

# Public Health and the Environment



**Elle Fremit, B.A.H., M.A**  
**Sustainable Development Office**  
**Corporate Administration and Services Directorate**

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# Outline

*Public  
Health  
Outcomes*

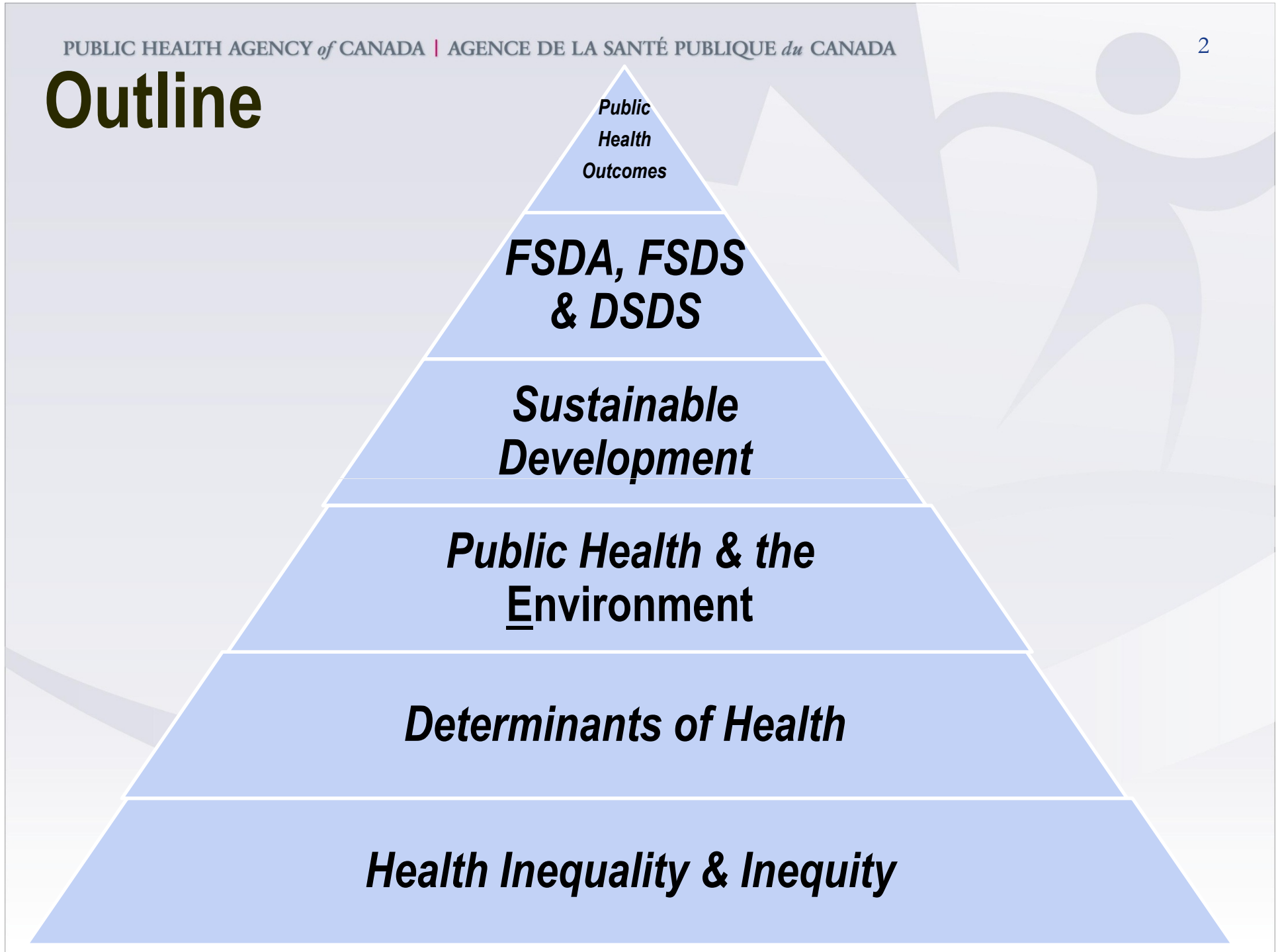
***FSDA, FSDS  
& DS***

***Sustainable  
Development***

***Public Health & the  
Environment***

***Determinants of Health***

***Health Inequality & Inequity***



# Health Inequality and Inequity

## What is the difference between the **Health Inequality** and **Health Inequity**?

- **Health inequality** is differences in the health status of individual groups, due to uncontrollable factors such as biology, genetics, social and economic factors. In 2001, the life expectancy for First Nations was 6.6 years less than the life expectancy for the average Canadian population.
  1. People living in Canada's highest income urban neighbourhoods live an average of **X** years longer than those in Canada's lowest income neighbourhoods.
  2. The poorest 20% of Canada's population have more than **X** the chance of having two or more chronic conditions, including heart disease and diabetes, than the richest 20%.
  3. In the last 10 years, differences in death from diabetes between the highest and lowest income groups increased by **X**%.
- **Health inequity** is the health inequalities that are generally considered to be *unfair* or *unjust* and *modifiable*. Canadians who live in remote and northern regions do not have the same access to nutritious foods at comparable prices; and health care/public health practitioners.

