision-making on resource efficiency and sustainable development. Through its reports, the IRP synthesizes scientific knowledge to inform international policy processes and environmental governance. <u>Functions:</u> **A (Knowledge):** The IRP assesses and synthesizes scientific knowledge on natural resource use and its impacts through global and thematic reports, providing an evidence base for policy. **E (Science–Policy Interface):** The IRP functions as a science–policy interface, delivering policy-relevant scientific assessments to inform international environmental decision-making.	UNEP International Resource Panel (2007)[46]
Intergovernmental Science-Policy Panel on Chemicals, Waste and Pollution (ISP CWP)	United Nations Environment Assembly Resolution 5/8 (2022) established the ISP-CWP as a new, independent intergovernmental body mandated to strengthen the global science–policy interface on the sound management of chemicals and waste and the prevention of pollution. The Panel is intended to provide policymakers with authoritative, policy-relevant scientific assessments and advice, taking into account different national circumstances, development priorities and capacities. As an emerging mechanism, it is in the process of developing its institutional structure and assessment functions, with a mandate to synthesize scientific knowledge, identify knowledge gaps and support informed decision-making at national and international levels. <u>Functions:</u> **A (Knowledge):** The Panel is mandated to assess and synthesize scientific knowledge on chemicals, waste and pollution, providing an evidence base for policy.	United Nations Environment Assembly Resolution 5/8 (2022)[47]

[44] Resolution 1714 (XVI). Available at https://docs.un.org/en/A/RES/1714(XVI).
[45] Resolution 1/61. Available at https://www.fao.org/4/x5572E/x5572e07.htm#Resolution1.
[46] UNEP, *International Resource Panel: Overview and Mandate* (UNEP, 2007).
[47] UNEP, resolution 5/8.

	E (SPI): The Panel is designed as a formal intergovernmental science–policy interface, intended to deliver policy-relevant scientific assessments to support decision-making.	
Persistent Organic Pollutants Review Committee (POPRC)	The Stockholm Convention on Persistent Organic Pollutants established the POPRC as a subsidiary scientific body mandated to review chemicals proposed for listing under the Convention. In accordance with Article 8 and its annexes, the Committee evaluates scientific data on the persistence, bioaccumulation, toxicity and long-range environmental transport of chemicals, and develops risk profiles and risk management evaluations to support decision-making by the Conference of the Parties. Article 8 of the Stockholm Convention entails the reviewing process of new chemicals and Annex D, Annex E and Annex F specify the information requirements for the review. Functions: **A (Knowledge):** POPRC evaluates and synthesizes scientific data on hazardous chemicals, producing risk profiles and assessments that provide an evidence base for decision-making. **E (SPI):** POPRC functions as a formal science–policy interface under the Stockholm Convention, providing policy-relevant scientific evaluations to inform intergovernmental decisions on chemical regulation.	Stockholm Convention on Persistent Organic Pollutants, Article 8[48]
Climate and Clean Air Coalition Scientific Advisory Panel (CCAC SAP)	The CCAC SAP was established to provide scientific advice on short-lived climate pollutants, supporting the Coalition's objectives to reduce emissions and improve air quality. Composed of independent experts, the Panel assesses and synthesizes scientific knowledge on mitigation options, impacts and policy-relevant pathways, and provides guidance to inform the Coalition's strategies and initiatives. Functions: A **A (Knowledge):** The Panel assesses and synthesizes scientific knowledge on short-lived climate pollutants, producing analyses that inform mitigation strategies and policy discussions.	CCAC Framework Document[49]
IPCC	General Assembly Resolution 43/53 (1988) and subsequent decisions established the IPCC as a scientific body mandated to assess the scientific, technical and socioeconomic information relevant to understanding climate change. Jointly established by UNEP and the WMO, the IPCC produces periodic assessment reports that synthesize the state of knowledge, risks and response options related to climate change, providing an authoritative basis for international policy discussions. Functions: **A (Knowledge):** The IPCC assesses and synthesizes scientific knowledge on climate change through comprehensive reports, providing a global evidence base.	UN General Assembly Resolution 43/53 (1988)[50]

[48] UNEP, Stockholm Convention on Persistent Organic Pollutants (2001).
[49] Climate and Clean Air Coalition, *Framework Document of the Climate and Clean Air Coalition* (UNEP, 2012).
[50] Resolution 43/53. Available at https://docs.un.org/en/a/res/43/53.

