



CNHE/IISE - The Canadian Nurses for
Health and the Environment



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Nurses and Environmental Health Webinar

ARNBC – The Association of Registered Nurses of British Columbia

Tues Nov 28, 2017: 12:00 – 13:00

Acknowledgement

We wish to acknowledge that this session is being held on the traditional unceded lands of the:

- ★ Musqueam
- ★ Tsleil-Waututh
- ★ Squamish
- ★ Coast Salish

First Nations People who have been on this sacred land for thousands of years.



The Canadian Nurses for Health and the Environment - Infirmières et Infirmiers pour la Santé et l'Environnement (CNHE/IISE) represents Registered Nurses dedicated to the improvement of environmental health across all domains of nursing practice, policy, research and education.



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Topic	Section Name	Duration
1.	The interconnectedness of environmental and human health	20 mins
2.	Environmental health as a foundation for primary health care	10 mins
3.	Overview of the Canadian Nurses for Health & the Environment	15 mins
4.	Time for Questions	15 mins



PART 1:
The interconnectedness of
environmental and human
health



Health Interconnection

The natural environment is considered to be an important and interconnected **determinant of health**.

Currently, many ecological issues demand societal attention, including **climate change, food safety, medical waste, and exposure to toxic contaminants and pollutants**. Critical Issues that influence the health of our natural environment impact all of the determinants of health in many ways.



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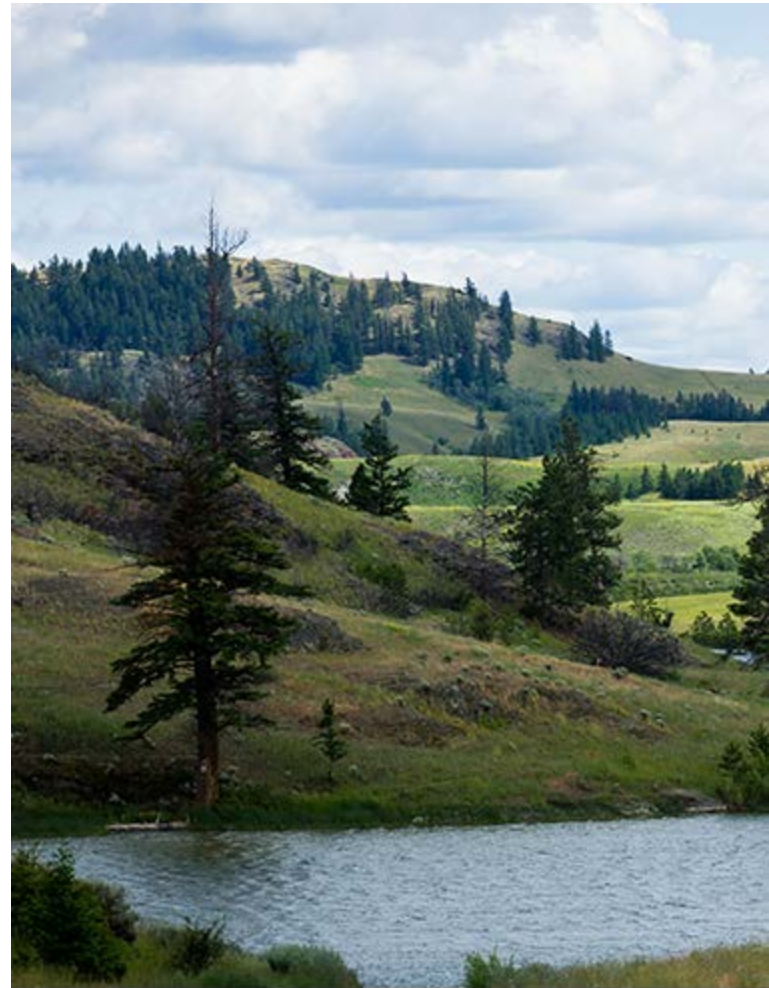


Ecological Determinants

- Oxygen
- Water
- Food
- Ozone layer that protects Earth's surface from high levels of UV radiation;
- Nitrogen and phosphorus cycles that circulate nutrients needed for plants and thus for all our food;
- Systems to detoxify wastes through natural processes; and
- Abundant fertile soil, fresh water and marine aquatic systems to grow food and other plants.
- Abundant energy
- Reasonably stable global climate with temperatures conducive to human and other life forms.

SOURCE: Canadian Public Health Association (2015). [Global Change and Public Health: Addressing the Ecological Determinants of Health](#). p. 3.

Expanding the SODH



Global Urbanization

For the first time in human history we now live in an urban world.

Globally, the 50% mark was passed early in the 21st century.

by 2050 it is expected that the urban population will be 67% of the total population,

Reaching 86% in more developed regions and 64% in less developed regions.

SOURCE: Canadian Public Health Association (2015). [Global Change and Public Health: Addressing the Ecological Determinants of Health –The Report in Brief](#), p. 40.

Rural Areas Endangered



Some Global Impacts

Of Environmental Changes.....

“Table 1 shows the estimated numbers of people, globally, at risk from selected major examples of the adverse health impacts of global environmental changes.

From this it is apparent that there are many impacts stemming from a variety of causes, and that the numbers of people at risk is very large, ranging from hundreds of millions into the billions of people.”

Table 1: The global estimated numbers of people at risk from selected major examples of the adverse health impacts of global environmental changes

Source: Global Environmental Change & Human Health, 2007 ¹¹⁸

Category of health risk	Size/proportion of populations at risk	Types of GECs involved
Malaria	40% of world population	Climate change and land use change
Dengue fever	3 billion	Climate change, urbanisation, world trade
Diarrhoeal diseases (associated with water quality/quantity)	1 billion people	Climate change, land cover change, pollution, irrigation and freshwater shortage, urbanisation
Malnutrition (especially food shortages)	840 million	Climate change, land use, freshwater shortage, biodiversity change
Health consequences of desertification: malnutrition; respiratory diseases; impacts of population displacement	250 million people	Climate change, land use, land cover change
Skin cancer, eye disorders, immune system depression	Mid-high latitude populations (1-2 billion)	Stratospheric ozone depletion

SOURCE: Canadian Public Health Association (2015). [Global Change and Public Health: Addressing the Ecological Determinants of Health –The Report in Brief.](#) p. 50.