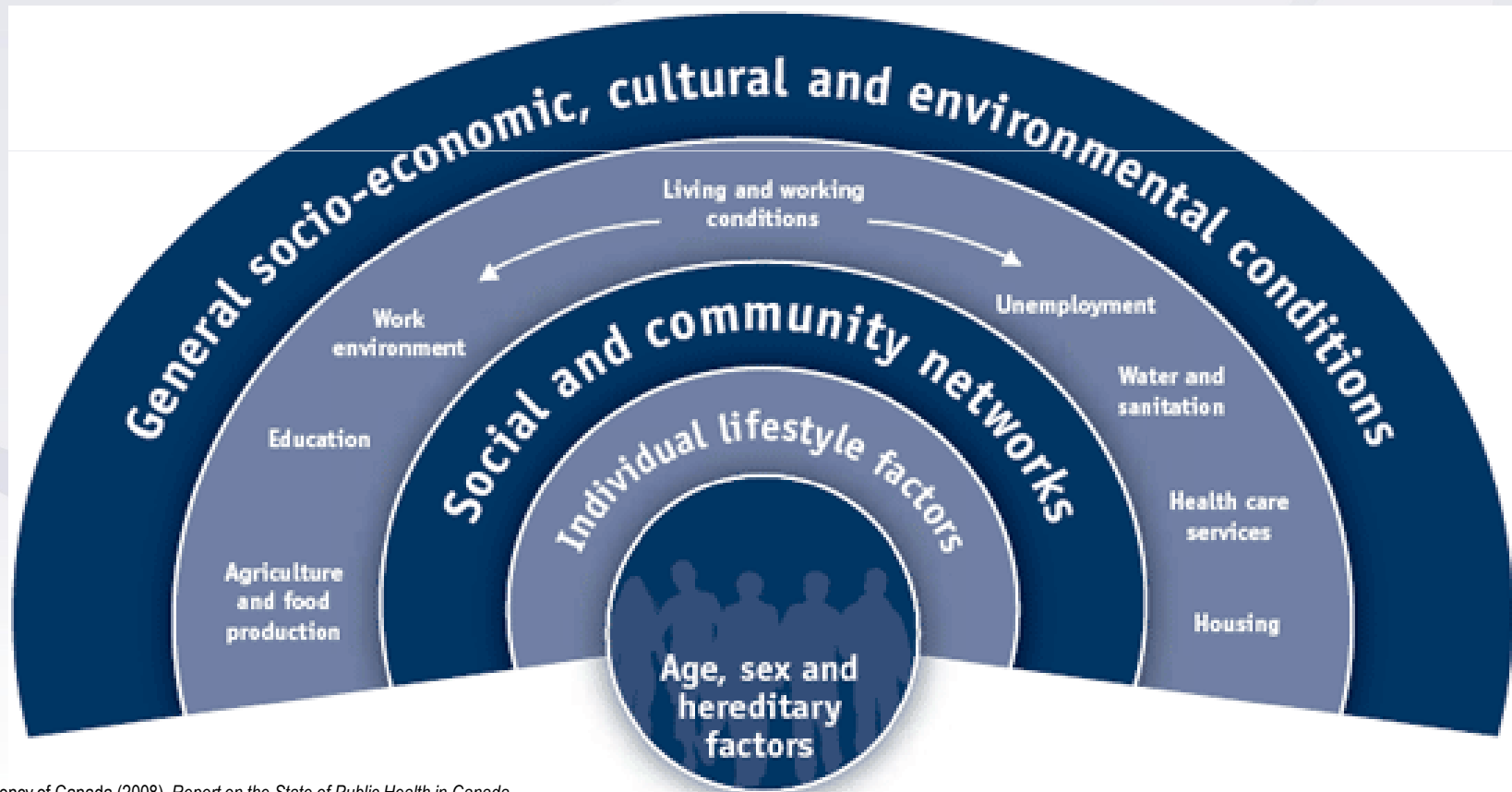
# Determinants of Health

What is the difference between the **Determinants of Health** and the **Social Determinants of Health**?

- **Determinants of health** are the broad range of personal, social, economic and environmental factors that determine individual and population health.
  1. **Income and social status**
  2. **Employment and working conditions**
  3. **Access to health services**
  4. **Biology and genetic endowment**
  5. **Gender**
  6. **Childhood experiences**
  7. **Physical environments**
  8. **Social supports and coping skills**
  9. **Education and literacy**
  10. **Healthy behaviours**
  11. **Culture**
- **Social determinants of health** refer to a specific group of socio-economic factors within the broader determinants of health that relate to an individual's place in society, such as income, education or employment.

# Report on the State of Public Health in Canada

“The overall health of Canada's population is considered very good, especially in comparison to many other countries. But a closer inspection of disease, disability and death rates shows that some groups of Canadians are less healthy and have a lower quality of life than others.” Dr. David Butler-Jones



# Public Health & the Environment: Clean Air

- **Clean air** is essential for good health, and this is especially true when it comes to indoor air.
- As Canadians, we spend close to 90% of our time inside; at home, at work and in recreational environments. Most people, however, are unaware of the effects that poor indoor air quality can have on their health.
  - **Biological pollutants** are living organisms like mould, bacteria and dust mites.
  - **Chemical pollutants** are gases and particles that come from combustion appliances, tobacco smoke, radon gas, household and personal care products, various building materials and outdoor air.

