VIRTUAL COURSE:

Climate, Environment, and Health for the Americas - Mobilizing transdisciplinary knowledge and training for policy action

Introduction

The region of the Americas needs to strengthen the capacity of public sector actors to address and adapt to environmental determinants of health (EDHs), prioritizing populations living in conditions of vulnerability. An integrated and evidence-informed approach within the health sector and in partnership with other key sectors such as climate, environment, and disaster risk management, is essential to addressing and adapting to the challenges of EDHs in the Region. Implementation of solutions must be context-specific, based on the needs and realities of countries, and should encourage coordination, leadership, and communication.

A transdisciplinary (TD) approach expects stakeholders, including decision- and policy-makers, implementers, communities affected by policies, and practitioners, to work together with researchers in collaborative and iterative co-development processes at the interface of science and policy. TD research projects are problem-driven and solution-oriented, integrating knowledge, tools, and ways of thinking from multiple disciplines and actors from the public and private sectors. Stakeholders are included from the initial project framing stage and throughout the project life cycle in an equitable and ethical co-creation process.

Science-policy projects at the nexus of Climate, Environment and Health (CEH) can have broad societal framework and measurable societal benefits; their focus can range from vulnerability and resilience to reduce the risks of natural and anthropogenic hazards, to pollution, food/water security and quality, chronic and emergent diseases related to global change, and adaptation and

mitigation actions in different socio-economic and environmental sectors to improve wellbeing (https://www.iai.int/pdf/en/Strategicplan-en.pdf).

Main Objective

This training initiative aims to enhance the capacity of professionals and institutions across the Americas to address challenges at the intersection of climate, environment and health through a transdisciplinary approach. Participants will develop skills in communication and engagement with diverse stakeholders, with a focus on the science-policy interface and the genuine participation of communities. The overarching goal is to contribute to the development and implementation of more effective public policies that address the most critical national, regional and global public health priorities.

Course Modality

This is a self-paced course that participants can complete at their own pace. There are no specific deadlines for completing the course modules. It is recommended to dedicate 40 hours to review the course material.

The contents of this course are an adapted version of the Virtual 7-Week Training, hosted via Zoom by the IAI, from September through November 2022. Narrations of some of the presentations of this course are live translations of the Zoom sessions, edited for clarity and conciseness.

Course Structure

The course consists of 5 modules. It also has 5 science communication sessions. The learning objectives of each module are described below:

MODULE 1: INTRODUCING TRANSDISCIPLINARY RESEARCH APPROACHES

Learning Objectives:

Participants will be able to:

- Define and distinguish transdisciplinary research approaches from other forms of collaborative scientific approaches, including interdisciplinary science, multidisciplinary science, team science, and convergence science.
- Draw connections between translational science from the medical/health context and transdisciplinary science for action-oriented research and policy interventions.
- Describe why transdisciplinary science is effective for solutions-oriented research and decision-making in the public health sphere.

Focal Areas:

- Introduce and define transdisciplinary research and distinguish it from other approaches, including: interdisciplinary science, multidisciplinary science, convergence science, and team science (recommended readings).
- Discuss the interconnections between translational science in the medical/public health field and transdisciplinary research approaches.
- Transdisciplinary research as a way of being (recommended readings).
- Context and justification for why transdisciplinary research approaches are necessary and desired when other collaborative research approaches exist.
- Unique capabilities of TD research for action-oriented research and translation across the science-policy interface.

MODULE 2: DOING TRANSDISCIPLINARY RESEARCH

Learning Objectives:

Participants will be able to:

- Define the concept of knowledge co-production in transdisciplinary research, in particular related to co-production of knowledge with policy-makers and local communities.
- Relate transdisciplinary approaches with increasing equity, diversity, and inclusion (EDI) of previously marginalized groups in science, in particular women, people of color, indigenous communities, and youth/children.
- Explain the concept of integration in transdisciplinary research related to diverse methodological approaches and data interoperability in the context of diverse data sets including quantitative data, qualitative data, and data/stories drawn from daily life, anecdotes, and experiences of participants.