Human Impact on the Environment

“In recent decades, the impact of human activity on the natural environment and its ecosystems has been so profound that it has given rise to the term Anthropocene, popularized by Nobel prize-winning chemist Paul Crutzen, delimiting a shift into a new geological epoch, in which human activity has become the dominant force for environmental change.

Anthropogenic pressures, demographic change, and resulting changes in production and consumption patterns are also among the factors that contribute to biodiversity loss, ill-health and disease emergence. These pressures have shown a great acceleration, especially in the past 50 years.”

SOURCE: WHO (2015) [Connecting Global Priorities: Biodiversity and Human Health, Summary of the State of Knowledge Review](#), P. 37.



Anthropocene: The age we have made

- Air, water, soil pollution
- Chemical pollution
- Radioactive pollution
- Population Explosion
- Waste
- Industrialization of Agriculture
- Ocean Acidification
- Invasive species
- Species Extinction
- Biodiversity Loss
- Climate change

Geology

The Anthropocene epoch: scientists declare dawn of human-influenced age

Experts say human impact on Earth so profound that Holocene must give way to epoch defined by nuclear tests, plastic pollution and domesticated chicken

Age of the Human



Anthropocene = a better reflection of the massive scale of human impact as a geophysical force of planetary change



Air and Water Quality are in Jeopardy



Climate Change & Health

“Biggest public health opportunity of 21st Century” (Lancet, 2015)

- 🌳 Aggravation of many health problems & creation of new disease patterns
- 🌳 Temperature related illness and death
- 🌳 Increased droughts and water shortages
- 🌳 Crop loss, Famine
- 🌳 Vector-borne diseases (Lyme & West Nile)
- 🌳 Increased ground-level ozone & decreased air quality
- 🌳 Pollen increases : asthma, allergies
- 🌳 Water and food borne diseases
- 🌳 Diarrhoeal, cardiorespiratory diseases
- 🌳 Injury from extreme weather
- 🌳 Mental Stress

SOURCE: Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation–Lancet Commission on planetary health. *The Lancet*, [Index of Contents](#)

<http://www.thelancet.com/info-graphics/planetary-health>



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<http://cnhe-iise.ca/>

Biodiversity, Species Extinction



Biodiversity contributes to important ecological determinants of health, including water and air quality, food security, microbial diversity in the human microbiome, infectious disease control, pharmaceuticals and traditional medicines and mental, physical and cultural wellbeing.

SOURCE: WHO (2015) [Connecting Global Priorities: Biodiversity and Human Health, Summary of the State of Knowledge Review](#), .

Vulnerable populations

To Environmental Changes.....

- ☀ The elderly
- ☀ Chronically sick
- ☀ Pregnant women (and preconception)
- ☀ Pre-term birth linked to heat
- ☀ Children
- ☀ First Nations
- ☀ Remote communities
- ☀ Outdoor workers
- ☀ Economically disadvantaged
- ☀ Immigrants
- ☀ Communities of Colour



THE WEB OF LIFE

Humankind has not woven the web of life. We are but one thread within it. Whatever we do to the web, we do to ourselves. All things are bound together. All things connect. (Chief Seattle)





Environmental Toxicants and Related Diseases



Search links between toxicants and human diseases or conditions.

Browse By Category...

Browse By Disease...

Browse By Toxicant...

Search by Keyword



Database courtesy CHE

Are You Breathing Clean Air?

80% of the world breathes air that is considered unhealthy by WHO.

How does your city rate?

What is PM 2.5?

RESOURCES/ORGANIZATIONS

ARTICLES/PUBLICATIONS

Our Health *and the* Environment

Our health is intrinsically linked with the environment.

Where we live, study, work and play directly influences our health and risk of developing a disease or disorder. The environment is more than the physical characteristics that surround us—like air pollution, industrial plants and tobacco smoke—it also includes social, cultural and economic characteristics.



The purpose of this atlas is to illustrate the myriad of ways the environment affects our health.



AIR QUALITY



CLIMATE CHANGE



BUILT ENVIRONMENTS



ENVIRONMENTAL CONTAMINANTS



DRINKING WATER QUALITY



FOOD QUALITY



<http://www.ehatlas.ca>



The role of nurses in environmental health:

- ✓ assessing and communicating risks of environmental hazards to individuals, families and communities;
- ✓ advocating for policies that protect health by preventing exposure to those hazards and promoting sustainability;
- ✓ producing nursing science, including interdisciplinary research, related to environmental health issues.

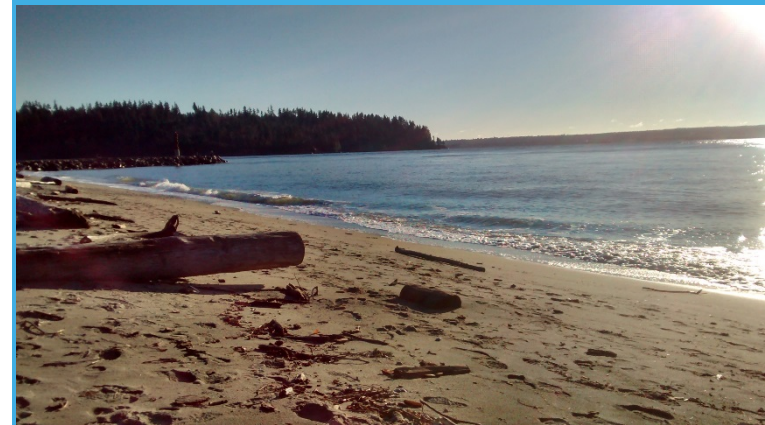
SOURCE: CNA, 2017 [Nurses and Environmental Health Position Statement](#), p.1.



Why is Environmental Health important for nurses?

The environment is an important determinant of health and has a profound impact on why some people are healthy and others are not.

The CNA believes that the public expects nurses to be aware of and know how to promote Canadians' health in the context of environmental health issues.



Canadian Nurses for Health and the Environment Webinar

<http://cnhe-iise.ca/>

The role of nurses in environmental health (cont.)