- **Clean air / air quality** (indoor and outdoor) is the second most important preventable risk factor for respiratory disease.

### Prevalence of Chronic Respiratory Diseases 2000-2005

Disease	Estimated # of Canadians
Asthma*	2,744,000
COPD**	754,700
Lung Cancer***	20,560
<b>Total</b>	<b>3,519,260,000</b>

\* Prevalence ages 12+ in 2005; ages 4-11 in 2000  
 \*\* prevalence ages 35+ in 2005  
 \*\*\* new cases in 2003

### Economic Burden of Respiratory Disease in Canada (EBIC) 2000

Disease	Direct Costs*	Indirect Costs**
Asthma	\$705,400,000***	\$1,023,800,000
COPD	\$696,200,000***	\$840,100,000
Lung Cancer	\$242,200,000***	\$3,500,000,000****
<b>Total</b>	<b>\$1,643,800,000</b>	<b>\$5,363,900,000</b>

\* Direct costs include hospital, physician, drugs and research.  
 \*\* Indirect costs include mortality and long-term disability where available.  
 \*\*\*Research costs are not available.  
 \*\*\*\* indicates long-term disability results are not included due to very high sampling variability

# Public Health & the Environment: Climate Change

- Canadians are exposed to infectious diseases that are sensitive to **climatic changes**, such as changing patterns in temperature and precipitation, which may result in the emergence of diseases that are currently thought to be rare or exotic in Canada.
- Milder winters, fluctuating rainfall patterns and warmer temperatures directly impact the lifecycle of disease vectors.
  - Higher temperatures create favourable conditions for ticks, the vector carrying Lyme disease, leading to an increasing number of established tick populations which create new endemic areas of Lyme disease in Canada.
  - Higher temperatures and standing water create favourable conditions for mosquito breeding and presence, which can impact the incidence and prevalence of West Nile virus in Canada.

