

Shale Gas and public health

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What is Health???

“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”

(WHO – World Health Organization)

Prerequisites for Health

The Ottawa Charter for Health Promotion 21 November 1986

- **peace**
- **shelter**
- **education**
- **food**
- **income**
- **a stable eco-system**
- **sustainable resources**
- **social justice, and equity**

Determinants of Health

PHAC

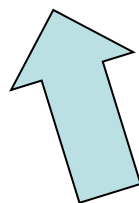
www.phac-aspc.gc.ca/ph-sp/determinants/index-eng.php

- income and social status
- social support networks
- education and literacy
- employment/working conditions
- social environments
- physical environments
- personal health practices and coping skills
- healthy child development
- biology and genetic endowment
- health services
- gender
- culture

CDC

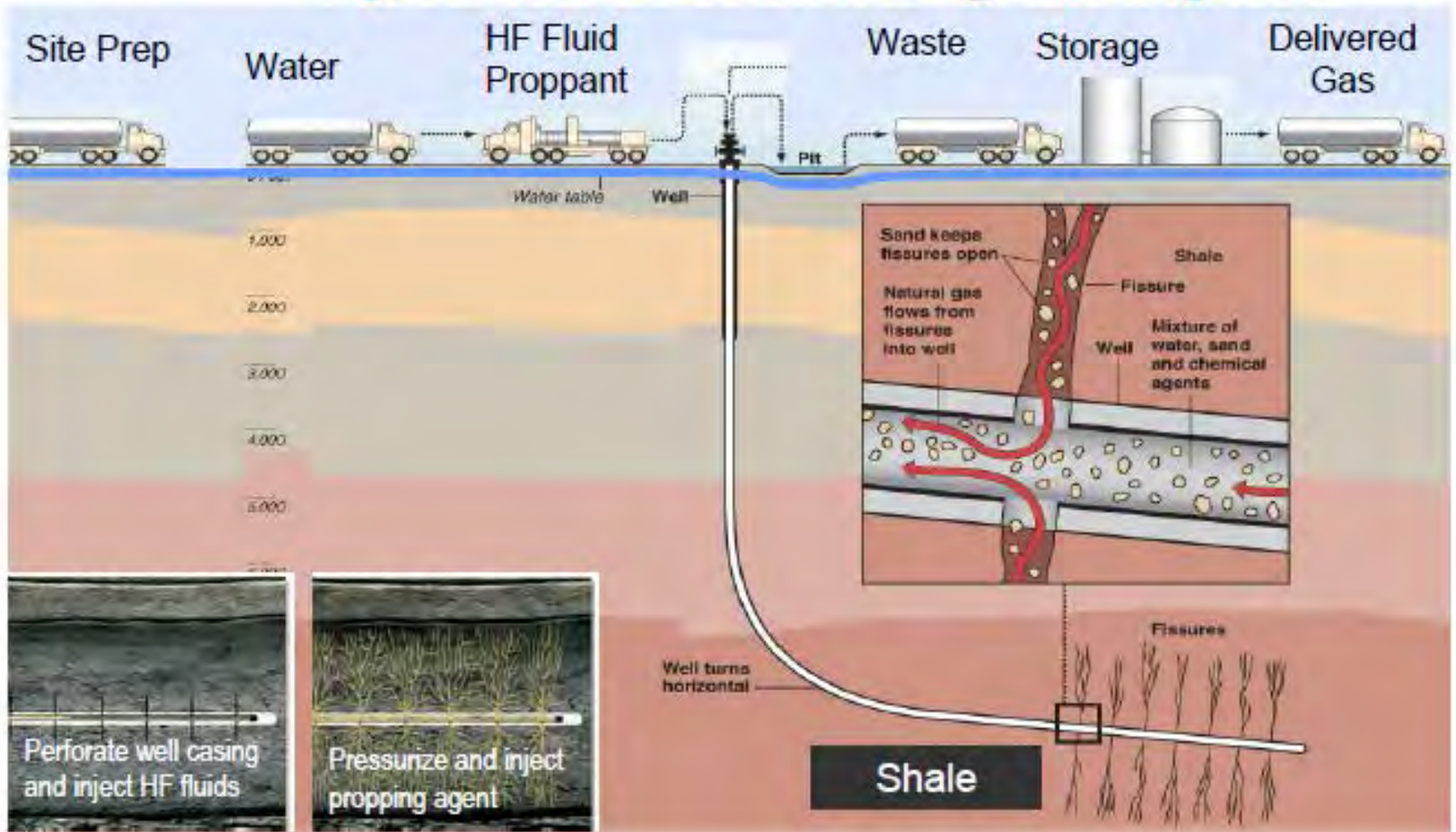
www.cdc.gov/socialdeterminants/FAQ.html

- genes and biology
- health behaviours
- social environment or social characteristics
- physical environment or total ecology
- health services or medical care



Preoccupation with only this one?