- ✓ Educating patients, families and communities about environmental health and how to address key environmental health issues
- ✓ Showing leadership in personal practices that support and reduce harm to the environment
- ✓ Collaborating with interdisciplinary colleagues to identify and mitigate environmental health risks in practice environments
- ✓ Promoting the development of natural and built environments that support health

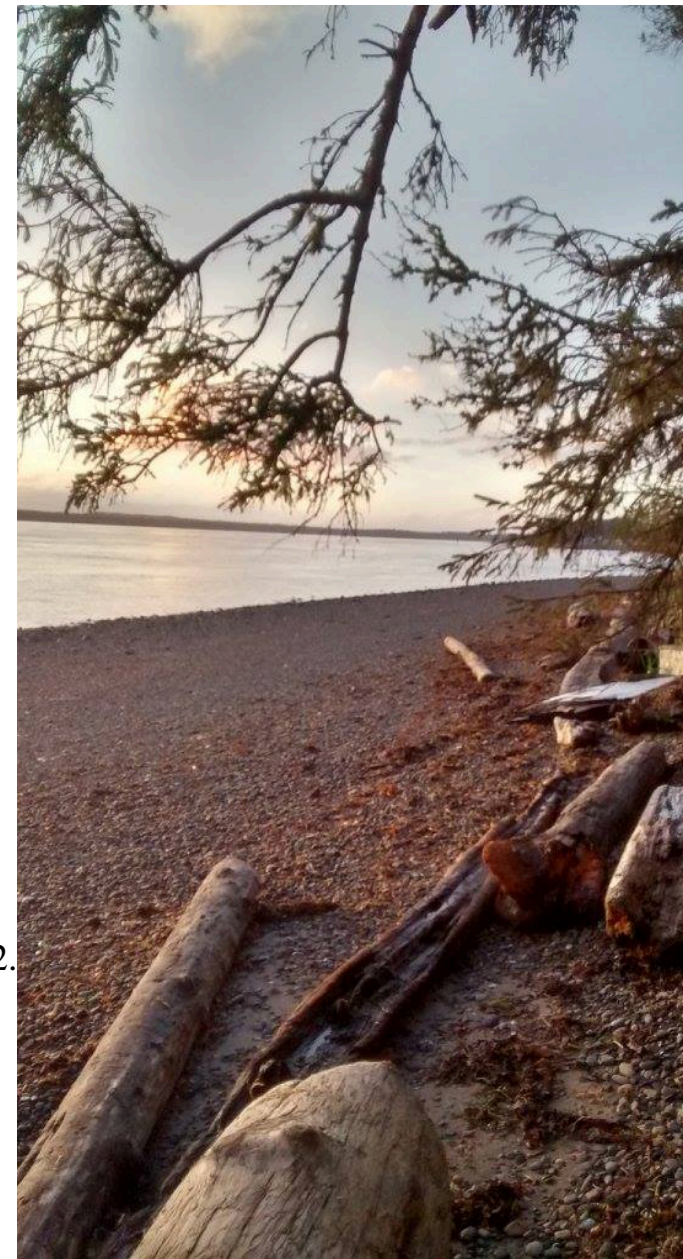
SOURCE: CNA, 2017 [Nurses and Environmental Health Position Statement](#), p.1.



The CNA wrote:

“Understanding and applying environmental health principles should be a part of every nurse’s practice. CNA values the work that nurse leaders, educators and students are doing to integrate and bolster nursing knowledge and skills related to environmental health. **We advocate for the further inclusion of concepts that support ecoliteracy in basic and continuing nursing education, strengthened (where necessary) and taught in both academic and workplace settings.** Rather than being taught as a specialized area of practice, environmental health can be integrated into all areas of nursing practice.”

SOURCE: CNA, 2017 [Nurses and Environmental Health Position Statement](#), p.2.





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Nurse Specialists

RN Licensing

History

Nursing Ethics

Leadership

Fixing the Health Care System

**Nursing and Environmental
Health**

Population Health

[Home](#) > [Download/Buy](#) > Nursing and Environmental Health

Nursing and Environmental Health



Online Tools

These three-minute videos present different aspects of environmental health issues from a nursing perspective:

- [Health, Environment and Nursing](#)
- [The Role of Nurses in Greening the Health System](#)
- [Nursing and Climate Change](#)

Backgrounders

- [The Ecosystem, the Natural Environment, and Health and Nursing](#) [PDF, 130 KB]

[The Environment and Health: An Introduction for Nurses](#) [PDF, 544 KB]

<https://www.cna-aiic.ca/en/download-buy/nursing-and-environmental-health>



PART 2:
Environmental health as a
foundation for primary
health care



How does PHC fit?

“Primary health care includes all services that play a part in health, such as income, housing, education, and environment.

Primary care is the element within primary health care that focuses on health care services, including health promotion, illness and injury prevention, and the diagnosis and treatment of illness and injury.”

