

INTERSECTORAL PREVENTION RESEARCH IN THE CANADIAN COMMUNITY OF PRACTICE IN ECOSYSTEM APPROACHES TO HEALTH

The Canadian Community of Practice in Ecosystem Approaches to Health (CoPEH-Canada) brings together researchers and practitioners from different disciplines and sectors throughout Canada. A key focus of ecosystem approaches to health, is intersectoral prevention for health. As such, the members of CoPEH-Canada have considerable experience in this field. Read on to find out more about CoPEH-Canada and intersectoral prevention research.

WHAT ARE ECOSYSTEM APPROACHES TO HEALTH?

In the last three decades, ecosystem approaches to health have emerged in response to complex health issues that demand **combined effort across sectors** to address social determinants of health while fostering ecosystem sustainability. Ecosystem approaches to health seek to **promote** human and ecosystem health and wellbeing and **prevent** disease and discomfort. These approaches encourage **social and gender equity** and **participation**, recognising that improving health requires sharing **different kinds of knowledge** in **transdisciplinary groups** at **various scales** and in different layers of ecosystems.

THE CANADIAN COMMUNITY OF PRACTICE IN ECOSYSTEM APPROACHES TO HEALTH

Since 2008, CoPEH-Canada has sought to favour greater collaboration among Canadians and the international community. Core members of CoPEH-Canada are based at 10 Canadian universities and organizations, supporting a network of Canadian scholars and practitioners dedicated to the understanding, teaching and application of ecosystem approaches to health, acting as a broker between the various groups in the field. CoPEH-Canada's contributions can be grouped under four key areas:

- Training and capacity building
- Profiling and applying ecosystem approaches to health research and practice in Canada
- Contributing to international field building in ecosystem approaches to health
- Evaluative research

INTERSECTORAL PREVENTION RESEARCH: A CONERSTONE OF ECOSYSTEM APPROACHES TO HEALTH

Integrated approaches traversing sectors have been suggested as a solution to many complex problems, including those which overlay health, ecosystems and society (Webb et al., 2010). Indeed, The World Health Organization has suggested that health should be integrated into all sectors of policy (WHO, 2008). Several frameworks which promote integration and collaboration to improve the health of humans and ecosystems have emerged as a response, ecosystem approaches to health being one of them. The ecosystem approaches to health propose six principles all of which are called upon in intersectoral prevention research. Participation, complexity, transdisciplinarity and social and gender equity necessitate skills in working across sectors, while research to action and sustainability bring in prevention. Sustainability highlights links to the environment.

A common element of these principles are complexity and diversity. Ecohealth thinking has converged onto the idea that the diversity of the actors involved in a partnership should be commensurate with the complexity of the problem (Charron, 2012; Zinsstag, Schelling, D., & Tanner, 2011). By combining both complexity and diversity into one framework, these elements can be evaluated in relation to each other to draw up an appropriately calibrated partnership that integrates the necessary sectors.

Recent critical research into how to support diverse partnerships and collaboration in ecohealth identified outreach to other sectors, such as government and civil society, as a common goal of practitioners (Saint-Charles et al., 2014). While cross-sectoral partnerships have been shown to be successful in alleviating health problems and collaboration across sectors is cited as a common goal, challenges to working across sectors still exist. CoPEH-Canada members are responding to this challenge through work that looks critically at the role, processes and outcomes of intersectoral partnerships in prevention research.

INTERSECTORAL PREVENTION RESEARCH IN COPEH-CANADA

This section provides examples of research carried out by CoPEH-Canada members that has focused on intersectoral dynamics. This brief review provides an indication of precedents and foundations that CoPEH-Canada has established, as well as opportunities to inform future intersectoral prevention research. Works cited are listed below and are available upon request.

CoPEH-Canada members have developed conceptual frameworks such as the Watershed Governance Prism (Parkes et al., 2010) and reviewed literature concerned with the intersectoral dynamics of this subject (Bunch et al., 2014). Their review pointed to the great potential for intersectoral work across the fields of public health and watershed management, focusing on ecosystems to improve social and physical determinants of health within catchments, and highlighting the relevance of

watersheds as settings for action (Morrison et al., 2012; Northern Health, 2012). Work on agricultural policies at the municipal level in Ecuador proposes a process of reflection, analysis and action in collaboration with different sectors, carries this process out and reports on the results (Orozco & Cole, 2011). Intersectoral collaboration was found to be a way to overcome resource limitations and facilitate the application of approaches based on the social determinates of health. Research on the collaboration between the health care sector and the education sector has found that collaboration improves the education that medical students receive, especially with respect to the less biomedical aspects of their training, and the health of children in schools where residents intern (Dharamsi, Woollard, Kendal, Okullo, & Macnab, 2014). Occupational health studies have looked at the effectiveness of participative ergonomic interventions in which the provincial health and safety associations (HSAs) acted as intermediaries between the workplace and the researchers (Kramer et al., 2010).