# Public Health & the Environment: Water

- **Clean water** and sanitation systems are the single most influential development in the history of public health.
- The risk of microbial disease associated with **drinking water** is presently a priority concern among North American water jurisdictions.
- Numerous past outbreaks, together with recent studies suggest that drinking water may be a substantial contributor to non-outbreak related gastroenteritis, which demonstrates the vulnerability of many North American cities to waterborne diseases.
- The results from the [Drinking Water Quality and Health Care Utilization for Gastrointestinal Illness in Greater Vancouver \(2000\)](#) study support several public health and water supply management beliefs:
  1. significant levels of day-to-day gastroenteritis events are potentially waterborne in nature;
  2. watershed protection together with chlorination may not adequately protect against the waterborne transmission of enteric pathogens; and
  3. turbidity appears to be a valuable water quality indicator.

# Public Health & the Environment: Nature

- **Clean nature** is critical to public health as the environment is where Canadians live, work and play.
  - It would take 13,476,639 trees to offset the amount of CO<sub>2</sub> released into the atmosphere by Canadian public servants each year because of electrical equipment being left on at night and over weekends. This is the equivalent of burning approximately 316,287 litres of gasoline - that is enough to drive around the earth's equator almost eight times.
  - In 2004, an estimated 450 million consumer batteries were sold in Canada and approximately 348 million were discarded into landfills. Batteries including lead-acid, lithium, nickel-cadmium, silver oxide and mercury batteries pose a higher threat to human and environmental health as they contain heavy metals, many of which are toxic substances scheduled under the [Canadian Environmental Protection Act](#), 1999.

# Sustainable Development

What is the difference between the **Determinants of Health** and **Sustainable Development** ?

- **Determinants of health** are the broad range of personal, social, economic and environmental factors that determine individual and population health.
- **Sustainable Development** is targeted actions that meet the social, environmental and economic needs of the present, without compromising the needs of future generations.
- The link between sustainable development and the determinants of health is clear: improve the broad range of factors that impact human health and well-being and it will enable Canadians to lead sustained economically-productive lives in a healthy environment, which in turn, is a public health outcome.

$$\wedge \text{ DoH} + \text{SD} = \text{PHO}$$

**Issue**

**Action**

**Solution**

# Public Health and the Environment: Food Matters Manitoba / Food Secure Saskatchewan



The Manitoba Food Charter emerged from Manitobans' common vision for a just and sustainable food system. The Charter provides vision and principles that will guide and inform all levels of government, businesses, non-profit organizations, communities, families and individuals in planning, policy development, programs and practice in mutual effort toward food security and community development. It was drafted through broad public consultation and is to be endorsed by Manitoba food system stakeholders.

## CURRENT SITUATION

Manitoba's food system has both strengths and weaknesses. Our province has a significant and diverse agricultural sector and many Manitobans can access the food that they want. However, agricultural communities are challenged by an increasingly urban and globalized economy. Many northern, inner-city, and low income women, children and men have difficulty accessing quality food. The nationally ratified Human Right to Adequate Food has not been realized. Rural, urban and northern communities are disconnected. Not all of our food is necessarily nutritious, not all information about our food is complete or accurate; and much of our food travels long distances. There has been a loss in food knowledge and skills and an increased reliance on fast and highly processed foods. There is growing interest in and widespread concern about Manitoba's food system and a desire for increased coordination and leadership on the issues facing it. The Manitoba Food Charter is testimony to Manitobans' willingness to collectively and constructively engage in meeting these challenges.

## VISION

A just and sustainable food system in Manitoba is rooted in healthy communities, where no one is hungry and everyone has access to nutritious food. It is an economically viable, diverse and ecologically sustainable system to grow, harvest, process, transport, and distribute food while minimizing waste.