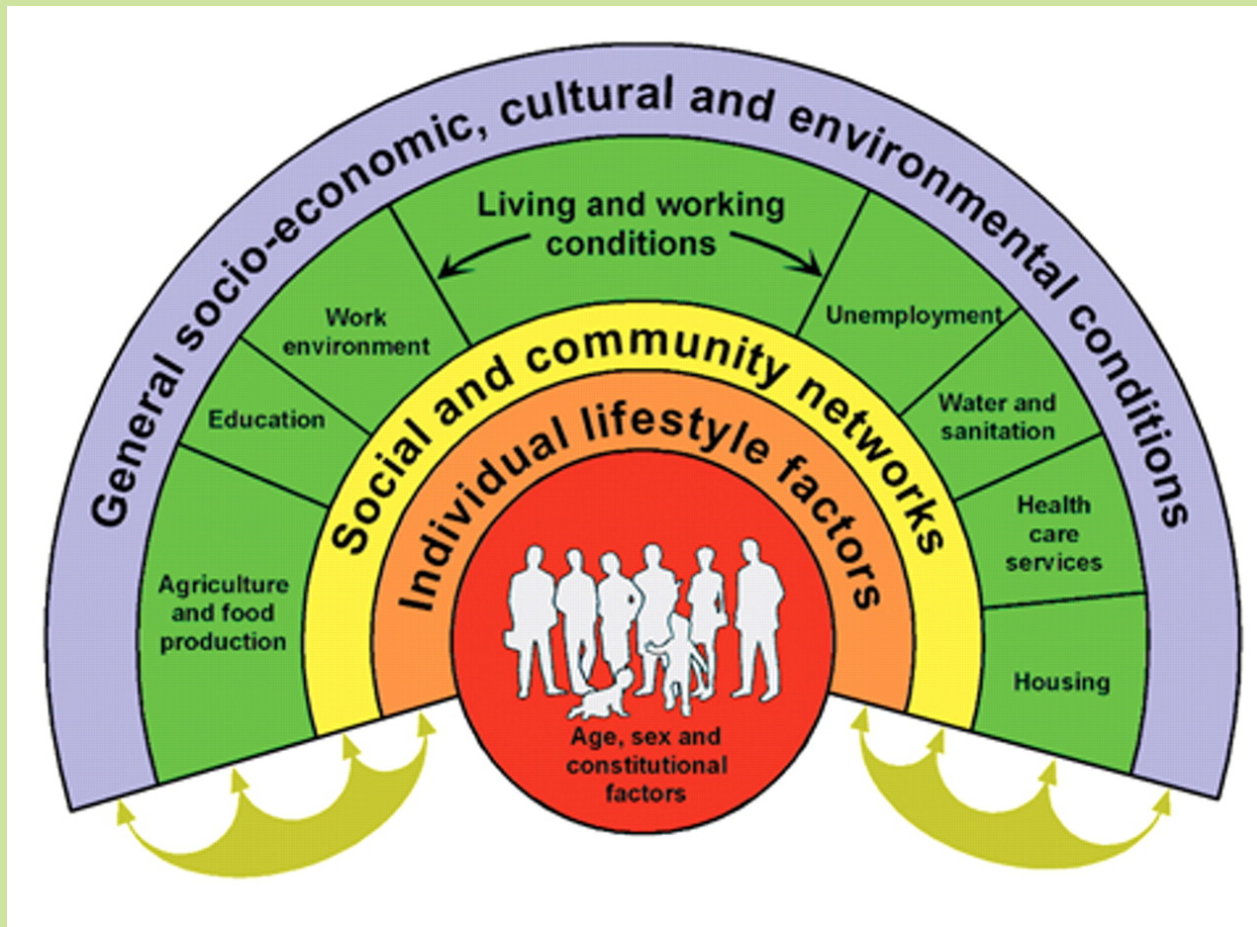
SOURCE: Health Canada. (2012). [About Primary Health Care](#),

Primary health care should be:



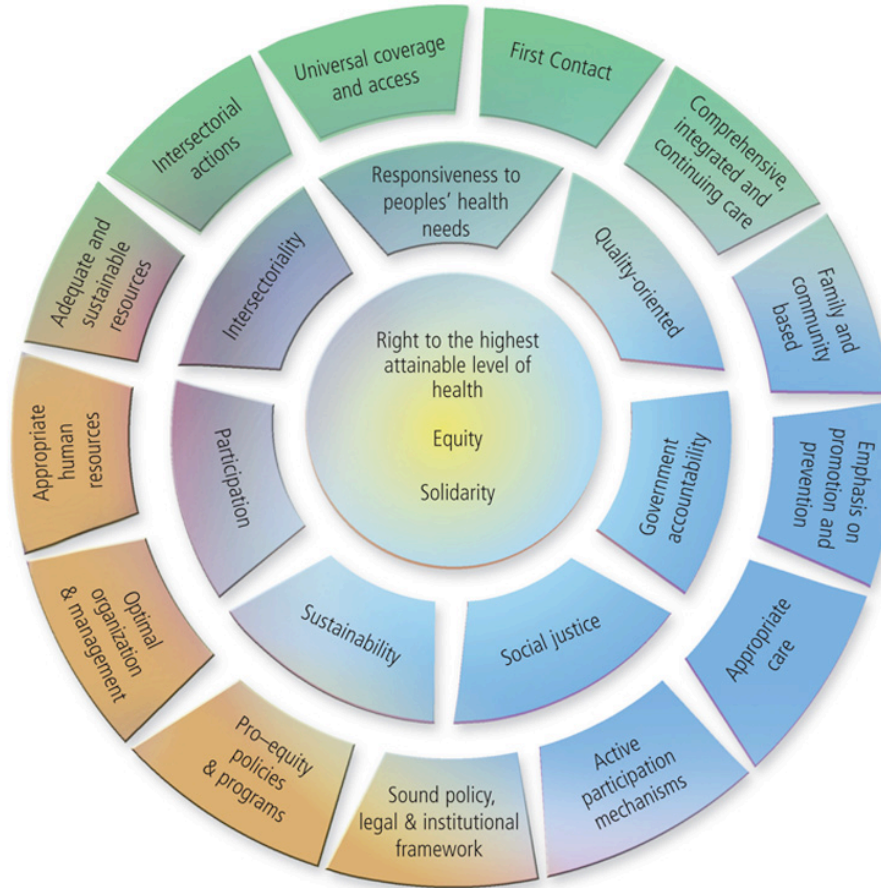
- patient and family centred,
- accessible,
- effective,
- efficient,
- safe,
- Coordinated,
- and population-health oriented.





“The PHC approach means being attentive to and addressing the many factors in the social, economic and physical environments that affect health – from diet, income and schooling, to relationships, housing, workplaces, culture and environmental quality.” (CNA, 2005, [Primary Health Care: A Summary of the Issues](#), p. 1).

Figure 1: Core Values, Principles and Elements in a PHC-Based Health System



SOURCE: WHO (2009).
[Progress in Primary Health care in the Americas.](#)



Primary Health Care in Canada

A Chartbook of Selected Indicator Results, 2016

[Read more](#)



Health Sector Responsibility

“We call on individuals working in the health sector to both model and advocate for environmentally responsible approaches to delivering health care without compromising patient safety and care.”

“We call on all health care organizations to pledge to minimize the negative impact of their activity on the environment and to seek solutions to existing barriers.”