	E (Science–Policy Interface): The IPCC functions as a formal science–policy interface, producing policy-relevant but not policy-prescriptive assessments to inform international negotiations and decision-making.	
IPBES	The IPBES was established by States in 2012 to strengthen the science–policy interface for biodiversity and ecosystem services. IPBES is mandated to assess and synthesize scientific knowledge, including Indigenous and local knowledge, on biodiversity, ecosystem services, and their contributions to human well-being. Through global and thematic assessments, the Platform provides policy-relevant evaluations to support decision-making at multiple levels. IPBES is independent but UNEP provides secretariat services. Functions: **A (Knowledge):** IPBES assesses and synthesizes multidisciplinary knowledge on biodiversity and ecosystem services through global and thematic reports, providing an authoritative evidence base. **E (Science–Policy Interface):** IPBES functions as a formal science–policy interface, delivering policy-relevant but not policy-prescriptive assessments to inform international and national decision-making.	IPBES Operating Principles (2012)[51]
UNFCCC	The UNFCCC is explicitly science-mandated at treaty level: Parties commit to "promote and cooperate in scientific ... and other research, systematic observation and development of data archives related to the climate system", and to "cooperate in the full, open and prompt exchange of relevant scientific ... information related to the climate system" (Art. 4.1). Article 5 further commits Parties to support international and intergovernmental efforts to strengthen systematic observation and scientific research capacities, particularly in developing countries, and to promote access to and exchange of data and analyses, grounding the regime in organized science, monitoring and knowledge exchange. Functions: **A (Knowledge):** The Convention explicitly mandates scientific research, systematic observation, and the development and exchange of climate-related data and information. **B (Cooperation):** The Convention commits Parties to international cooperation in scientific research, capacity-building and data sharing on the climate system.	United Nations Framework Convention on Climate Change, art. 4.1 and 5[52]
Science-Policy Interface of the United Nations Convention to Combat Desertification (UNCCD SPI)	he UNCCD SPI was established by the Conference of the Parties to strengthen the link between scientific knowledge and policy under the Convention. The SPI is mandated to provide independent scientific advice, synthesize existing research and support the translation of scientific findings into policy-relevant outputs on desertification, land degradation and drought. Through expert reports and assessments, it informs the deliberations and decisions of the Convention's governing bodies.	UNCCD Conference of the Parties Decision 23/COP.11 (2013)[53]

[51] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), *Functions, Operating Principles and Institutional Arrangements of IPBES* (UNEP, 2012). Available at://www.ipbes.net/document-library-catalogue/functions-operating-principles-and-institutional-arrangements.
[52] United Nations, *United Nations Framework Convention on Climate Change* (UNFCCC, 1992). Available at https://unfccc.int/resource/docs/convkp/conveng.pdf.
[53] United Nations Convention to Combat Desertification, decision 23/COP.11.

	Functions: **A (Knowledge):** The SPI assesses and synthesizes scientific knowledge on land degradation, desertification and drought, producing reports and analyses that provide an evidence base. **E (Science–Policy Interface):** The SPI functions as a formal science–policy interface under the UNCCD, delivering policy-relevant scientific advice to inform intergovernmental decision-making.	
	Specialized Agencies	
FAO	Article I of the FAO Constitution directs the Organization to collect, analyse, interpret and disseminate information on nutrition, food and agriculture, and to promote scientific and technological research in those domains. This constitutional language anchors FAO's science–policy instruments and the Organization's Science & Innovation agenda. Functions: **A (Knowledge):** Constitution mandates it to "collect, analyse, interpret and disseminate information" and promote "scientific… research" (Art. I). Institutionalized practice includes FAOSTAT; State of Food Security and Nutrition in the World (SOFI). **B (Cooperation):** Constitution refers to promotion of research and technical cooperation among Member States. Institutionalized practice includes FAO technical networks, Joint FAO/IAEA Centre and agricultural research platforms. **C (Standards):** FAO co-stewards global food standards via Codex (joint FAO/WHO) as the recognized science-based reference point in food safety governance (Codex is the institutionalized standard-setting mechanism attached to FAO/WHO). **D (Application):** FAO's constitution embeds technical assistance/action (science-to-practice) across agriculture and food systems, operationalized through sustained technical programmes.	FAO Constitution (1945), Art. I(1)–(2)[54] Codex Statutes[55]
ICAO	Under Article 44 of the Chicago Convention, ICAO's aims include the development of the principles and techniques of international air navigation and the encouragement of aircraft design and operation, an inherently technical and standards-based mandate that relies on aeronautical science, engineering and safety analytics. Functions: **C (Standards):** Chicago Convention requires collaboration to secure uniformity and provides for "International Standards and Recommended Practices" (SARPs) (Art. 37), grounded in engineering/safety science.	Chicago Convention (1944)[56]
IFAD	IFAD's founding documents do not contain an explicit science mandate.	IFAD Agreement (1976)[57]

[54] FAO, Constitution of the Food and Agriculture Organization of the United Nations. Available at https://www.fao.org/3/x5584e/x5584e0i.htm.
[55] FAO and WHO, Statutes of the Codex Alimentarius Commission.
[56] International Civil Aviation Organization, Convention on International Civil Aviation (Chicago Convention). Available at https://www.icao.int/publications/doc-series/convention-international-civil-aviation-doc-7300.
[57] IFAD, Agreement Establishing the International Fund for Agricultural Development. Available at https://www.ifad.org/documents/d/new-ifad.org/agree_e-pdf.

