Results of the Scoping Workshop for the Belmont Forum Collaborative Research Action (CRA) call on Climate, Environment and Health II (CEH2): Latin America and the Caribbean

2022

The Inter-American Institute for Global Change Research (IAI), an intergovernmental organization with 19 Parties in the Americas, promotes transdisciplinary research and the enhancement of capacities to improve public awareness and provide information to governments for the development of public policy relevant to global environmental change, based on scientific excellence, international and intersectoral cooperation, and the open exchange of knowledge. As part of its strategic plan 2019–2044 (Strategic Plan: http://www.iai.int/pdf/en/Strategicplan-en.pdf), the IAI Directorate also hosts the Belmont Forum Secretariat.

The Belmont Forum is a partnership of funding organizations, international science councils, and regional consortia committed to the advancement of transdisciplinary science on environmental change issues that require global coordination to accomplish science goals, create synergy, and avoid duplication. Its operations encourage international transdisciplinary research providing knowledge and research funds for understanding, mitigating, and adapting to global environmental change.

The United States Global Change Research Program (USGCRP) is a federal program mandated by U.S. Congress to coordinate federal research and investments in understanding the forces shaping the global environment, both human and natural, and their impacts on society. USGCRP facilitates collaboration and cooperation across its 13 federal member agencies to advance understanding of the changing Earth system and provide a gateway to authoritative science, tools, and resources to help people and organizations across the country manage risks and respond to changing environmental conditions.

Suggested citation: Torres I, Watson A, Grossman A, Ganapati S, Stewart-Ibarra A. Report on the Scoping Workshop for the Belmont Forum Collaborative Research Action (CRA) call on Climate, Environment and Health II (CEH2): Latin America and the Caribbean 2022. Montevideo: Inter-American Institute for Global Change Research (IAI), 2022.

Executive Summary

This report aims to identify the research and capacity building priorities, and main partners, in the region of Latin America and the Caribbean at the climate, environment and health nexus. It is the result of a workshop held in August, 2021, with more than 150 researchers and government officials from 35 countries.

The main challenges for using information across the health, environment, and climate sectors are related to availability of data and frameworks for engagement and collaboration, followed by limitations in knowledge production and mobilization.

• Lack of data was the most frequent concern, followed by barriers to accessing existing data and limited data standardization, resulting in unreliable data, data of poor quality, poorly shared data, difficulties in comparing data, and the need for legal frameworks to change the data landscape.

• The limitations related to frameworks allowing for engagement and collaboration included a lack of involvement of Indigenous and local peoples, and weak governance structures and a lack of coordination in working among different sectors, communities and countries. Interested parties also lack knowledge about governance by non-governmental actors and the environmental agenda is often absent in health systems.

• The most frequently mentioned limitations related to knowledge production and mobilization included barriers to data production, limited data analysis capacity, limited interdisciplinary (involving more than one discipline) and transdisciplinary (across disciplines, with non-academic actors) research and knowledge production, and limited solutions-oriented research.

The challenges and opportunities in creating a CEH community of practice relate to knowledge production, translation and mobilization, and engagement & collaborative frameworks.

• Among the main challenges are: 1) research is not always planned to be applicable to policy and decision making, and end users are not commonly engaged in the research process, while the scientific and research community is not regularly involved in decision making processes, 2) in academia, research output is more valued than policy influence, which also guides what is funded, 3) environment/climate change impacts seem far removed from the day-to-day activities of health practitioners, 4) there is an absence of national policy frameworks for climate services and policy frameworks that specifically address the connection between climate and health.

• Among the opportunities are: 1) open-source solutions to make information and tools available, 2) co-development of information that is applicable by diverse subject matter experts and practitioner types, 3) sharing of capacity-building best practices, 4) having the support of NGOs to interact with governments 5) developing a roadmap and guidelines to create and support a community of practice, 6) fostering citizen science, and 7) exploring transcontinental multilateral governance tools.