SOURCE: CNA, 2009 [Toward an Environmentally Responsible Canadian Health Sector](#), p.2.

We Need to Be Involved!



Nurses Can Have An Impact!

“Nurses are uniquely qualified to bring information to the public on protection from environmental exposures. They have the assessment skills and scientific background to identify potential hazards, and the communication skills to explain the exposure, and how to reduce its risk, in an understandable way.”

SOURCE: CNA, 2017 [Nurses and Environmental Health Position Statement](#), p.2.

Uniquely Qualified!



PART 3:
Overview of the Canadian
Nurses for Health & the
Environment

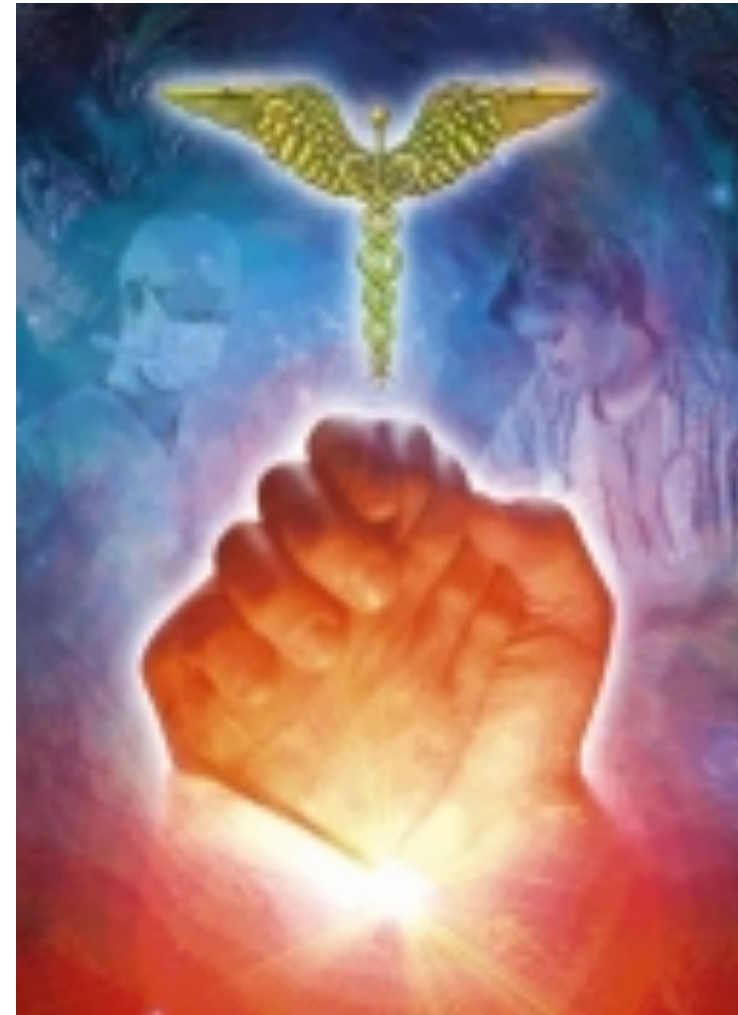


About the CNHE/IISE

The Canadian Nurses for Health and the Environment / Infirmieres et Infirmiers pour la Sante et l'Environnement (CNHE/IISE) represents Registered Nurses dedicated to the improvement of environmental health across all domains of nursing practice, policy, research and education.

A member of the Canadian Network of Nursing Specialties of the Canadian Nurses Association, CNHE works to facilitate knowledge sharing and transfer based on environmental health principles and nursing best practices.

Please Join the CNHE/IISE!



CNHE/IISE Objectives

CNHE works to achieve these objectives:

- ✓ Facilitate knowledge sharing and transfer based on environmental health principles and nursing best practices.
- ✓ Support evidence-based environmental health practice.
- ✓ Influence policy development and legislation to support environmental nursing practice.
- ✓ Promote educational and research opportunities for nurses.



What does the CNHE site offer?

- ★ Blog & Social Media
- ★ Partnerships
- ★ Advocacy & Issues
- ★ Environmental Action Alerts
- ★ Research and Education
- ★ Updates from CNA
- ★ National Conference
- ★ Upcoming events
- ★ Recommended links
- ★ Members Portal & Mailing List

<http://www.cnhe-iise.ca/>

Resources for our Nurse Members





Join the CNHE!!

THE CANADIAN
NURSES FOR
HEALTH
AND THE
ENVIRONMENT

CALLING ALL NURSES...

 **CNHE/IISE**
Canadian Nurses for Health & the Environment
Infirmières et Infirmiers pour la Santé et l'Environnement

×

THE CANADIAN NURSES FOR HEALTH AND THE ENVIRONMENT (CNHE) REPRESENTS REGISTERED NURSES DEDICATED TO THE IMPROVEMENT OF ENVIRONMENTAL HEALTH ACROSS ALL DOMAINS OF NURSING PRACTICE, POLICY, RESEARCH AND EDUCATION. A MEMBER OF THE CANADIAN NETWORK OF NURSING SPECIALTIES OF THE CANADIAN NURSES ASSOCIATION, CNHE WORKS TO FACILITATE KNOWLEDGE SHARING AND TRANSFER BASED ON ENVIRONMENTAL HEALTH PRINCIPLES AND NURSING BEST PRACTICES.

×

[HTTP://CNHE-IISE.CA](http://CNHE-IISE.CA)



We are eager to join forces with all Canadian nurses who are moved to protect the environment and restore ecological health across the nation. If you are dedicated to working with your peers in building a brighter healthier future for the entire nation, consider joining us now.



 **CNHE/IISE**
Canadian Nurses for Health & the Environment
Infirmières et Infirmiers pour la Santé et l'Environnement

STUDENTS

JOIN THE CNHE!!

ENGAGE, LEARN, ADVOCATE FOR FREE!

[HTTP://CNHE-IISE.CA](http://cnhe-iise.ca)



FREE MEMBERSHIP is available to any nursing student enrolled in an approved or accredited undergraduate nursing program in Canada: they are eligible for individual membership in CNHE by completing the registration form.

Nursing Faculty...