ILO	The ILO Constitution makes the ILO a global clearing house for labour knowledge: its functions "include the collection and distribution of information on all subjects relating to international adjustment of industrial life", and the Organization undertakes inquiries and studies to support standard setting, an early, explicit mandate for applied social science within the UN family. Functions: **A (Knowledge):** The ILO Constitution commits the Organization to collect and distribute information on labour conditions and undertake "special investigations" and studies. Institutionalized practice includes ILOSTAT; Global Wage Report; World Employment and Social Outlook.	ILO Constitution (1919, as amended), Functions Article[58]
IMF	The IMF's founding documents do not contain an explicit science mandate. However, if we consider institutionalized practice, the IMF does perform somewhat of an epistemic function. Functions: **A (Knowledge):** Institutionalized practice includes World Economic Outlook; Global Financial Stability Report; Research Department.	IMF Articles of Agreement (1944), Art. I[59]
IMO	The IMO Convention makes IMO a mechanism for intergovernmental cooperation on technical matters affecting shipping, including the recommendation and adoption of regulations and guidelines on maritime safety and marine pollution prevention, an evidence- and standards-driven remit grounded in naval architecture, ocean engineering and marine environmental science. Functions: **C (Standards):** The IMO Convention mandates cooperation on "technical matters… affecting shipping" and adoption of standards (Art. 1(a)). Institutionalized practice includes MARPOL (International Convention for the Prevention of Pollution from Ships), SOLAS (safety standards), and technical committees converting engineering and environmental sciences into binding regulation.	IMO Convention (1948), Art. 1(a)[60]
ITU	The ITU Constitution and Convention establish ITU's purposes around standardization, spectrum management and the technical development of telecommunications. ITU's Telecommunication Standardization Sector explicitly "fulfil[s] the purposes of the Union relating to telecommunication standardization … by studying technical, operating and tariff questions and adopting recommendations". Functions: **A (Knowledge):** ITU institutionalizes global digital knowledge production through its statistical and analytical work, including	ITU Constitution (1992, as amended)[62]

[58] ILO, Constitution of the International Labour Organization. Available at https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:62:0::NO:62:P62_LIST_ENTRIE_ID:2453907.
[59] International Monetary Fund, Articles of Agreement of the International Monetary Fund**.** Available at https://www.imf.org/external/pubs/ft/aa/index.htm.
[60] International Maritime Organization, Convention on the International Maritime Organization. Available at https://www.imo.org/en/About/Conventions/Pages/Convention-on-the-International-Maritime-Organization.aspx.
[62] ITU, Constitution and Convention of the International Telecommunication Union. Available https://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx/.

	connectivity indicators and flagship publications such as *Measuring Digital Development: Facts and Figures*.[61] **B (Cooperation):** ITU institutionalizes global digital evidence production via its recurring connectivity indicators series (*Measuring Digital Development: Facts and Figures*). **B (Cooperation):** ITU's structure enables sustained expert cooperation through sector membership and study group architecture (technical expert communities). **C (Standards/Norms):** Constitution embeds the Telecommunication Standardization Sector and related study groups as part of ITU's core design. **D (Application):** ITU's Development Sector institutionalizes technology diffusion/capacity-building (development-oriented technical cooperation) via its development functions and study groups.	
UNESCO	Article I of the UNESCO Constitution includes science as a core component of its mandate: "to contribute to peace… by promoting collaboration among nations through education, science and culture", and charges UNESCO to "maintain, increase and diffuse knowledge".[63] Beyond the Constitution, UNESCO's Recommendation on Open Science (2021) and Recommendation on Science and Scientific Researchers (2017) establish system-wide normative frameworks and guidance for scientific openness, integrity and researcher protections that inform UN cooperation. <u>Functions:</u> **A (Knowledge):** UNESCO institutionalizes global knowledge production through flagship assessments such as the *World Water Development Report*, produced annually under the World Water Assessment Programme with UN-Water and multiple UN agencies. **B (Cooperation):** UNESCO operates extensive global research and knowledge networks, including the International Geoscience Programme (with the International Union of Geological Sciences), supporting collaborative research on Earth systems; the UNESCO Chairs Programme, linking universities worldwide; but also Fellowships and Scientific networks such as the Organization for Women in Science for the Developing World (OWSD). These mechanisms position UNESCO as a hub for international scientific exchange. **C (Standards/Norms):** UNESCO issues system-wide normative instruments for science governance. This includes, for instance, the Recommendation on Open Science or ethical instruments such as guidelines on emerging technologies (e.g. neurotechnology and AI).	UNESCO Constitution (1945), Art. I.[64] UNESCO Recommendation on Open Science (2021)[65] UNESCO Recommendation on Science and Scientific Researchers (2017)[66]

[61] International Telecommunication Union (ITU), *Measuring Digital Development: Facts and Figures 2025* (Geneva, ITU, 2025). Available at: https://www.itu.int/hub/publication/D-IND-ICTOI-2023-1/.
[63] Constitution of the United Nations Educational, Scientific and Cultural Organization (UNESCO), Article I. https://unesdoc.unesco.org/ark:/48223/pf0000382500.
[64] Constitution of the United Nations Educational, Scientific and Cultural Organization (UNESCO). Available at https://www.unesco.org/en/legal-affairs/constitution.
[65] UNESCO, Recommendation on Open Science (2021). Available at https://unesdoc.unesco.org/ark:/48223/pf0000379949.
[66] UNESCO, Recommendation on Science and Scientific Researchers (2017). Available at https://unesdoc.unesco.org/ark:/48223/pf0000367439.