Research looking into opportunities and barriers to intersectoral collaboration identified seven key themes: policy gaps, leadership, governance, scaling up, diversity, monitoring and evaluation and communication (Leung, Morrison, & Middleton, 2015). The paper concludes that, “public health partnerships allowed the study participants to better deal with the so-called ‘wicked problems’ (Rittel & Webber, 1973, p. 160), which thrive in the gaps and cracks created by the ‘fragmented and incomplete’ government response to environmental and health issues” (p. 15). Another paper deals more specifically with the challenges that arise in blending the different types of knowledge that different sectors rely upon (Tanguay, Saint-Charles, & de Grosbois, 2014). According to these authors, the co-production of knowledge requires a questioning of ones own view of the world, methods, and thoughtful choice of time and spatial scales. Methodological tools such as scenario analysis, mapping and geographic information systems (GIS) help cross barriers. Further work has shown that the barriers to interdisciplinary work include conventions, norms, rules and methods of inquiry that are distinct to each discipline (Castán Broto, Gislason, & Ehlers, 2009). A review of a broad set of literature describing and evaluating collaborations across sectors showed that facilitators and barriers were based on the enthusiasm of the people involved, workplace policies and resources, evaluation of the results, having a shared goal, and use of information technology (IT) (Anholt, Stephen, & Copes, 2012).

Several of the articles reviewed in the above section deal principally with trans-, multi- or interdisciplinarity, which is the ecohealth principle most linked to intersectoral research; however, social and gender equity also draws on similar notions and deserves attention here. Since 2008, CoPEH-Canada members have also co-led the [CIHR Team in Gender, Environment and Health](#). Research in the context of this project has been undertaken into the role of sex and gender in the diffusion of new knowledge and practices (Saint-Charles, Rioux-Pelletier, Mongeau, & Mertens, 2012) and the incorporation of sex and gender into basic experimental biomedical research (Ritz et al., 2014).

OPPORTUNITIES FOR COLLABORATION

Given our considerable expertise in intersectoral prevention research and its evaluation, core members of CoPEH-Canada have considered carefully how best to respond to the upcoming CIHR call for applications for Team Grants: Environments and Health: Intersectoral Prevention Research. Rather than collectively submit an application for this competition, we would like to continue in our collaborative, supportive and capacity-building role through strengthening existing applications.

We are aware that numerous excellent teams will be putting in applications for this call. We are hoping to collaborate with teams that are submitting an application, offering our expertise to strengthen both the submitted application and the work of the CoPEH-Canada. We can offer advice and support in all of the fields mentioned above and more. Given our considerable experience in teaching, we can also offer creative workshops to help teams build full applications. With members skilled in subjects such as sex and gender equity, traditional knowledge, ecosystem management, social networks, epidemiology, and much more we can offer an array of expertise.

With this decentralized approach based on multiple nexus teams and sources of funding, CoPEH-Canada aims to flourish on several fronts while compelling our growing team to continue innovating and re-inventing ecosystem approaches to health. We are looking for ways to continue the work we have been doing for the past eight years in new and innovative ways, namely:

- Building on our experience of summer-schools and workshops to design and conduct training opportunities in ecosystem approaches to health, as applied to intersectoral prevention contexts.
- Supporting the community of practice through regional activities, in collaboration with complementary initiatives.
- Maintaining a presence at national and international fora to promote the ecosystem approaches to health as effective and innovative responses to complex issues at the interface of health, ecosystems and society.

Please get in touch with us to see how we can collaborate toward enhancing intersectoral preventive research and fostering a just and healthy society, environment and future.

COPEH-CANADA CORE MEMBERS

National coordinator

Jena Webb, CoPEH-Canada, copeh-can@uqam.ca

Québec/Acadie/Atlantique Node

Mélanie Lemire, Centre de Recherche du CHU de Québec – Université Laval

Johanne Saint-Charles, Université du Québec à Montréal, Centre de recherche interdisciplinaire sur le bien-être, la santé, la société et l'environnement (CINBIOSE), Faculté de communication

Céline Surette, Université de Moncton, Département de chimie et biochimie

Cathy Vaillancourt, Centre INRS–Institut Armand-Frappier

Ontario Node

Martin Bunch, York University, Faculty of Environmental Studies

Donald Cole, University of Toronto, Dalla Lana School of Public Health

Karen Morrison, York University, Faculty of Environmental Studies

Western Node

Maya Gislason, Simon Fraser University, Faculty of Health Sciences

Margot Parkes, University of Northern British Columbia, School of Health Sciences

Craig Stephen, Canadian Wildlife Health Cooperative and Western College of Veterinary Medicine