Add your Voice, Advocate, Learn,
Network, Participate...

Join the CNHE!

<http://cnhe-iise.ca/>



CNHE/IISE

Canadian Nurses for Health & the Environment
Infirmières et Infirmiers pour la Santé et l'Environnement



We are also eager to join forces with all Canadian nursing faculty who know how important it is to include environmental health and ecoliteracy into nursing curriculum. Consider joining us now and add your voice to our evolving environmental learning resources for nurses.

Nursing Education

Ecoliteracy in Nursing education,
including basic and continuing education

- ★ enables nurses to consider environmental factors that may be contributing to poor health;
- ★ understand environmental hazards and their impact on health;
- ★ understand the role of individuals and communities in providing good stewardship of the environment;
- ★ make recommendations about how to reduce or prevent exposures to environmental hazards;
- ★ and conduct research on environmental health issues.

SOURCE: CNA(2017). [Nurses and Environmental Health Position Statement](#), p.5.

Preparing to Lead....



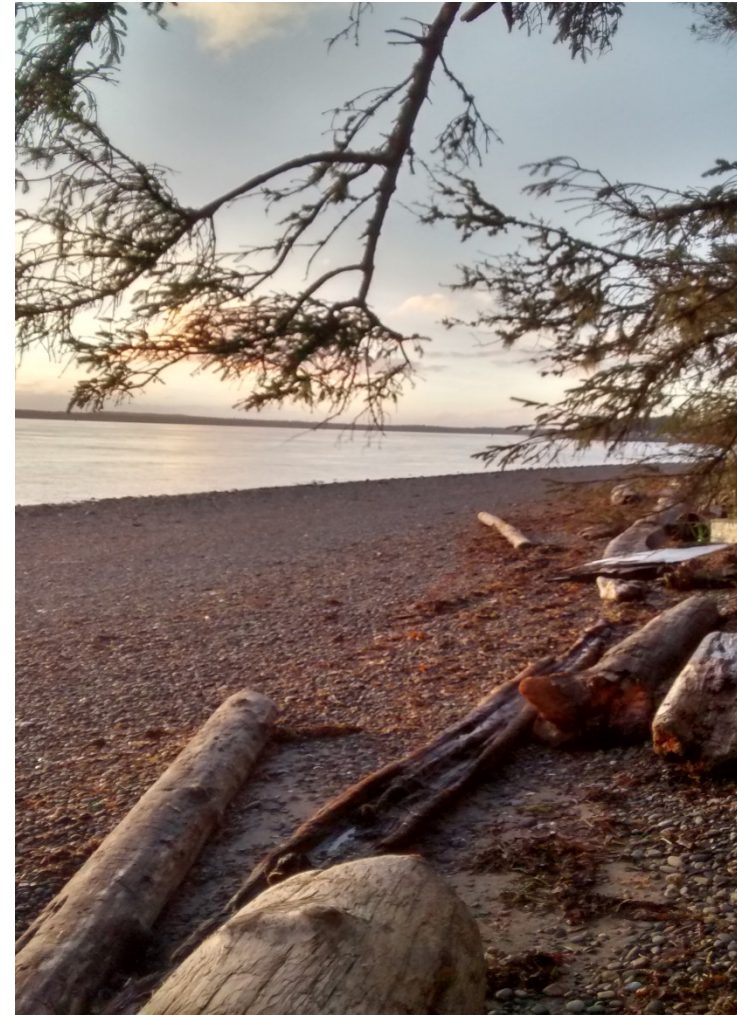
Environmental Scan

The Canadian Nurses for Health and the Environment is designing environmental competencies and curriculum to share with nurses and educators.

We are introducing this work to encourage engagement and explore ways that nursing can collaborate with others to support environmental health.

A CNHE initial environmental scan of Schools of Nursing is under development to gather information about existing resources and learning activities.

[Environmental Scan Link](#)



Initial Literature Review and Resource Scan

A Review of the Literature and Resource Scan is also being done to provide evidence of current tools available and enable a resource collection for nurses.

<http://www.cnhe-iise.ca/curriculum.html>



Taking Stock of what Exists...