	D (Application): UNESCO translates scientific knowledge into policy and capacity-building programmes, particularly in water management, education and science policy.	
UNIDO	The UNIDO Constitution positions the Organization to "create new and develop existing concepts and approaches" for industrial development and to support technology development and dissemination, an explicit impulse toward industrial science, R&D and technology transfer in its objective and functions. Functions: **A (Knowledge):** UNIDO institutionalizes industrial policy/technology knowledge production through recurring flagship outputs such as the Industrial Development Report series. **D (Application):** Mandated to assist in "development and transfer of industrial technology".	UNIDO Constitution (1979), Functions Article[67]
World Tourism Organization (UN TOURISM)	The Statutes of the World Tourism Organization (1970), now UN Tourism, assign the Organization functions that include "collecting, analysing and disseminating information on tourism" and "undertaking studies in the field of tourism" (Statutes of the WTO, Art. 3). This explicit mandate to produce analyses, statistics and studies embeds an applied research and knowledge-production function within the Organization's constitutional purpose. Functions: **A (Knowledge):** Agreement (Art. 13) anchors statistical knowledge functions – cooperation in "collection, analysis, publication and dissemination of statistical information". **C (Standards/Norms):** UN Tourism is formally recognized for standardizing tourism statistics (standards for measurement; normative statistical frameworks).	Statutes of the World Tourism Organization. 27 Sept. 1970, United Nations Treaty Series.
WHO	Article 2 of the WHO Constitution assigns functions that are inherently scientific: to act as the directing and coordinating authority on international health work, promote and conduct research, and set evidence-based norms and standards. These constitutional powers underpin WHO's guideline system and evidence-to-recommendation processes. Functions: **A (Knowledge):** WHO Constitution empowers WHO "to promote and conduct research in the field of health". **B (Cooperation):** WHO institutionalizes scientific cooperation via a global network of WHO Collaborating Centres (research institutes/universities designated to support WHO programmes). **C (Standards/Norms):** WHO issues global health norms, including legally relevant regimes; the International Health Regulations (2005) are a core instrument establishing international public health duties	WHO Constitution (1946), Art. 2[68]

[67] United Nations Industrial Development Organization, Constitution of the United Nations Industrial Development Organization. Available at https://treaties.un.org/doc/Publication/UNTS/Volume%201401/volume-1401-I-23432-English.pdf.
[68] WHO, Constitution of the World Health Organization. Available at https://apps.who.int/gb/bd/pdf/bd47/en/constitution-en.pdf.

	and capacities (science-based surveillance/lab capability is structurally integral to implementation). **D (Application):** WHO's mandate includes technical assistance and guidance, operationalizing research into practice through country support, normative guidance and health systems implementation (the collaborating-centre system supports this translation).	
WIPO	The WIPO Convention tasks the Organization to "promote the protection of intellectual property throughout the world" and to carry out functions needed to reach that objective, including facilitating technical cooperation among States and administering the IP unions. While not a "science" mandate per se, WIPO's objectives and functions structurally support scientific and technological innovation ecosystems and the dissemination of technical knowledge. <u>**Functions:**</u> **C (Standards/Norms):** WIPO Convention sets objectives "to promote the protection of intellectual property throughout the world" and functions include harmonization measures, normative infrastructure shaping innovation ecosystems. **D (Application):** WIPO operationalizes diffusion of technical knowledge via Technology and Innovation Support Centers (training, tools and networking to access patent/technical information).	WIPO Convention (1967), Art. 3[69]
WMO	Article 2 of the WMO Convention defines WMO's purposes as facilitating global observation networks, promoting standardization and advancing research and training in meteorology, climatology and related geophysical fields, placing scientific cooperation and data exchange at the core of its mandate. <u>**Functions:**</u> **A (Knowledge):** WMO Convention mandates standardization and uniform publication of observations/statistics and encourages research/training – the foundation for global meteorological knowledge production. Institutionalized in recurring authoritative assessments such as State of the Global Climate. **B (Cooperation):** WMO coordinates global observing cooperation through systems like the Integrated Global Observing System (WIGOS)/Global Observing System (GOS) that integrate networks owned/operated by diverse actors. **C (Standards/Norms):** WMO issues technical regulations (WMO-No. 49) codifying meteorological standards and recommended practices. **D (Application):** The Convention includes furthering application of meteorology to aviation/shipping/agriculture and other activities – explicit science-to-service translation.	WMO Convention (1947), Art. 2[70]

[69] World Intellectual Property Organization, Convention Establishing the World Intellectual Property Organization. Available at https://www.wipo.int/treaties/en/convention/
[70] World Meteorological Organization (WMO), Convention of the World Meteorological Organization (WMO), Article 2. Available at https://oag.gov.bt/wp-content/uploads/2011/02/Convention-of-the-World-Meteorological-Organization.pdf.

World Bank	The World Bank's founding documents do not contain an explicit science mandate. However, if we consider institutionalized practice, the World Bank does perform somewhat of an epistemic function and knowledge transfer function. Functions: **A (Knowledge):** The World Bank institutionalizes global development knowledge through the annual World Development Report series (flagship knowledge product). **D (Application):** The Bank's operational model translates analytical knowledge into development finance/practice through lending and technical support (practice-level STI/evidence-to-implementation).	Articles of Agreement (1944), Art. I[71]
	Secretariat Departments/Offices and Other UN Entities	
Joint United Nations Programme on HIV/AIDS (UNAIDS)	UNAIDS' founding documents do not contain an explicit science mandate.	
United Nations High Commissioner for Refugees (UNHCR)	The Statute of UNHCR (GA Res. 428 (V), 1950) assigns the organization responsibility for international protection and coordination of refugee assistance. While not framed as a scientific body, it mandates the collection and dissemination of information on refugee populations and conditions, embedding an evidence function grounded in demographic and social data. Function: **A (Knowledge):** UNHCR is mandated to obtain and provide "information concerning the number and condition of refugees" and relevant legal frameworks. This is institutionalized through global data systems and flagship analytical outputs (e.g. *Global Trends Report*), based on demographic and statistical methodologies.	UNHCR Statute (1950)[72]
OHCHR	General Assembly Resolution 48/141 (1993) establishes the post of High Commissioner for Human Rights and mandates the Office to promote and protect all human rights, coordinate human rights activities across the UN system, and provide advisory services, technical assistance and information to support implementation. While not a scientific body, OHCHR has institutionalized a strong evidence, monitoring and analytical role grounded in human rights documentation, indicators, reporting and legal analysis. Functions: **A (Knowledge):** OHCHR collects, analyses and disseminates human rights information, reports, indicators and legal analysis to support UN human rights work. **D (Application):** OHCHR applies evidence and legal analysis through advisory services, technical assistance, capacity-building and support to national human rights implementation.	UN General Assembly Resolution 48/141 (1993)[73]