Definition of Hydraulic Fracturing Lifecycle



Chief Medical Officer of Health's Recommendations Concerning Shale Gas Development in New Brunswick

Office of the Chief Medical Officer of Health (OCMOH)
New Brunswick Department of Health

September 2012

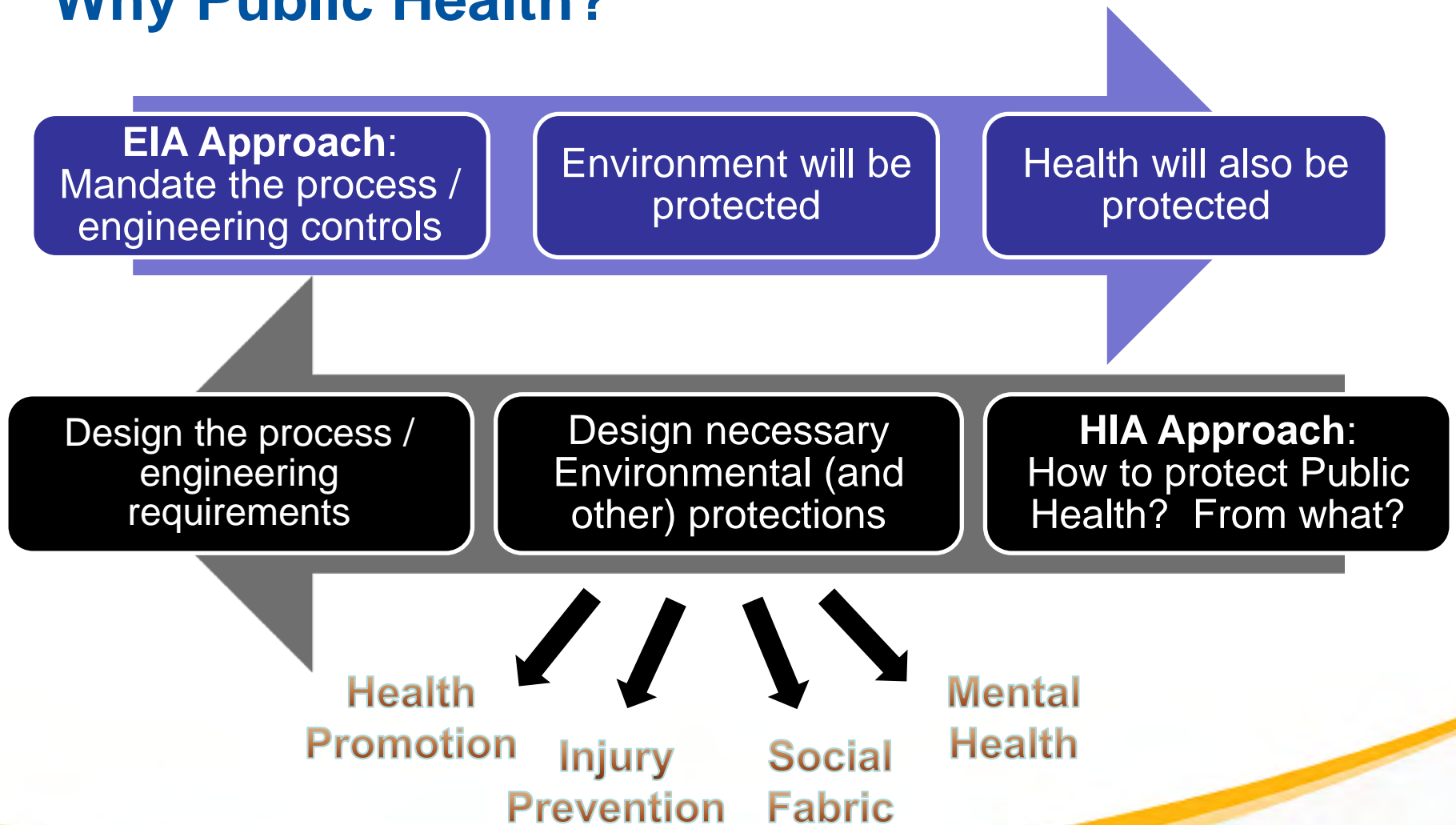


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www.gnb.ca/health

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Isn't Shale Gas just an Environmental Issue? Why Public Health?