While training and education limitations were the least frequent concern, there was much emphasis on the need for researchers to learn about communication to diverse audiences and the use of media to disseminate knowledge. However, there was also concern that researchers are not invested in sharing scientific findings widely or translating them to policy briefs and for wider publics.

The core partners identified were researchers/academics and civil society (communities, vulnerable and underrepresented groups, and Indigenous groups).

Report on the Scoping Workshop for the Belmont Forum Collaborative Research Action (CRA) call on Climate, Environment and Health II (CEH2): Latin America and the Caribbean 2022

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Background

In August 2021, more than 150 researchers and government officials from 35 states met to identify research and capacity building priorities at the intersection of Climate, Environment and Health (CEH) in Latin America and the Caribbean region. The workshop was organized by the Inter-American Institute for Global Change Research (IAI), the U.S. Global Change Research Program (USGCRP), and the Belmont Forum (BF). The event was held in conjunction with the Americas Group on Earth Observations, AmeriGEO Week 2021.

The first CRA on Climate, Environment and Health (CEH1) focused on improving understanding and fostering evidence-informed decision making to adapt and mitigate climate change effects while promoting public health. Future Earth, through its Health Knowledge Action Network (Health KAN) first proposed the theme of CEH, based on the conclusion that a *sustained effort across years, institutions, and disciplines would better accomplish the goals of innovative research approaches, North-South collaboration, new institutional partnerships, and effective engagement of the health sector*.

Institutions and programs were invited to **leverage their funds and other resources in a highly flexible process** aimed at fostering creative and innovative approaches to address scientific and institutional challenges. Through the Belmont Forum, CEH1 awarded 9 projects more than 12 million euros and in-kind contributions from 13 funding agencies in 10 countries. The projects included 69 researchers based in 20 countries.

This report on the scoping process is a contribution to the text of the CEH2 call planned for 2022.

Scoping Workshop Goals and Objectives

The Scoping Workshop aimed to bring together experts and funding institutions to develop an overall roadmap towards greater synergy than could otherwise be accomplished through a more siloed approach, and to define funding and research priorities and partnerships that will become the basis of the CRA call text.

The objectives were to:

- Identify the most critical obstacles in using environmental and climate information to reduce health risks and inform actions in the health sector, including scientific and institutional barriers, gaps and research needs.
- Foster greater communication across sectors and communities to develop a more integrated community that can both research and provide actionable information for decision makers.
- Engage new funders and in-kind contributors with the Belmont Forum and CEH2.

Anticipated Outcome and Products

- An understanding of the research and capacity building priorities, and main partners, in the region of Latin America and the Caribbean.
- Initial expressions of interest in collaborating from non-Belmont Forum funders.

Method and Materials

According to language ability/preference, workshop participants joined English and Spanish breakout rooms where they posted answers to three questions on a virtual whiteboard as they discussed in small groups with the aid of a moderator. All sessions were recorded. The answers posted in each group where transcribed and translated to English when relevant, compiled in spreadsheets and coded by two researchers. In a first round, lines of text were each given a primary code using grounded theory. In a validation meeting, the researchers reviewed the codes and grouped them in broader secondary codes. Finally, codes were grouped in main categories used for the analysis.

The questions posed to the workshop attendees were:

- What are the obstacles for using information for public health decision making and for using health information to climate change decision making?
- How to foster a community of practice to improve the uptake of science and informed decision making across the scales?
- Who would you consider or recommend as partners/contributors to the Belmont Forum and CEH2?

A total of 97 participants, excluding facilitators, attended. Most participants belonged to academia and government institutions at the national level. There was low representation of NGOs and intergovernmental bodies, and minimal representation of sub-national government institutions, the private sector and not-for- profits. See Fig. 1.