[71] World Bank, Articles of Agreement of the International Bank for Reconstruction and Development. Available at https://www.worldbank.org/en/about/articles-of-agreement.
[72] A/RES/428(V). Available at https://docs.un.org/en/a/res/428(v).
[73] Resolution 48/141. Available at https://docs.un.org/en/A/RES/48/141.

UNIDIR	UNIDIR has an explicit research mandate in its statute: it was established "for the purpose of undertaking independent research on disarmament and related problems", and its functions include providing "data" and supporting negotiations through "objective and factual studies and analyses". Functions: **A (Knowledge):** UNIDIR produces technical and policy-oriented research on disarmament, arms control and emerging technologies, functioning as a knowledge provider to the international security community.	UNIDIR Statute[74]
UNITAR	In general, the UNITAR Statute establishes it as an entity "for Training and Research," embedding a formal mandate to generate and mobilize knowledge (training plus research) in support of UN objectives. Functions: **A (Knowledge):** UNITAR conducts applied research and develops analytical tools to support training programmes and policy implementation. **B (Scientific Cooperation):** UNITAR facilitates knowledge exchange and capacity development across Member States, often linking academic expertise with policy communities.	UNITAR Statute[75]
United Nations Office for Project Services (UNOPS)	The UNOPS' founding documents do not contain an explicit science mandate.	UNDP/UNFPA/UNOPS Exec. Board Decision 2009/25[76]
United Nations Relief and Works Agency for Palestine (UNRWA)	The UNRWA's founding documents do not contain an explicit science mandate.	UNGA Res. 302 (IV)[77]
United Nations System Staff College (UNSSC)	The UNSSC's founding documents do not contain an explicit science mandate.	UNSSC Statute[78]
UNU	UNU has one of the clearest science/research mandates in the UN system: by its Charter, UNU's mission is to conduct "research into the pressing global problems of human survival, development and welfare", explicitly constituting a research function within the UN framework. Functions: **A (Knowledge):** UNU conducts independent research and produces analytical outputs across thematic institutes (e.g. climate, environment, governance), institutionalizing knowledge generation within the UN system. **B (Scientific Cooperation):** UNU operates as a distributed global research network of institutes and partners, facilitating	UNU Charter[79]

[74] United Nations Institute for Disarmament Research (UNIDIR), UNIDIR's Statute (2026). Available at https://unidir.org/unidir-statute/.
[75] UNITAR, Statute (English) (n.d.). Available at https://unitar.org/sites/default/files/media/publication/doc/unitar-statute-english-s.pdf.
[76] Executive Board of the United Nations Development Programme, the United Nations Population Fund and the United Nations Office for Project Services, Decisions Adopted by the Executive Board in 2009 (UNFPA, 2009). Available at https://www.unfpa.org/sites/default/files/board-documents/main-document/2009_English_Decisions_adopted_by_the_Executive_Board.pdf
[77] Resolution 302 (IV). Available at https://docs.un.org/en/a/res/302(iv).
[78] United Nations System Staff College, United Nations System Staff College (UNSSC) Statute. Available at https://www.unssc.org/sites/default/files/u3/unssc_statute.pdf.
[79] United Nations University, Charter of the United Nations University (UNU). Available at https://unu.edu/sites/default/files/2022-12/UNU-Charter-2014.pdf.

	collaboration among universities, research institutions and UN entities.	
UN WOMEN	General Assembly Resolution 64/289 (2010) establishes UN Women as the entity responsible for gender equality and women's empowerment, consolidating prior bodies, including the research-oriented United Nations International Research and Training Institute for the Advancement of Women. While not a scientific institution, its mandate embeds the generation and use of gender-disaggregated data and analysis as a core component of its work. Functions: **A (Knowledge):** UN Women institutionalizes gender data and analytical reporting (e.g. *Progress on the SDGs: Gender Snapshot*), grounded in statistical and social-scientific analysis.	UNGA Res. 64/289[80]
United Nations Conference for Trade and Development (UNCTAD)	In general, UNCTAD's founding resolution (General Assembly Resolution 1995 (XIX), 1964) positions it as the UN's focal point for trade and development analysis, combining research, intergovernmental deliberation and technical cooperation. Its mandate embeds economic research and data analysis, particularly in development economics and globalization, within its institutional role. Functions: **A (Knowledge):** UNCTAD produces authoritative analytical outputs such as the Trade and Development Report and World Investment Report, grounded in economic modelling and policy analysis. **E (SPI):** UNCTAD serves as an intergovernmental forum where research informs negotiations and policy debates on trade and development.	UN General Assembly Resolution A/RES/1995(XIX)[81]
UNODC	In general, UNODC's mandate combines research, policy support and technical assistance on drugs, crime and justice. While not framed as a scientific agency, it embeds criminological and statistical analysis within its operational model. Functions: **A (Knowledge):** UNODC produces analytical outputs such as the *World Drug Report*, based on global data collection and statistical analysis. **D (Application):** UNODC translates research into policy advice, legal reform support and capacity-building programmes.	UNODC Founding Conventions[82]
United Nations Office for Digital and Emerging Technologies (UNODET)	UNODET was established to strengthen system-wide coordination and policy engagement on digital and emerging technologies. Its mandate includes supporting the analysis of technological trends, fostering coherence across UN entities, and facilitating dialogue among governments, the private sector and the scientific and technical community. While not a research body, the Office contributes to the integration of scientific and technical knowledge	UN General Assembly, Pact for the Future and Global Digital Compact (2024)