Robert Woollard, University of British Columbia, Department of Family Practice

WORKS CITED

- Anholt, R. M., Stephen, C., & Copes, R. (2012). Strategies for Collaboration in the Interdisciplinary Field of Emerging Zoonotic Diseases. *Zoonoses and Public Health*, 59(4), 229-240. doi:10.1111/j.1863-2378.2011.01449.x
- Bunch, M., Parkes, M., Zubrycki, K., Venema, H., Hallstrom, L., Neudoerffer, C., . . . Morrison, K. (2014). Watershed Management and Public Health: An Exploration of the Intersection of Two Fields as Reported in the Literature from 2000 to 2010. *Environmental Management*, 54(2), 240-254. doi:10.1007/s00267-014-0301-3
- Castán Broto, V., Gislason, M., & Ehlers, M.-H. (2009). Practising interdisciplinarity in the interplay between disciplines: experiences of established researchers. *Environmental Science & Policy*, 12(7), 922-933. doi:<http://dx.doi.org/10.1016/j.envsci.2009.04.005>
- Charron, D. (Ed.) (2012). *Ecohealth Research in Practice: Innovative Applications of an Ecosystem Approach to Health*. Ottawa: Springer.
- Dharamsi, S., Woollard, R., Kendal, P., Okullo, I., & Macnab, A., J. . (2014). Health promoting schools as learning sites for physicians in-training. *Health Education*, 114(3), 186-196. doi:10.1108/HE-09-2013-0048
- Kramer, D. M., Wells Rp Fau - Bigelow, P. L., Bigelow Pl Fau - Carlan, N. A., Carlan Na Fau - Cole, D. C., Cole Dc Fau - Hepburn, C. G., & Hepburn, C. G. (2010). Dancing the two-step: Collaborating with intermediary organizations as research partners to help implement workplace health and safety interventions. *Work*, 36(3), 321-332.
- Leung, Z., Morrison, K., & Middleton, D. (2015). Partnerships and governance at the environment–health nexus in Ontario: lessons from five case examples. *Journal of Environmental Planning and Management*, 1-20. doi:10.1080/09640568.2015.1040488
- Morrison, K., Parkes, M., Hallstrom, L., Neudoerffer, C., Bunch, M., & Venema, H. (2012). Ecohealth and watersheds: Watersheds as settings for health and well-being in Canada. *Network for Ecosystem Sustainability and Health and the International Institute for Sustainable Development, Publication Series No. 3*. Retrieved from <http://www.iisd.org/publications/pub.aspx?pno=1569>.
- Northern Health. (2012). Northern Health Position on the Environment as a Context for Health. *Parkes MW, LeBourdais C, Beck L et al (Contributing Authors)*. Retrieved from <http://www.northernhealth.ca/AboutUs/PositionStatementsAddressingRiskFactors.aspx>
- Orozco, F., & Cole, D. (2011). Developing Cross Sectoral, Healthy Public Policies: A Case Study of the Reduction of Highly Toxic Pesticide Use among Small Farmers in Ecuador. *Social Medicine*, 6(2), 36-47.
- Parkes, M., Morrison, K., Bunch, M., Hallström, L., Neudoerffer, C., Venema, H., & Waltner-Toews, D. (2010). Towards Integrated Governance for Water, Health and Social-Ecological Systems: The Watershed Governance Prism. *Global Environmental Change*, 20(4), 693-704. doi:10.1016/j.gloenvcha.2010.06.001
- Rittel, H., & Webber, M. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, 4, 155-169.
- Ritz, S. A., Antle, D. M., Côté, J., Deroy, K., Fraleigh, N., Messing, K., . . . Mergler, D. (2014). First steps for integrating sex and gender considerations into basic experimental biomedical research. *The FASEB Journal*, 28(1), 4-13. Retrieved from <http://www.fasebj.org/content/28/1/4.abstract>
- Saint-Charles, J., Rioux-Pelletier, M., Mongeau, P., & Mertens, F. (2012). Diffusion of environmental health information: the role of sex- and gender-differentiated pathways. In CIHR Institute of Gender and Health (Ed.), *What a Difference Sex and*

- Gender Make: A Gender, Sex and Health Research Casebook* (pp. 69). Vancouver, British Columbia: Canadian Institutes of Health Research.
- Saint-Charles, J., Webb, J., Sanchez, A., Mallee, H., van Wendel de Joode, B., & Nguyen-Viet, H. (2014). Ecohealth as a Field: Looking Forward. *EcoHealth*, 11(3), 300-307. doi:10.1007/s10393-014-0930-2
- Tanguay, N., Saint-Charles, J., & de Grosbois, S. (2014). Adopter une approche écosystémique : accepter de changer *Vertigo*, *Hors-série 19*. doi:10.4000/vertigo.14983
- Webb, J. C., Mergler, D., Parkes, M. W., Saint-Charles, J., Spiegel, J., Waltner-Toews, D., . . . Woollard, R. F. (2010). Tools for Thoughtful Action: The Role of Ecosystem Approaches to Health in Enhancing Public Health. *Canadian Journal of Public Health*, 101(6), 439-441. Retrieved from citeulike-article-id:9302175
- WHO, W. H. O. (2008). *World Health Report 2008. Chapter 4: Public policies for the public's health*. Retrieved from
- Zinsstag, J., Schelling, E., D., W.-T., & Tanner, M. (2011). From 'One Medicine' to 'One Health' and Systemic Approaches to Health. *Preventative Veterinary Medicine*, 101(3-4), 148-156.