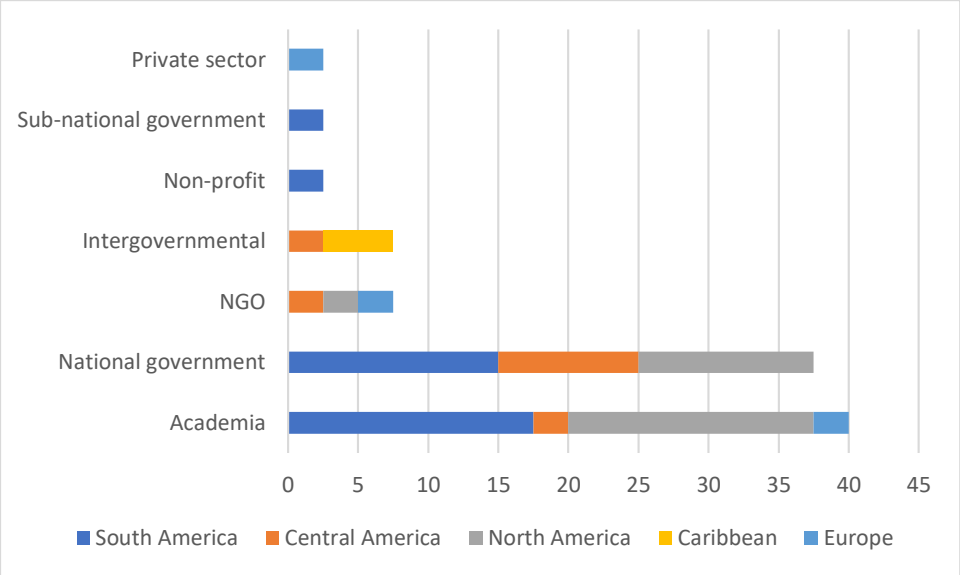

Fig. 1. Sectors represented in the CEH scoping workshop according to region.

Synthesis of Findings

Please refer to the Annex at the end of this document for the compilation of responses.

1. Critical obstacles in the use of health and environment/climate information for decision making

1.1 *Data limitations*

Data-related limitations were identified as the top obstacle in the area of information in decision-making, particularly in environment and climate information. Difficulties in developing and sustaining engagement and collaboration and in producing, translating, and mobilizing knowledge were also important concerns. Training and education were less of a concern.

The most frequently identified barrier was the lack of publicly available real-time and historical data on health, environment, and climate variables. Other barriers included difficulty accessing existing data and limited data standardization, unreliable or poor-quality data, or data with insufficient or incongruent granular spatial resolution, which are especially relevant in countries with a highly diverse geography. Standardization of types of data collected, and their spatial and temporal scales, would enable comparisons between health and environment/climate data across the region.

Data that would be useful to produce at the CEH nexus includes data for early warning systems that integrate health system data, monitoring of climate-sensitive diseases, georeferenced health data including disease cases and hospitalizations, and baseline studies of the impact of climate change on agro-ecosystems with a focus on nutritional security.

1.2 Limitations in knowledge production, translation, and mobilization

The greatest limitations related to knowledge production, translation, and mobilization included barriers to data production, limited data analysis capacity in countries, a lack of interdisciplinary and transdisciplinary research, and a lack of solutions-oriented research.

In terms of knowledge production, participants expressed concerns of oversimplification of relationships between climate and health, stemming from a focus on outcomes and pathways, which also influences the understanding of the lagged effects between exposure and outcomes. In terms of resources, participants highlighted the limited resources that are invested in applied research and in higher education and the restrictions that are placed on health data (due to protection of personal data) that are required for analysis.

Regarding knowledge translation and mobilization, an assumed tradeoff between chronic and acute impacts appears to impede a simultaneous focus on both, while the omission of health costs in environment/climate adaptation and mitigation actions makes it difficult to intentionally build health into such actions. Participants also emphasized the difficulties in establishing relationships with relevant intergovernmental organizations to effectively translate and mobilize knowledge.

"There is a mechanistic understanding of relationships between climate and health"

Participants agreed that there is a lack of solution-oriented and actionable research. One reason is that funding organizations and academia rarely prioritize or incentivize dissemination and policy translation. They also agreed that there are limitations in the use and interpretation of data, also due to limitations in multilateral agreements (because they are not sufficiently publicized and shared across continents).