[80] Resolution 64/289. Available at https://docs.un.org/en/a/res/64/289.
[81] Resolution A/RES/1995(XIX). Available at https://digitallibrary.un.org/record/203700?ln=en&v=pdf.
[82] United Nations, Office on Drugs and Crime, "Mandate", Treatment and Care. Available at www.unodc.org/unodc/en/treatment-and-care/mandate.html.

	into UN policy processes on digital transformation and emerging technologies. Functions: **A (Knowledge):** UNODET contributes to the analysis and dissemination of knowledge on digital and emerging technologies, supporting evidence-informed policy discussions across the UN system.	UN General Assembly Resolution A/RES/79/1 (2024)[83]
United Nations Department of Economic and Social Affairs (UNDESA)	The UN Charter (Art. 55) tasks the Organization with promoting solutions to "international economic, social, health and related problems", and DESA operationalizes this responsibility by producing authoritative economic, demographic and statistical analysis for intergovernmental deliberation. Through its servicing of the UN Statistical Commission (ECOSOC Res. 8 (II), 1947) and the Commission on Science and Technology for Development (ECOSOC Res. 46/235), DESA is structurally embedded in the UN's global statistical and quantitative social-science architecture. Functions: **A (Knowledge):** DESA institutionalizes global knowledge production through recurring flagship publications, including the *World Economic Situation and Prospects*, the *World Population Prospects*, and the *Sustainable Development Goals Report*. **C (Standards):** The Statistical Commission, serviced by DESA, functions as the main intergovernmental authority for global statistical standards, reinforcing DESA's epistemic role. **E (SPI):** DESA services formal science-policy mechanisms, notably the Commission on Science and Technology for Development and the Technology Facilitation Mechanism.	ECOSOC Res. 8 (II) (Statistical Commission)[84] Addis Ababa Action Agenda (2015)
United Nations Office for Disaster Risk Reduction (UNDRR)	UNDRR's mandate, anchored in the Sendai Framework for Disaster Risk Reduction (2015), emphasizes the role of science and technology in understanding and reducing disaster risk. It promotes the integration of scientific knowledge into risk governance without conducting primary research itself. Functions: **A (Knowledge):** UNDRR institutionalizes knowledge production and synthesis through the *Global Assessment Report* (GAR), which provides periodic, evidence-based assessments of global disaster risk using scientific modelling, risk analytics and interdisciplinary research inputs. UNDRR also collaborates with scientific bodies such as the International Science Council to develop global research agendas and knowledge products that help translate science into risk-informed decision-making.	Sendai Framework (2015)[85] UN General Assembly Resolution 56/195[86] Terms of Reference for Science and Technology Advisory Groups[87] Collaboration with ISC[88]

[83] Resolution A/RES/79/1. Available at https://docs.un.org/en/a/res/79/1.
[84] See UNDESA, "United Nations Statistical Commission", n. d. Available at https://unstats.un.org/UNSDWebsite/statcom/.
[85] United Nations, Sendai Framework for Disaster Risk Reduction. Available at https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030.
[86] Resolution A/RES/56/195. Available at https://documents.un.org/doc/undoc/gen/n01/492/61/pdf/n0149261.pdf.
[87] UNISDR, *The UNISDR Global Science and Technology Advisory Group for the Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030* (2018). Available at https://www.unisdr.org/2016/docs/stag/Revised%20G-STAG%20TOR%20final.pdf.
[88] International Science Council, "UNDRR and the International Science Council renew partnership to advance risk-informed sustainable development", 13 November 2025. Available at https://council.science/news/undrr-isc-mou/.

	E (SPI): UNDRR facilitates the Global Platform for Disaster Risk Reduction and supports science-policy dialogue through mechanisms such as the UNDRR Science and Technology Platform and Science and Technology Advisory Groups at global and regional levels.	
Office for the Coordination of Humanitarian Affairs (OCHA)	OCHA's mandate, anchored in General Assembly Resolution 46/182 (1991), is to coordinate humanitarian response and ensure effective information-sharing among actors. While not a scientific body, its functions include the systematic collection, analysis and dissemination of operational data to support humanitarian decision-making, embedding an applied evidence function within its coordination role. Functions: **A (Knowledge):** OCHA institutionalizes humanitarian data and analysis through products such as the Humanitarian Needs Overviews, ReliefWeb or the Humanitarian Data Exchange.	UNGA Res. 46/182 (1991)[89]
United Nations Research Institute for Social Development (UNRISD)	UNRISD was established as an autonomous research institute to conduct "multidisciplinary research on the social dimensions of contemporary development issues". This explicit research mandate positions it as a dedicated social-science body within the UN system. Functions: **A (Knowledge):** UNRISD conducts independent research programmes and produces analytical publications on inequality, social policy and development.	UNRISD Mandate[90]
Office for Outer Space Affairs (UNOOSA)	The mandate of UNOOSA, established to service COPUOS, is to promote international cooperation in the peaceful uses of outer space. While grounded in space science and technology, the Office itself does not conduct scientific research but facilitates coordination and information exchange. Functions: **B (Scientific Cooperation):** UNOOSA supports international cooperation in space science and technology through COPUOS and associated programmes. **D (Application):** UNOOSA promotes the application of space technology for development (e.g. UN-SPIDER programme for disaster management).	UNGA Res. 1472 (XIV), 1959 (COPUOS)[91]
United Nations Economic Commission for Europe (UNECE)	UNECE, established by ECOSOC in 1947, combines economic analysis with the development of technical conventions and statistical standards across sectors such as transport, environment and trade. While not a scientific body per se, its mandate embeds technical and statistical knowledge in regional governance. Functions:	ECOSOC Resolution E/RES/36 (IV)[92] UNECE Conventions[93]

