

One Health Data Convergence Declaration of intent

The signatories to this Declaration of Intent,

Recognizing that human health, animal health, plant health, the health of ecosystems, and socio-economic environments constitute a deeply interconnected system, making essential the full implementation of the One Health approach, as defined by the One Health High Level Expert Panel (OHHLEP), recalling existing global One Health frameworks and collaborations, including the Quadripartite alliance (WHO, FAO, WOA, UNEP) and the One Health Joint Plan of Action, as key reference structures for advancing coordinated and coherent action;

Considering that health, environmental and climate crises have highlighted the limitations of sectoral approaches and the need to strengthen collective capacities for prevention, anticipation, surveillance and early signal detection, systemic risk assessment, and mitigation;

Considering the increasing global incidence of cardiovascular disease projected to rise 91%, diabetes Expected to rise 146%, cancers, projected to rise by 80% by 2050, and the need, given the biological complexity of the disease and its interactions with risk factors, to promote international data sharing;

Observing that, despite the growing production of data across all relevant domains and initiatives aimed at improving their aggregation and cross-use or at structuring their sharing, such data remain fragmented, heterogeneous and weakly interoperable across domains, thereby limiting their use for the operational implementation of the One Health approach; including their limited accessibility in machine-readable formats and their insufficient readiness for advanced analytics and artificial intelligence applications;

Emphasizing that the priority lies while leveraging to the maximum existing governance structures and data systems than in enabling existing data to become interoperable, coherent and mobilizable within an interdisciplinary and cross-sectoral perspective, as well as strengthening the capacity of existing structures to cooperate effectively together; including through the development of AI-compatible datasets, interoperable infrastructures and shared analytical capacities;

Reaffirming that any data convergence process must respect existing legal and ethical frameworks, notably regarding the protection of personal data, State sovereignty, intergovernmental organizations mandated by States, and data producers, as well as the

principles of proportionality and public interest; while ensuring equitable participation and recognition of contributions from all stakeholders, including low- and middle-income countries;

Recalling the international principles of open science, in particular the FAIR and CARE principles, as well as the principle according to which data should be “as open as possible, as closed as necessary”; and supporting the development of data governance approaches that are inclusive, transparent and accountable;

Hereby adopt this One Health Data Convergence Declaration of Intent, a voluntary and non-legally binding framework intended to establish a common reference framework to guide data convergence towards greater interoperability across domains, enabling their mobilization and valorization in support of the implementation of the One Health approach and their translation into concrete use cases, particularly to address health, environmental and climate crises and to contribute to cancer and non-communicable diseases prevention and control, including through the use of modeling tools and AI-ready analytical frameworks.

1 – Purpose of the Declaration of Intent

The purpose of this Declaration of Intent is to:

1. Propose a common and operational definition of One Health data, based on their capacity to be mobilized within an interdisciplinary and cross-sectoral approach; including their usability in digital, interoperable and machine-readable environments;
2. Promote the progressive convergence of data originating from the domains relevant to the One Health approach, with a continuous objective of improving and harmonizing existing frameworks and systems; including alignment with international standards and interoperability frameworks;
3. Strengthen data cross-referencing and comparability and facilitate data coherence in order to enable analysis of interactions, dynamics, and cascading effects among the different One Health components; including multi-scale and multi-factorial analyses supported by advanced modeling tools;
4. Support the valorization of existing data for observation, monitoring, strengthening national and regional capacities, prevention, scientific expertise, research, and public decision-making, including decision-support tools leveraging data integration and predictive analytics.

2 – Scope of Application

This Declaration of Intent applies to data and metadata, in alignment with the internationally recognized definition of One Health, and without limiting its evolving scope, regardless of their format or management arrangements, relating in particular to the following domains:

- human health, including prevention, surveillance, care and determinants;
- animal health;
- plant health;
- physical, chemical, biological, social, psychosocial and aesthetic environmental factors, natural environments and climate;
- agriculture, food systems and production systems;
- Earth Observation
- ecosystems, including their observation, the characterization of their status, and their evolution in both biological and physico-chemical components, as well as socio-ecosystems integrating social, economic, territorial and behavioral determinants;
- reference frameworks, nomenclatures, indicators and tools necessary for their interpretation.

These data, designated as “One Health data”, shall have been produced according to reproducible and transparent scientific protocols and, where possible, structured to enable interoperability, machine readability and reuse across digital systems. These data may be considered functionally, according to their role in supporting specific One Health use cases, thematic areas of collaboration or policy objectives, rather than as a fixed or standalone category.

3 – Intended Objectives of the Declaration of Intent

This Declaration of Intent aims to ensure that One Health data present characteristics enabling:

- their mobilization, compatibility and coherence (based on existing reference frameworks, units, methods, quality standards and traceability requirements, notably within legal frameworks regulating health data) in an interdisciplinary and cross-domain manner;
- their technical and semantic interoperability with data originating from other domains of the One Health approach, including the use of shared ontologies, standards and interoperable data models;

- their integration into systemic analyses, including interactions, multi-exposures and complex dynamics, supported by modeling approaches and AI-enabled analytical tools;
- the production of One Health indicators comparable over time and across locations, based at minimum on:
 - an explicit temporal unit,
 - a localization unit,
 - a clearly defined scale or level of granularity;
- the implementation of consistent data quality assurance and validation mechanisms across domains;
- the use of standardized definitions, methodologies and reference data sources, including relevant covariates;
- the transparent communication of data limitations, uncertainties and interpretative frameworks.