The types of knowledge that are lacking include: operational research ("proof of concept") and research across different fields. Some of the types of data that are needed include impact-based forecasting (short-term predictions of climate impacts and health outcomes) and health outcomes with a holistic approach, including data on social determinants of health. Participants agreed that better methods to define the attributable burden of environmental factors on health problems are also needed.

1.3 Limitations in engagement and collaborative frameworks

"Health systems have yet to integrate environmental health into their agendas"

Participants identified key limitations related to frameworks allowing for engagement and collaboration. Participants emphasized that there are limitations in establishing communication and relationships across governments, sectors, communities, and countries because it takes time but "this doesn't align with 5-year funding cycles". Governance structures fail to bring partners together across the stages of policy design, implementation and monitoring, and there is a lack of political will to support collaboration. Participants reflected on the duplication of efforts across sectors/institutions in a country, and the fact that health systems have not integrated environmental health into their agenda. Finally, there was concern that indigenous peoples and local communities are not intentionally involved.

"Policy and community relationships, international networks take a long time to build and become impactful. This doesn't align with 5-year funding cycles."

1.4 Limitations in training and education

Among the needs in training and education for the use of health information in environment/climate sector decision are developing curriculum and tools to train future and present practitioners and decision makers working in health to address environment/climate change-related issues. Training and education for professionals already working in environment/climate change to address health-related issues would also close gaps in synergies between the fields. Participants discussed how continuing education could facilitate a widened focus of health researchers and policy actors, from a concern with services, insurance, capacity, and individual behavior, to understanding systemic impacts on health and the social determinants of health, and their importance. A number of participants emphasized the need

to improve the capacity for risk communication. Finally, the workshop highlighted that policy actors should learn how to effectively adopt Health in All Policies.

> *"We are not translating new research into curriculum and tools for practitioners, and have yet to widen the focus of researchers and policy actors working in health."*

2. Fostering a CEH community of practice to improve the uptake of science and informed decision-making

Participants identified the main challenges and opportunities for fostering a CEH community of practice that could improve the uptake of science and informed decision-making across various levels of government, sectors, and regions as described in the following.

2.1 *Data opportunities and limitations*

The data-related challenges to creating a CEH community practice included limitations in data sharing and harmonization across countries, institutions, and sectors, considering that countries/continents have different data governance systems (data standards and data sharing standards), and potential difficulties in sharing tools through an online community of practice.

> *"Open data platforms that span different fields would increase transparency and empowerment, promoting transdisciplinary approaches to decision making."*

Among the data-related opportunities to creating a CEH community of practice were, on one part those strictly related to data, as in the use of big data such as electronic medical records and the creation of open data platforms in different disciplines, or that bring together disciplines, to increase transparency and empowerment, and promote transdisciplinary approaches to decision making. On the other, an opportunity was found in multilateral agreements, such as a conference of parties agreeing on transboundary solutions. A number of participants emphasized the importance of estimations of the costs of inaction on public health.

> *"Even with good data on health impacts, we get decision-maker and media pushback against calls to action on environment and health. Quantifying costs in health care and loss productivity may help to counteract this."*

2.2 Knowledge production, translation and & mobilization

Participants identified diverse knowledge-related opportunities in creating a CEH community of practice. Science-based opportunities included the use of open source/code and open data, and the co-development of accessible (easily understandable) information and tools by different groups with diverse subject matter expertise, languages, and practitioner types. Communication-based opportunities included the translation of findings to different languages and the use of the media and fora, and trusted messengers, to communicate scientific results and policy recommendations to different population groups and policy and decision makers. Institution-based opportunities included the sharing of information by local governments working in public health and the creation of a collaborative platform to aggregate multidisciplinary knowledge, and share data and best practices in capacity building. A civil society-based opportunity was also identified which could involve fostering citizen science.