89 Resolution A/RES/46/182. Available at https://docs.un.org/en/a/res/46/182.
90 United Nations Research Institute for Social Development, "About". Available at www.unrisd.org/en/about.
91 General Assembly resolution 1472 (XIV). Accessible at https://digitallibrary.un.org/record/206356.
92 Resolution E/RES/36(IV). Available at https://docs.un.org/en/E/RES/36(IV).
93 United Nations, Economic Commission for Europe, "Environment Policy: Conventions and Protocols". Available at unece.org/environment-policy/conventions-and-protocols.

	A (Knowledge): UNECE produces statistical data and analytical reports supporting regional economic cooperation. **C (Standards/Norms):** UNECE develops technical conventions and regulatory frameworks (e.g. vehicle standards) grounded in engineering and environmental science.	
Economic Commission for Africa (UNECA)	UNECA, established by ECOSOC Resolution 671 A (XXV) (1958), is mandated to promote economic development and regional cooperation, including through studies, investigations and the collection and dissemination of economic and social information. While its founding resolution does not explicitly assign a scientific mandate, ECA has institutionalized a strong analytical and statistical role, embedding economic and technical knowledge in regional development processes. Functions: **A (Knowledge):** ECA produces analytical outputs, statistical data, and regional assessments that support evidence-based policy-making and economic cooperation.	ECOSOC Resolution 671 A (XXV) (1958)[94]
Economic Commission for Latin American and the Caribbean (ECLAC)	ECLAC, established by ECOSOC Resolution 106 (VI) (1948), is mandated to promote economic development through regional cooperation, including undertaking studies and collecting and disseminating economic and social information. While its founding resolution does not explicitly assign a scientific mandate, ECLAC has developed a strong analytical and policy-research function, embedding economic and social science knowledge in regional governance. Functions: **A (Knowledge):** ECLAC produces analytical studies, statistical data and policy-oriented research supporting economic and social development in the region.	ECOSOC Resolution 106 (VI) (1948)[95]
Economic and Social Commission for Asia and the Pacific (ESCAP)	ESCAP, established by ECOSOC Resolution 37 (IV) (1947), is mandated to promote economic and social development through regional cooperation, including undertaking studies and collecting and disseminating economic and social information. While its founding resolution does not explicitly assign a scientific mandate, ESCAP has institutionalized an analytical and statistical role, embedding economic and technical knowledge in regional cooperation frameworks. Functions: **A (Knowledge):** ESCAP produces analytical reports, statistical data and policy research supporting regional development and cooperation.	ECOSOC Resolution 37 (IV) (1947)[96]

[94] Resolution 671 A (XXV). Available at https://digitallibrary.un.org/record/213171?v=pdf.
[95] Resolution 106 (VI). Available at https://docs.un.org/en/e/RES/106(VI).
[96] Resolution 37 (IV). Available at https://docs.un.org/en/e/RES/37(IV).

Economic and Social Commission for Western Asia (ESCWA)	ESCWA, established by ECOSOC Resolution 1818 (LV) (1973), is mandated to promote economic and social development through regional cooperation, including undertaking studies and collecting and disseminating economic and social information. While its founding resolution does not explicitly assign a scientific mandate, ESCWA has developed an analytical and statistical role, embedding economic and technical knowledge in regional development processes. Functions: A (Knowledge): ESCWA produces analytical studies, statistical data and policy reports supporting regional development and cooperation.	ECOSOC Resolution 1818 (LV) (1973)[97]
	Related Organizations/Treaty Bodies/Non-UN Bodies	
Convention on Biological Diversity (CBD)	The CBD, adopted in 1992, is explicitly grounded in scientific knowledge, research, information exchange and technical and scientific cooperation. The Convention requires Parties to promote and cooperate in scientific research, develop training and capacity in biodiversity science, and facilitate the exchange of relevant information (Articles 12, 17 and 18). Article 25 further establishes the Subsidiary Body on Scientific, Technical and Technological Advice as an intergovernmental mechanism to provide scientific and technical advice to the Conference of the Parties. Together, these provisions embed biodiversity science, monitoring and knowledge exchange within the treaty regime and institutionalize a structured science–policy interface. Functions: **A (Knowledge):** The Convention mandates scientific research, training and the exchange of biodiversity-related data and information. **B (Cooperation):** The Convention promotes international scientific and technical cooperation among Parties. **E (Science–Policy Interface):** SBSTTA functions as a treaty-embedded science–policy interface, providing scientific and technical advice to inform decision-making by the Conference of the Parties.	Convention on Biological Diversity, Articles 12, 17, 18, and 25[98]
Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO)	The CTBTO regime is explicitly technical-scientific in how it is built: the Treaty establishes a global "verification regime" (including an International Monitoring System) and provides for ongoing "review of relevant scientific and technological developments". Functions: **C (Standards/Norms):** the Treaty establishes a global technical verification regime with standardized monitoring systems. **E (Science–Policy Interface):** the CTBTO includes mechanisms for reviewing scientific and technological developments relevant to verification.	CTBTO, art. IV[99]