A just and sustainable food system in Manitoba means:

- ❖ Farmers, fishers, harvesters, processors and distributors can generate adequate incomes and use ecologically sustainable practices.
- ❖ Respect for the traditional hunting, fishing, trapping, gathering, and conservation practices of First Nations, Inuit and Metis peoples within sustainable limits;
- ❖ A sustainable balance between fair international agricultural trade and diverse vibrant production for the local market;
- ❖ Healthy relationships between producers and consumers in urban, rural and northern Manitoba communities;
- ❖ Province-wide availability of a variety of nutritious and affordable food through accessible retail outlets and food service operations and the economic means to obtain sufficient daily food for health and dignity;
- ❖ Well grounded confidence in the quality and safety of our food; and
- ❖ Easy access to understandable accurate information about nutrition, food composition, the ways food is grown, preserved, processed, purchased, and cooked, and how to minimize waste.

**WE, THEREFORE, DECLARE** our commitment and intent to work in partnership towards achieving a just and sustainable food system in the province of Manitoba. We recognize that this commitment has real implications for our policies, programs and practice. Our willingness to make this commitment indicates our sense of collective and personal responsibility for the present and future ecological, economic and social well-being of Manitoba.

Signature \_\_\_\_\_

<http://food.cimnet.ca>



## MFC Funding Summary 2008-2009

Source	Date	Allocation	Amount
PHAC funds	Date	Allocation	Amount
Public Health Agency of Canada	2008-2009	For a complete list of PHAC funded activities see attached logic model • Numerous projects including community development and innovation projects • 2009 Growing Local Conference (15000) • 2008 Golden Carrot Awards • 2008 Northern Harvest Forum • Provincial newsletters • Food Security Networks	\$145,000
PHAC Amendment	2008-2009	30000 Growing Local Conference 33000 Newcomer food security project, local food economic analysis, Pan Canadian, municipal and Manitoba policy scan and reports 32500 Northern Grocers Forum	\$95,500
PHAC Canadian Diabetes Strategy	2007-2008	7 Diabetes prevention projects	\$57,000
<b>Subtotal PHAC</b>			<b>297,500</b>

PHAC funding led to the development of the first Provincial food charter in North America, the Manitoba Food Charter, developed through over 70 provincial community consultations, with over 50 organisational signatories. The charter model has been used as model for other initiatives such as Vibrant Communities, Violence prevention, regional food charters etc.



## Growing in Collaboration

A REPORT ON THE WORK OF THREE FOOD SECURITY ORGANIZATIONS IN MANITOBA AND SASKATCHEWAN:  
 FOOD MATTERS MANITOBA  
 BAYLINE REGIONAL ROUND TABLE  
 FOOD SECURE SASKATCHEWAN







## NORTHERN FOOD SECURITY PARTNERSHIP INITIATIVE

2008/2009  
 ANNUAL REPORT and  
 EVALUATION









BAYLINE REGIONAL ROUND TABLE  
 Northern Food Security Partnership Initiative  
 Box 108, Wabowden, MB R0B 1S0  
 Ph: (204) 689-2063 Fax: (204) 689-2355  
 Email: [baylinerrt@live.ca](mailto:baylinerrt@live.ca)

# Federal Sustainable Development Act










- The *Federal Sustainable Development Act* (2008) requires departments to make environmental decision-making more transparent and accountable. The focus is on environmental issues with economic considerations:
  -  Clean Air and Climate Change
  -  Clean Water
  -  Clean Nature
  -  Greening of Government Operations (GGO)
- Every societal issue will have a positive or negative direct and/or indirect impact on public health (Kevin Bacon degrees of separation).
- How will the FSDS impact public health?
- How will the FSDS impact the Public Health Agency of Canada?