> *"Too often, once a study is published, researchers are done"*

One of the main knowledge-related challenges to creating a CEH community of practice is that traditional research outputs (e.g., scientific publications) are valued by the scientific community instead of policy influence. Thus, there are limited incentives for scientists to engage in transdisciplinary collaboration, dissemination, and policy translation. Researcher unwillingness or inability to invest time in the communication of results to multiple non-academic audiences (and to fight misinformation) combined with the fact that research is commonly not designed to be used by decision-makers, leaves a missing link in using research for practice. The following challenges were identified related to governments: a lack of engagement of scientists in policy and decision, failure to provide funding and create a sustainable model to implement actions over the long-term, and an absence of national policy frameworks for climate services that specifically address climate and health. Finally, it was noted that environment/climate impacts seem far removed from the day-to-day activities of health practitioners.

2.3 Engagement & collaborative framework

> *"A CEH community of practice requires a basic roadmap and guidelines to exchange knowledge and work together"*

Participants found there are opportunities to create frameworks for engagement and collaboration which can support a CEH community of practice, but this will require defining a basic roadmap and guidelines for a community of practice to exchange knowledge and create opportunities for collaboration. To achieve this, one proposal was to use shared/multilateral governance tools such as the Global Framework for Climate Services, which addresses health topics. Participants agreed that active engagement is key to a CEH community of practice. They found it necessary to engage local partners across research and policy using a bottom-up methodology to ensure sustainability, and actively engage ministries of science and technology in public policy design related to environment/climate and health. NGOs are viewed as key to fostering relationships between researchers and governments, as well as virtual meeting spaces for researchers, policy actors, and other interested groups working across

diverse fields. Clear and consistent messaging was considered essential to a community of practice, both in general and also when collaborating, for example, to draft policy briefs.

> *"End users are not involved from the beginning of the scientific/research process"*

Among the challenges to creating frameworks for engagement and collaboration to develop and work within a CEH community of practice are: 1) End users are not involved from the beginning of the scientific/research process, so decisions are often top-down instead of bottom-up or circular, i.e., involving and empowering all partners in decision-making, 2) Scientist lack the knowledge/skills regarding the incentives, priorities, and ways of working of decision makers, 3) government institutions work in silos but on similar ideas, while different sectors and different actors, at different levels are not integrated in terms of information and services, 4) Research teams do not coordinate with each other, for example to create common regional research methodologies and share funding, 5) working towards real, concrete, joint action requires strengthening of government institutions so that they align policies with resources and actions., 6) increasing the interest and ability of governments to share data and resources, and join discussions, while other partners need more knowledge on governance.

2.4 Training & education

Participants agreed that professionals require transdisciplinary skills and support to pursue careers that span research, policy and practice, for which curriculum must become more innovative. For example, study plans should promote scientific and technological innovation.

> *"Study plans need to promote scientific and technological innovation and include planetary health"*

2.5 Potential partners

In general, the partners most frequently identified belong to academic institutions, including universities, national government, followed closely by local and indigenous communities. Other frequently mentioned actors are intergovernmental and international research networks, and civil society (advocacy organizations and NGOs). The private sector and task forces are less frequently mentioned but, interestingly, the media are mentioned a number of times. Among international and private organizations explicitly named were WHO, IADB, ECLAC, Green Climate Fund, Google and Gates Foundation.

Partners were categorized as:

- **Core partners**: researchers/academics, civil society (communities, vulnerable and underrepresented groups, and indigenous groups).
- **Involved partners**: institutions such as health and environment ministries, and regional and local departments, meteorological agencies, and disaster risk reduction agency, and society, including communities, social and non-governmental organizations, and citizen science groups. Although less mentioned, it is interested to note that communicators (such as journalists, advertising creatives and science translators) were identified by several participants.

- **Informed partners** most mentioned were policymakers such as legislators, and national and local governments, and institutions such as meteorological and hydrological agencies, health ministry, and risk reduction/management agencies, followed by health facilities and practitioners.