[97] Resolution 1818 (LV). Available at https://digitallibrary.un.org/record/215051?v=pdf.
[98] United Nations, Convention on Biological Diversity.
[99] Resolution 50/245. Available at https://treaties.un.org/doc/source/docs/A_RES_50_245-E.pdf.

Organisation for the Prohibition of Chemical Weapons (OPCW)	The Chemical Weapons Convention embeds scientific expertise in its verification regime, mandating technical evaluation and inspection to ensure compliance. Under Article VIII, the Technical Secretariat provides "technical assistance and technical evaluation" for implementation of the Convention, making scientific/technical capability (including analytical chemistry and inspection technologies) integral to the OPCW's legal functions. Functions: **C (Standards/Norms):** The Technical Secretariat is tasked to carry out "verification measures" and provide technical evaluation, grounded in chemistry and laboratory science.	CWC, art. VIII[100]
International Atomic Energy Agency (IAEA)	The IAEA Statute contains some of the UN system's most explicit science provisions: to "foster the exchange of scientific and technical information on peaceful uses of atomic energy" and to "encourage the exchange and training of scientists and experts." These clauses, together with the Statute's safeguards provisions, embed scientific research, training, and knowledge exchange into the Agency's legal DNA. Functions: **B (Scientific Cooperation):** IAEA coordinates international nuclear research through laboratories, coordinated research projects and scientific networks. **C (Standards /Norms):** IAEA establishes nuclear safety standards and verification mechanisms (e.g. safeguards system), grounded in nuclear science and engineering. **D (Application):** IAEA implements technical cooperation programmes applying nuclear technologies in health, agriculture and energy.	IAEA Statute (1956), Art. II[101]
International Criminal Court (ICC)	The ICC's founding documents do not contain an explicit science mandate.	Rome Statute of the ICC[102]
International Organization for Migration (IOM)	IOM's founding documents do not contain an explicit science mandate, even though IOM later developed a strong research and data portfolio operationally. Functions: **A (Knowledge):** IOM produces migration data and analysis (e.g. World Migration Report), institutionalizing an epistemic function through practice.	IOM Constitution[103]
International Trade Centre (ITC)	The ITC's founding documents do not contain an explicit science mandate.	General Assembly Resolution 2297, A/RES/2297(XXII)[104]

[100] Organisation for the Prohibition of Chemical Weapons, Article VIII – The Organization. Available at https://www.opcw.org/chemical-weapons-convention/articles/article-viii-organization.
[101] IAEA, Statute of the International Atomic Energy Agency. Available at https://www.iaea.org/about/statute.
[102] United Nations Office of Legal Affairs, Rome Statute of the International Criminal Court. Available at https://legal.un.org/icc/statute/99_corr/cstatute.htm.
[103] International Organization for Migration, "IOM Constitution", last amended 28 October 2020. Available at www.iom.int/iom-constitution.
[104] General Assembly resolution 2997 (XXVII). Available at https://docs.un.org/en/a/res/2997(XXVII).

World Trade Organization (WTO)	Related but not a UN specialized agency. WTO is included here because UN negotiations and agencies routinely interface with it. The SPS Agreement requires that sanitary and phytosanitary measures be "based on scientific principles", not maintained without "sufficient scientific evidence", and demonstrate consistency with risk assessment obligations. The TBT Agreement similarly disciplines technical regulations and standards.[23] While the WTO is autonomous, these legally-binding science requirements shape how States handle science-for-policy at the trade–health–agriculture–environment interface. Functions: **C (Standards/Norms):** The SPS Agreement institutionalizes science-based risk assessment as a legal requirement in trade regulation, embedding scientific validity into global rulemaking.	WTO SPS Agreement
IUCN	Related but not a UN specialized agency, IUCN is included here because UN negotiations and agencies routinely interface with it. The Statutes of the International Union for Conservation of Nature establish the Union as a global scientific and technical network whose purpose includes to "influence, encourage and assist societies … to conserve the integrity and diversity of nature", and to provide "scientific knowledge and advice" for conservation. The Statutes further mandate IUCN to "prepare and publish statements, reports and scientific studies", and to promote research and cooperation. Functions: **A (Knowledge):** IUCN produces authoritative scientific assessments, notably the Red List of Threatened Species, based on standardized methodologies and expert review. **B (Scientific Cooperation):** IUCN operates a global network of expert commissions coordinating research and knowledge exchange. **C (Standards/Norms):** IUCN develops globally used scientific standards (e.g. Red List Categories and Criteria). **E (Science Policy interface):** IUCN provides scientific input to international processes, translating science into policy guidance.	IUCN Statutes and Regulations[105]

[105] International Union for Conservation of Nature, Statutes, including Rules of Procedure of the World Conservation Congress, and Regulations (Gland, Switzerland, 2022). Available at https://portals.iucn.org/library/sites/library/files/documents/2022-002-En.pdf.

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