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2024-2025 Work Plan of the Open Data and Science Committee

1. This document has been prepared by the IAI Directorate.

Background

- 2. The work plan below describes the objectives and activities agreed upon by the IAI Open Data and Science working group members for the period 2024-2025.
- 3. Article II of the Agreement Establishing the IAI states that "The Institute shall seek to achieve the principles of scientific excellence, international cooperation, and the full and open exchange of scientific information on global change."
- 4. Along these lines, the 26th Conference of the Parties (Guatemala, 2018) adopted Open Data Policies and Principles for the IAI (Decision XXVI/45).
- 5. Six years after the adoption of this policy, it is important to advance the implementation of the Open Data Policies and Principles for the IAI and update its content in the context of rapid cultural and technological advances in the field of open science and open data.
- 6. The Conference of the Parties is invited to assess and offer feedback on the work of the IAI Open Data and Science working group and become aware of its 2024-2025 work plan.

7. The Open Science and Data work plan proposes activities and methodologies to advance in the fulfillment of three major objectives aligned with the IAI's Open Data Policy.

Workplan:

Objective 1: Implement and update the IAI's Open Data Policy: The design of the plan is based on the recognition that researchers and decision-makers who are part of the IAI community have a particular information supply and demand profile. Therefore, to be effective, the plan's activities must be designed with these particularities in mind. The supply and demand of academics and researchers is mainly oriented towards research data and scientific publications (articles and reports). Conversely, decision-makers generally demand information and knowledge with a higher level of synthesis and integration, which is often found in policy briefs and synthetic evaluations.

Activity 1.1. Develop good practices for open data generation: The IAI regularly awards funding for initial (seed) and advanced research projects of a multinational nature, in the Americas and on transcontinental shelves (Belmont Forum). Projects funded by the IAI must comply with the IAI's open data policy and principles, which mainly include the requirement to share research data and scientific publications produced by the projects. To accompany the fulfilment of this requirement by the research projects currently funded and those to be funded in the next calls, it is important to establish good practices in the generation of open data and to develop training material (manuals, webinars) to guide them in their adoption. Funding agreements with projects will incorporate these good practices as a requirement.

Activity 1.2. Participatory updating of the IAI's Open Data Policy: Every policy requires periodic updating to adapt its technical and administrative components to changes in the context. Likewise, the updating of a policy must occur through a participatory process in which the needs and knowledge of the different social actors involved are incorporated and integrated. It is timely to update the IAI Open Data Policy through a participatory process involving IAI staff, advisory board members, and representatives of IAI Parties and partners.

Objective 2. Improve the accessibility and usability of IAI's Open Data platforms: The IAI has worked on developing Open Data platforms to promote the availability of research data and scientific publications generated by projects funded by the Institute. Based on the conceptual and technological developments available today, it is possible to ensure that the content of these platforms (research data and scientific publications) is consulted and used more frequently by end users. The content of such platforms can even be expanded to contain information and knowledge that is more usable by decision-makers (e.g., policy briefs and synthetic assessments).

Activity 2.1. Improve the accessibility and usability of the Repository and Search Engine of Scientific Publications: The IAI has on its website a "Database of scientific

publications and reports generated by projects and activities sponsored by the IAI" (https://www.iai.int/es/article). This platform consists of a repository and a web browser. The repository contains more than 600 scientific articles and reports published by IAI-funded projects between 1997 and 2024, with the highest frequency of entries from 2012 onwards. The web search engine contains fields with the basic search criteria. The IAI is in the process of redesigning its website, which represents an opportunity to also redesign this repository and its search engine with the aim of making them more visible and usable by the IAI's multilingual community.

Activity 2.2. Evaluate the relevance and feasibility of generating a Repository and Search Engine for Policy Summaries and Synthetic Evaluations: As mentioned above, decision-makers tend to demand information with a higher degree of synthesis and integration, compared to researchers. A strategic goal of the IAI is to respond to the information needs of the Parties, so it is important to generate instruments capable of offering the type of information that decision-makers usually demand. Numerous national and regional research institutes, as well as intergovernmental science-policy platforms, periodically generate thematic evaluations with regional or subregional resolution with the aim of offering information "tailored" to the demands of decision-makers. However, these assessments and policy briefs are often fragmented and scattered across the websites of the many agencies that produce them. In its role as an articulator between the production and use of knowledge for decision-making, it is opportune to evaluate the possibility of generating a Repository and Search Engine for Policy Summaries and Synthetic Evaluations on the IAI website to facilitate access to this information in different languages by the Parties.