4 – Principles for Action

The signatories recognize the following common principles for action:

1. Data sovereignty, excluding any obligation of centralization, transfer or sharing;
2. Respect for existing legal, regulatory and ethical frameworks, including the protection of personal data and privacy, in compliance with applicable legal and ethical standards;
3. Technical and semantic interoperability as a priority objective, integrated from the stage of data description, i.e. metadata, including machine-readable metadata and standardized formats enabling automated processing;
4. Identifier standards, standardized access and reuse protocols, interfacing mechanisms (e.g. APIs), semantic standardization and syntactic standardization and enabling secure, scalable and AI-compatible data access;
5. A progressive and pragmatic approach, based on capacities and needs and fostering capacity building and technical support where needed;
6. The pursuit of the public interest, notably in prevention and the protection of populations and ecosystems;
7. Subsidiarity vis-à-vis sectoral approaches aimed at interoperability and data sharing;
8. Transparency and traceability of uses and processing;
9. Equity in access to, use of and benefits derived from data, including considerations for fair and inclusive participation across countries and stakeholders.

5 – Common Commitments

The signatories will endeavour, on a voluntary basis, to:

1. Identify and document data relevant to operationalize the One Health approach, notably through appropriate metadata, including the development of catalogues and inventories of available datasets;
2. Progressively improve interoperability of such data, relying on existing standards, norms, international recommendations, reference frameworks or good practices, and promoting alignment with global interoperability initiatives;
3. Facilitate the coherence of data originating from different domains, in particular for cross-cutting analyses;
4. Develop and support concrete use cases demonstrating the operational value of data convergence and sharing, including use cases leveraging artificial intelligence, predictive modeling and decision-support systems;
5. Share methodological and technical feedback, without any obligation to disseminate the data themselves, including best practices in data integration, analytics and governance;
6. Build upon existing systems and infrastructures.
7. Ensure that activities undertaken under this Declaration are aligned with relevant national and international standards, and that associated metadata and documentation are accurate, complete and interoperable;

These commitments do not create any legal obligation to share or open data.

6 – Modalities of Implementation

Implementation of this Declaration of Intent relies on:

- voluntary initiatives undertaken by the signatories;
- the use and adaptation of existing tools for data cataloguing, interoperability and valorization, including digital platforms enabling data discovery and access;
- efforts to pool existing initiatives led by signatories in the fields of data cataloguing and interoperability, on a voluntary basis;
- a demonstration-by-example approach promoting reproducibility and scaling-up, based on existing mechanisms developed in national, regional and international contexts, including pilot projects and demonstrators integrating advanced analytical tools;
- alignment with existing frameworks and initiatives at national, regional or international levels, such as such as national digital health strategies, Open Science Wildlife, Livestock data and agriculture repositories, Quadripartite's

announced global One Health Intelligence System and Earth Observation (Satellite data) sources.

This Declaration of Intent does not establish any new governance structure. It encourages the development of a shared working capacity across structures and institutions.

7 – Monitoring and Evolution

The signatories may, on a voluntary basis:

- exchange on the state of the art within international summits dedicated to monitoring progress of their work, including sharing lessons learned from implementation and use cases;
- propose evolutions or clarifications to this Declaration of Intent;
- contribute to the development of technical documents.

8 – Final Provisions

This Declaration of Intent does not constitute an international agreement and does not create rights or obligations governed by international law for the signatories or their respective States.

List of Endorsing Entities

The entities listed below have expressed their intention to endorse this Declaration. This list will be updated as further endorsements are received.

States

- Cambodia
- Spain
- France
- Kenya
- United Kingdom
- Thailand
- Singapore
- Egypt
- Democratic Republic of the Congo
- [Country Name]

International Organizations

- World Health Organization (WHO)
- World Organization for Animal Health (WOAH)
- Food and Agriculture Organization of the United Nations (FAO)

Others entities

- [Institution Name], [Country]
- Green Data for Health, France
- PREZODE initiative, international
- Virchow foundation and Virchow prize, Germany
- German Health Alliance, Germany
- Health Diplomacy Alliance, International
- Research Centre for Health and Wellbeing, Shanghai University, China
- Saint-Joseph University of Beirut, Lebanon
- Consortium of Universities for Global Health, International
- Balkan One Health Network (BOHN), Bosnia and Herzegovina, Serbia, Montenegro, North Macedonia, Kosovo and Bulgaria
- Asia eHealth Information Network (AeHIN), International
- International Research Laboratory HealthDEEP, France, Thailand
- Frontiers Research Foundation, Switzerland
- German Environment Agency, Germany
- Montreal University, Canada
- French National Academy of Medicine, France
- Oswaldo Cruz Foundation (Fiocruz), Brazil
- Consultative Group on International Agricultural Research
- Africa Centres for Disease Control and Prevention
- Global health Group, KCCR at The Kwame Nkrumah University of Science and Technology, Ghana
- The Lancet One health commission, United Kingdom
- Center for Global Health at the Technical University of Munich (TUM), Germany
- Consultative Group on International Agricultural Research, International