Focal Areas:

- Engaging diverse actors in research with a focus on best practices in stakeholder engagement processes and pitfalls to avoid (JAWIC).
- Introduce the concepts of knowledge production and knowledge co-production, provide context and concrete examples to distinguish between knowledge production in traditional scientific approaches and knowledge co-production in transdisciplinary science.
- Clearly connect the concept of knowledge co-production with diverse actors (i.e., scientists, social actors, stakeholders, policymakers) with the key theory of integration in transdisciplinary science.
- Provide an applied example of how integration occurs in transdisciplinary research teams (example: boundary objects).

MODULE 3: DESIGNING & IMPLEMENTING TRANSDISCIPLINARY RESEARCH APPROACHES

Learning Objectives:

Participants will be able to:

- Describe the stages of transdisciplinary research problem identification, problem structure and problem analysis.
- Identify opportunities and barriers for the uptake of research into policy.
- Apply a transdisciplinary approach to policy analysis to a real-world problem.

Focal Areas:

- Key stages of transdisciplinary research problem identification, problem structure, and problem analysis (recommended readings).
- The context influencing the uptake of research into policy.
- A concrete model of a transdisciplinary approach to policy analysis (recommended readings).
- Successful and unsuccessful examples of translating knowledge to policy and action.

MODULE 4:

MANAGING TRANSDISCIPLINARY TEAMWORK

Learning Objectives:

Participants will be able to:

- Identify common pitfalls of working in transdisciplinary teams and strategies for managing transdisciplinary teams ethically and equitably.
- Describe how to mitigate common conflicts in transdisciplinary teams.
- Explain the importance of including diverse stakeholders in research with an emphasis on equity, diversity, and inclusion (EDI), including gender equity, racial and ethnic diversity, and intergenerational inclusion.

Focal Areas:

- Best practices for managing conflicts that arise in transdisciplinary teams, including stakeholder equity and social learning to strengthen teamwork.

- Politics and ethics of transdisciplinary research in teams composed of diverse scientific disciplines, policy makers and stakeholders.
- Best practices to apply and pitfalls to avoid in stakeholder engagement processes, including youth and children, using an EDI-focused lens.

MODULE 5:

TRANSDISCIPLINARY GRANT WRITING, ASSESSMENT & EVALUATION

Learning Objectives:

Participants will be able to:

- Explain the importance of including diverse actors in research with an emphasis on equity, diversity, and inclusion (EDI) including gender equity, racial and ethnic diversity, and intergenerational inclusion.
- Describe how to integrate key facets of transdisciplinary research into grant writing.
- Define the characteristics of a quality assessment framework for evaluating transdisciplinary research.

Focal Areas:

- Effective approaches for designing and integrating transdisciplinary research in grant writing.
- Concrete criteria and guidance for evaluating transdisciplinary research in competitive grant writing and in overall project performance (i.e., metrics of success).
- Collaboration agreement templates for ethical and effective transdisciplinary research (recommended readings).

SCIENCE COMMUNICATION SESSIONS

In each Module, you will also access one of the following science communication sessions to help you learn about knowledge dissemination:

1. Challenges of and solutions for science communication

2. Quick guide to writing for a broad audience

3. Telling stories through data

4. How to explain science to a broad audience

5. How is a public policy designed and how can I become a better advocate?

Learning Strategies

Each Module consists of a case study and a main presentation that addresses the main concepts and the Focal Areas. In each presentation, delivered by international experts, you will find narrated slides, reflection activities and review questions to strengthen your knowledge.

The case studies will allow participants to understand, in a real situation, the usefulness of transdisciplinary approaches in specific experiences. In each Module you will also find recommended readings to broaden the topics.

Evaluation and Course Certificate

Upon completion of the 5 modules, participants will be able to access the Final Evaluation. The Final Evaluation is a quiz with 20 questions (randomly selected from a bank of questions) that covers the content of all the modules. To pass the course, a score of 70% or higher is required. You will be able to take the Final Evaluation multiple times until you obtain the required score.

Participants who meet these requirements and fill out the course survey will be able to download their course certificate of completion of 40 hours of course work directly from the platform.