Activity 2.3. Improve the accessibility and usability of the Database Repository: The "Open Data Catalog" in the Harvard Dataverse (https://dataverse.harvard.edu/dataverse/IAI?q=&types=datasets&sort=dateSort&order=desc& page=1). The Harvard Dataverse is a free data repository open to all researchers in any discipline, both inside and outside the Harvard community, where research data can be shared, archived, cited, accessed, and explored. Each individual Dataverse collection is a customizable collection of datasets (or a virtual repository) for organizing, managing, and displaying datasets. Between 2019 and 2022, IAI-funded projects have deposited 23 research databases with different characteristics, from campaign reports, field data sheets, and geographic information layers, to the Harvard Dataverse. These databases are thematically classified into four groups: (i) Ecosystems, Biodiversity, and Land Use, (ii) Climate Variability in the Americas, (iii) Atmospheric, Oceanic, and Inland Water Processes, and (iv) Human Dimensions and Applications. Taking into account the low number of downloads of the databases contained in this IAI repository, it is appropriate to review what type and quality of databases are deposited in the Harvard Dataverse, evaluate whether this is the most appropriate open data repository and how access to the data deposited there is facilitated from the IAI's communication channels (e.g. website).

Activity 2.4. Evaluate the situation of the IAI Data and Information System (IAI-DIS): To have a platform to contain and make available the research databases produced by the projects funded by the IAI, the Institute developed and maintained for more than ten

years (between 1996 and 2008 approximately) a "Data and Information System" (DIS, for its acronym in English). Taking into account the resources and experience invested by the IAI in this system and the need to redesign the current research data repository (activity 2.3), it is appropriate to assess the status of this system and explore the possibility of recovering some material (databases) or non-material resources (contacts, lessons learned) from this experience.

Objective 3. Support evaluation and scoping processes of IAI Parties and partners: The governments of the IAI member countries, as well as international and intergovernmental organizations that are partners of the IAI, periodically promote evaluation and diagnostic processes, structured either thematically or geographically, that demand a large quantity and good quality of information. Because of its mission and activities, the IAI is in a very good position to support these processes by providing information produced in the Americas on various topics related to global change.

Activity 3.1. Support United Nations Common Country Analyses: The United Nations Development Coordination Office (DCO) periodically coordinates the conduct of Common Country Analyses, which represent the basic input for generating Cooperation Frameworks between countries and the United Nations. These analysis papers contain an assessment of the status and trends of each country, which is structured around the Sustainable Development Goals. The DCO for Latin America and the Caribbean contacted the IAI to evaluate ways in which the Institute could provide information for the 6 Common Country Analyses of the region that are at an early stage. The IAI's support to this process consists of compiling and producing synthesis documents on the status and trends in variables critical to fulfilling the Sustainable Development Goals for Argentina, Cuba, Guatemala, Mexico, Panama and Uruguay.

Activity 3.2. Support the IPCC Climate Change and Cities Assessment: A strategic objective of the IAI is to strengthen the presence and participation of science from the Americas in intergovernmental science and policy platforms. During 2024, the Intergovernmental Panel on Climate Change (IPCC) is defining the scope of an assessment on climate change and cities. In this context, this evaluation represents an opportunity to increase the impact of the information produced in and for the region in global evaluations. From the information contained in the IAI's repository of articles and reports and other sources of information, it is possible to compile "packages" of literature (with emphasis on grey literature) relevant to this IPCC assessment, which can be presented to the authors of the assessment during the drafting stage or in third-party review instances.

Activity 3.3. Support the definition of the scope of the Belmont Forum CRA on Oceans, Coasts and Islands: During 2024, the Belmont Forum, ANR France, and the IAI are defining the scope of the Collaborative Research Action (CRA) on Oceans, Coasts and Islands. Defining this CRA's scope requires identifying research gaps and priority issues at the global level and within each region as information inputs. The IAI's repository of articles and reports represents an important source of information to support the

identification of research gaps and priority issues on Oceans, Coasts and Islands in the Americas, in coordination with the IAI committee of the same name.

Activity 3.4. Support the development of the LACI pilot on Data: The Initiative to Enhance Climate Risk Assessment Capacity and Catalyze Partnerships to Inform Decisions in Latin America and the Caribbean (LACI) is a collaborative effort between the U.S. Global Change Research Program and the U.S. Group on Earth Observations (USGEO) and regional partners, including AmeriGEO and the IAI. This initiative is developing four regional pilots, one on Data Management for Climate Risk Assessment. This pilot is planned to be developed in the La Plata Basin, and for its development, it will require local information and capacities for the management of such information that the IAI can provide.

Conclusions

- 8. The Directorate has incorporated these actions into the Strategic Plan (IAI/COP/32/8/d) and will report on advances to implement the plan in subsequent meetings of the Executive Council and Conference of the Parties.
- 9. Parties, Associates and members of the SAC and SPAC are invited to join the working group during the intercessional period, 2024-2025.
- 10. These activities will help the IAI to address its mission of ensuring the "full and open exchange of scientific information relevant to global environmental change".
- 11. The Directorate has hired an Open Data/Science Specialist to lead the implementation of these activities.

Recommendation

12. The Conference of the Parties is invited to take note of this report.