

## *News from the IAEH*

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### ECOSYSTEM APPROACHES TO HEALTH COMMUNICATION AT THE SCIENCE-POLICY INTERFACE IN A SOCIALLY NETWORKED WORLD

In June 2011, I had the opportunity to participate in an Ecosystem Approaches to Health (Ecohealth) Workshop hosted by the Canadian Community of Practice in Ecohealth (CoPEH-CAN) at the University of Northern British Columbia, Prince George. This four-day workshop was part of a longer Ecohealth Training Program hosted by CoPEH-CAN intended to “bring together people from different domains who integrate, or who are looking to integrate, the Ecosystem Approaches to Health in their work.” The principles of Ecohealth include systems thinking, trans-disciplinarity, participation, sustainability, equity, and knowledge-to-action. In this article, I describe some of the challenges and successes I have experienced in my attempts to apply an Ecohealth perspective to my recent work evaluating success in communications at the science-policy interface, especially as relates to knowledge sharing in Canadian environmental health policy-making.

At the science-policy interface, communications are often framed as neutral exchanges of information where, for example, scientists simply make policy recommendations; however, in this paper, Johanne Saint-Charles and I argue that information exchange is a transformative, constructivist process. Communications, whether about the natural or human world, occur within a socially networked world. Signaling, according to communications theory, occurs when a message is transmitted from a source to a receiver. These exchanges do not occur in isolation; the information we communicate to friends, family members, or colleagues can influence decisions made in other communities, regions, or nations. For example, the outcomes of

research done in a particular community may be conveyed formally (meta-analyses) or informally (personal communications) to other communities and individuals operating at various scales.

Groups of people form social networks where they exchange information. For example, at the science-policy interface, researchers, community members, medical professionals, government employees, policy analysts, and indigenous groups may work together to form information conduits where knowledge is diffused, translated, utilized, or mobilized across and within various scales. However, it is not sufficient to simply send and receive messages; effective communication requires iterative dialogue, trust building, and adaptability. Additionally, as with any desirable outcome, successful communication should not be without its own evaluative measures. I see similar core values applied in Ecohealth research, where the goal is to understand how social and ecological factors interact within and between various situations with implications for the wellbeing of the human and ecological constituents of these systems.

Being a novice to Ecohealth, I do struggle with my “fit” in this emerging trans-disciplinary field, although my research interests are likewise concerned with linkages between environmental sustainability and human health. My doctoral (residential pesticide use) and postdoctoral (climate change and Arctic food security) research has focused on public views of, involvement in, and responses to environmental health policy-making in Canada. My work has therefore been positioned at the science-policy interface, where systematic inquiry is meant to inform political outcomes. Applying an Ecohealth approach that is focused on enhancing human health is challenging while operating at the science-policy interface. For example, I tend to work with intermediary environment and health

policy outcomes (e.g., public preference for pesticide bans) rather than direct measures of ecological (e.g., high genetic diversity) or human (e.g., low mortality rates) health. In my work, “success” is more often indicated by inclusivity and equity in governance rather than by biophysical indicators of enhanced or diminished health.

On the other hand, the ability to work with and learn from members of CoPEH-CAN (and the wider community) has been extremely fruitful as I search for inspiration about theoretical approaches and methodological techniques that can be applied to these complex issues. For example, issues of environmental sustainability and health promotion, such as inter-generational transmission of harvesting skills are context specific and highly contested. As others have described, when faced with “wicked problems,” we must apply different approaches to science communication that are capable of promoting participation, careful to encompass trans-disciplinary ideals, conscious of social inequities, and show shifts in management styles that go beyond science–push or policy–pull. Accordingly, my own process of understanding how to communicate at the science–policy interface is inherently social (e.g., dependent on my network of colleagues and mentors) and eternally negotiated as I learn and then re-learn how to make tangible the negotiations between multiple knowledge producers and users that I witness in my research and everyday life.

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## COMMUNICATION IN ECOHEALTH

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The tensions and issues addressed by Rachel Hirsch reflect those that many Ecohealth researchers and practitioners encounter. Rachel’s work raises the “question of communication” in the field of Ecohealth by emphasizing the need to think about communication with trans-disciplinarity, participation, and equity in mind.

Communication is an emergent field where competing and complementary theories permit us to comprehend and act in a practical lifeworld in which “communication” is already a richly meaningful term. Addressing the complexity of the field requires more than 300 words, but there is one underlying tension in how communication is perceived that sometimes undermines the way in which we look at communication in Ecohealth research and practice. This tension can be seen in Rachel Hirsch’s text, where while promoting a “complexity” approach, communication often remains within the boundary of a traditional and linear Shannonian model.

The Shannonian model portrays communication as a means to transport information, seen therein as an immutable object, a black box through a “neutral” channel where—inevitably—noise reduces the clarity of information. However, information is always both an object and a construction, and the belief that information is neutral is a strong remnant of the positivist paradigm. Such a belief poses the risk that a genuine desire to take into account local or indigenous knowledge unfortunately leads to the framing of expert knowledge in such a way that local or indigenous people “will see it proper” rather than taking a more systemic stance.

Along with other branches of communication, science communication in the last twenty years has been moving from the deficit model to the dialog model, and much has been learned. Nonetheless, the Shannonian model still holds fast to our minds—its simplicity and the certainty it brings acts as an anchor in our troubled times. But if we are to move to a “post-normal” or publicly engaged science with Ecohealth, we must move our view of communication as well.

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