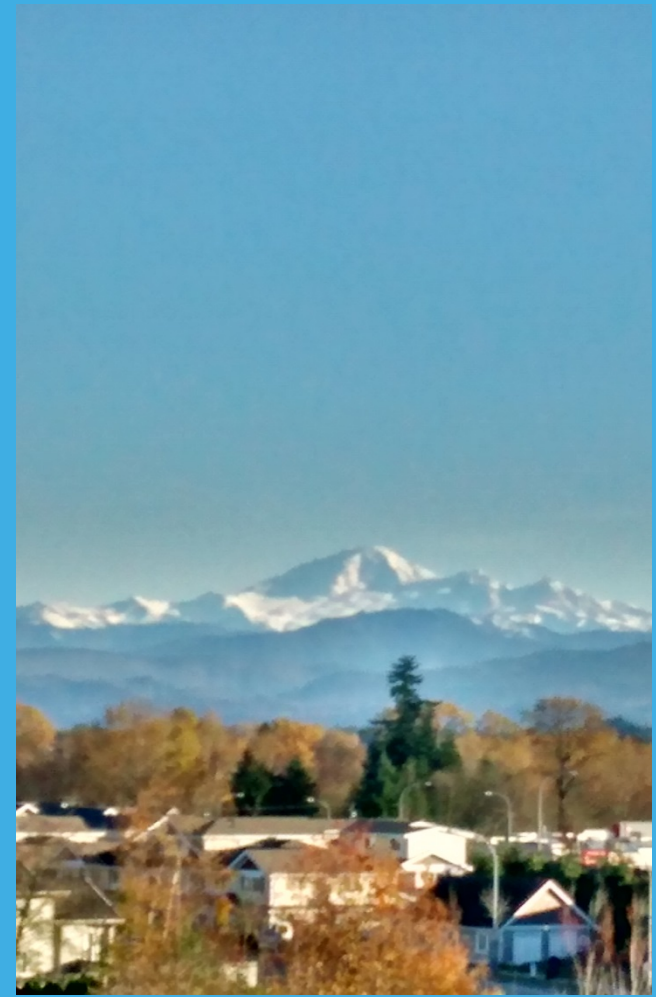


Initial Curriculum Topics

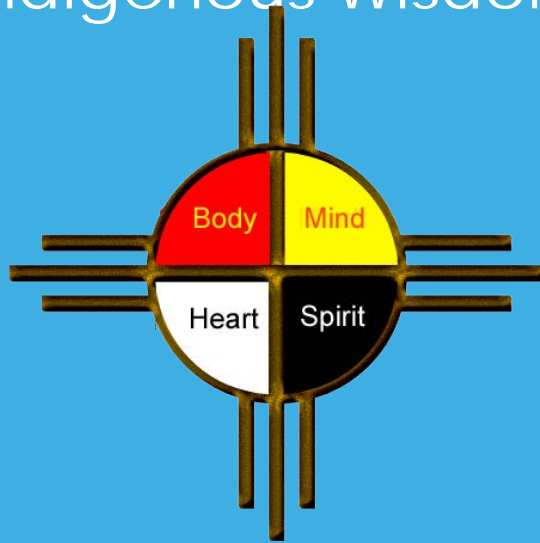
The CNHE is planning to develop learning activities related to:

- ✓ Air Quality
- ✓ Water Quality
- ✓ Food Quality
- ✓ Climate Change
- ✓ Environmental Contaminants, Pollution, Ecotoxicity
- ✓ Resource Depletion
- ✓ Biodiversity and Species Extinction
- ✓ Radiation Exposure
- ✓ Healthcare Waste
- ✓ Green Healthcare Systems
- ✓ Ecoliteracy and Nursing

[Curriculum Link](#)

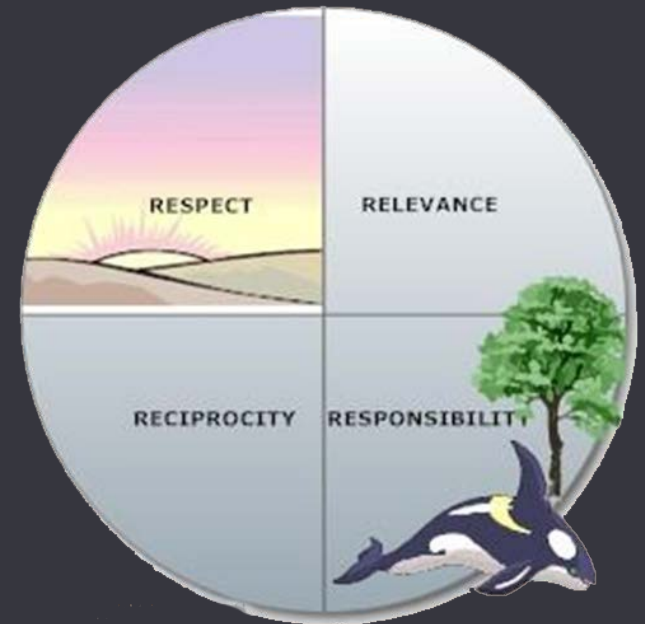


Indigenous Wisdom



The most logical source of sustainability wisdom that promotes ecological wholeness are traditional Indigenous teachings and philosophies. Nursing educational programs are beginning to incorporate Indigenous wisdom into curriculum to help evolve ecoliteracy and holistic care. These tenets are also being included in this environmental curriculum.

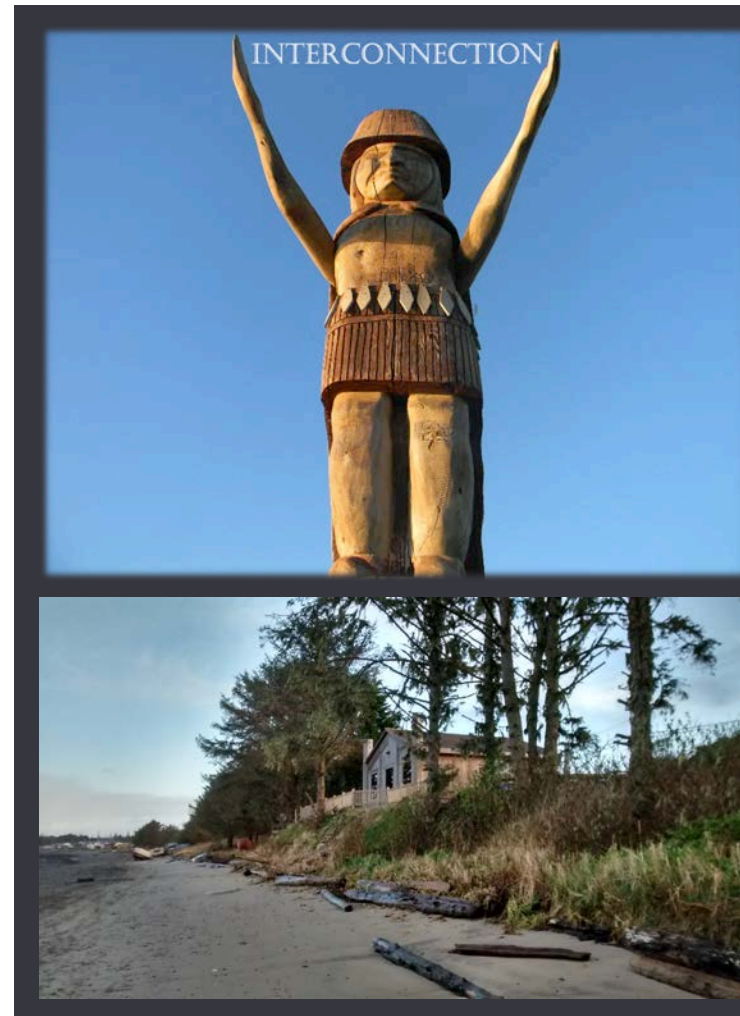
Environmental Sustainability
is a Foundation



Fundamental Teachings

- ★ Seven Generations
- ★ All My Relations and Interconnection
- ★ Four Directions and Holistic Balance
- ★ Four Pillars of Learning
- ★ A Connection to Place
- ★ Stewardship of the Land
- ★ Walking Softly on the Earth
- ★ Learning Together, Experientially
- ★ Raising Our Voices Together, Collective Activism

We need to understand our place
in the web of life



Join the CNHE and the Working Group

We invite Nurse Educators to join the CNHE and become formal members of the Working Group.