# PHAC's FSDS and DSDS Environment

## Federal Sustainable Development Strategy

-  Green Building Strategic Framework
-  Green Meeting Guide
-  Electronic and Electrical Equipment Disposal Plans
-  Paper Reduction Initiative
-  Printer Reduction Initiative
-  SmartBars

## Departmental Sustainable Development Strategy

-  National Energy Reduction Initiative
-  National Dead Battery Recycling Program
-  Sustainable Development Advocate
-  SEA compliance & reporting
-  Green procurement attributes of all contracts issued
-  Performance contracts for procurement specialists
-  Green procurement education and training
-  Environment Week (E-Week) & Earth Day
-  Banning standalone facsimile machines (2017)

# Public Health Outcomes: Sustainable and Health Communities

- Outcomes are the desired effects of programming
- Sustainable and Health Communities is a ultimate outcome for all government programs, whether they are driven by public health or not.

Figure 1: Determinants of Health

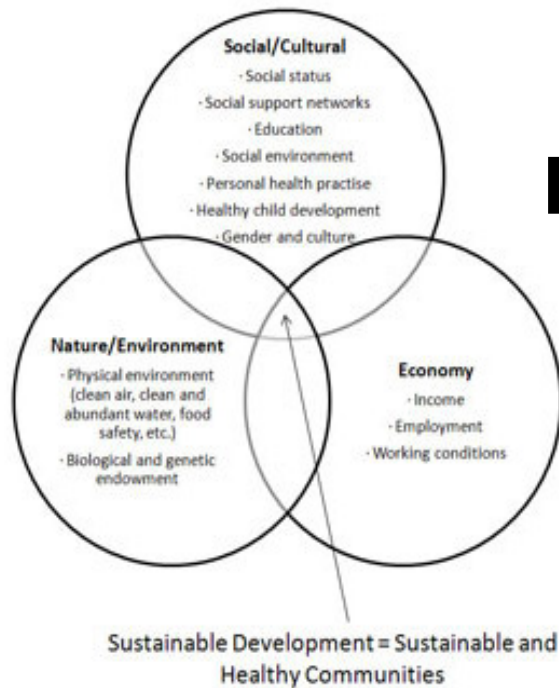


Figure 2: The Three Pillars of Sustainable Development

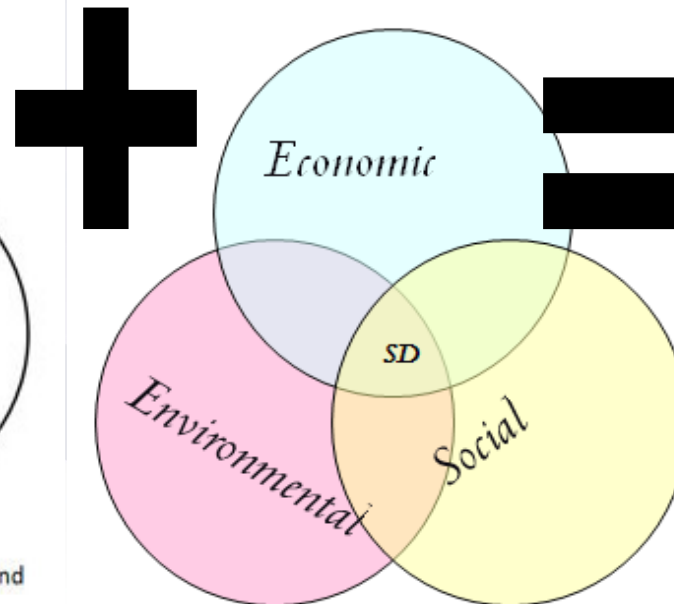


Figure 3: DoH + SD = SAHC



# Conclusion

- **Health inequities** and the **determinants of health** are modifiable and non-modifiable elements or factors that are seen within different health statuses of individual groups (age, biology, location, culture).
- The **social determinants of health** are a subset of modifiable factors under the determinants of health that focus solely on the social aspects of health (access, employment, societal cohesion)
- **Sustainable development** programming can target health inequities or specific determinants of health, in order to reduce vulnerabilities and increase resiliencies of communities, contributing to a strategic outcome of **sustainable and health communities**.
- Public health programming impacts the environment and is not limited to GGO.
- PHAC targeted action on the environment is public health!

# Thank you!