We also encourage all nurses to add their voice to the mandate and focus of the CNHE and become members. As well, undergraduate nursing students can join for free!

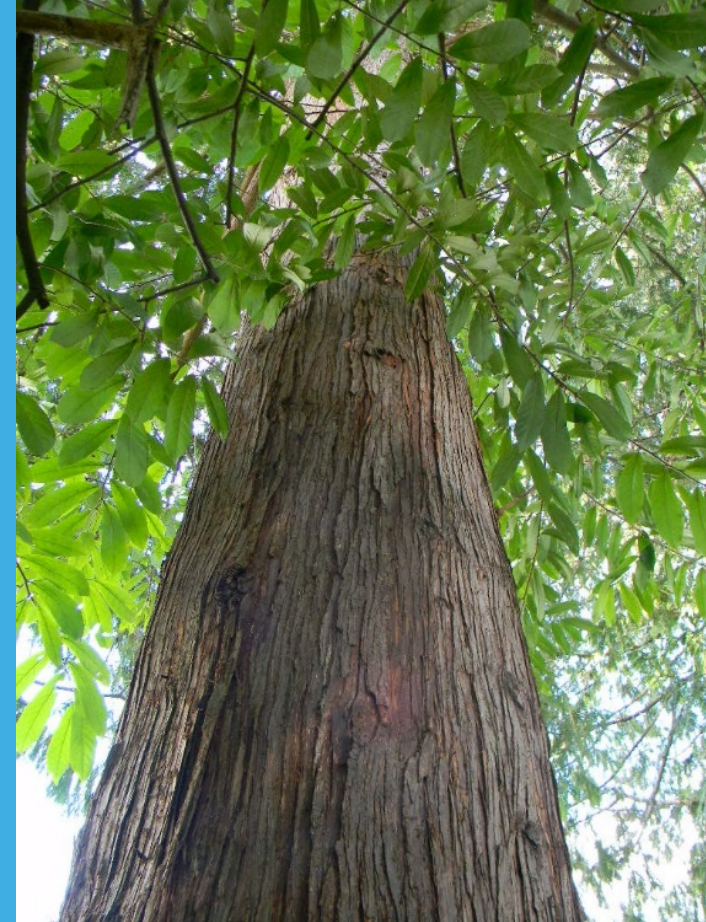
Join us today at: <http://cnhe-iise.ca/membership.html>

CNHE/IISE members are part of a committed group, dedicated to taking a stand on environmental health issues that threaten the health and well-being of Canadians and the planet as a whole.



Resources to Get Started

-  **Canadian Association of Physicians for the Environment**
<https://cape.ca>
-  **Canadian Environmental Health Atlas**
<http://www.ehatlas.ca/>
-  **Canadian Partnership on Children's Health and the Environment**
<http://www.healthyenvironmentforkids.ca>
-  **Canadian Nurses for Health & the Environment**
<http://www.cnhe-iise.ca>
-  **CNA– Nurses and Environmental Health**
<https://www.cna-aiic.ca/en/download-buy/nursing-and-environmental-health>
-  **Collaborative on Health and the Environment**
<http://www.healthandenvironment.org>
-  **First Nations Food, Nutrition and Environment**
<http://www.fnfnes.ca>
-  **Global Green and Healthy Hospitals**
<http://greenhospitals.net/en>
-  **WHO Health and Environment Infographics.**
<http://www.who.int/phe/infographics/en/>



Contact the Authors

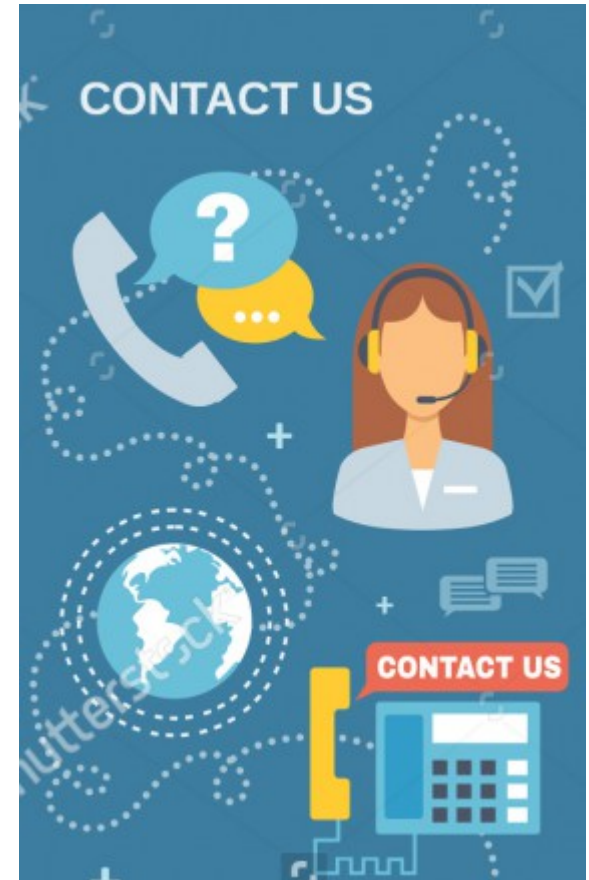
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June Kaminski is the Curriculum Coordinator of the BSN Advanced Entry program at Kwantlen Polytechnic University in BC. June is also the current Past-President, Treasurer and Webmaster of the Canadian Nurses for Health and the Environment, Editor in Chief of the Canadian Journal of Nursing Informatics and the Online Journal of Nursing Informatics.

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Fiona Hanley, is a nursing teacher at Dawson College, Montreal. She is a Board member of the Canadian Nurses for Health and the Environment, a former CHNE President, and past member of the CNA Environmental Reference Group. She is dedicated to working towards the integration of environmental health issues into all aspects of nursing practice.

<http://cnhe-iise.ca/>



PART 4: Questions?

Join the CNHE and get
involved!!
<http://cnhe-iise.ca/>