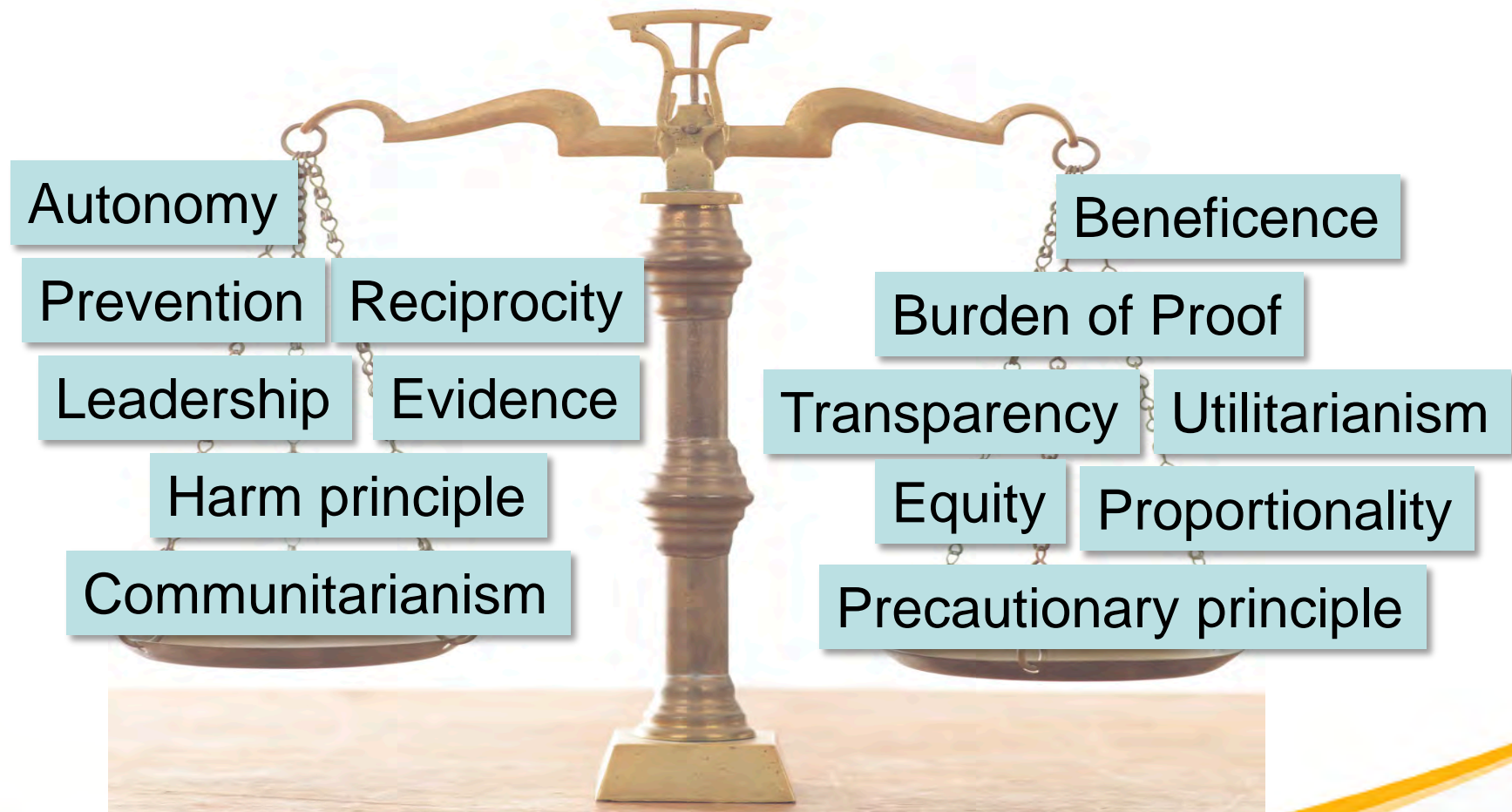


Key points to direct our work

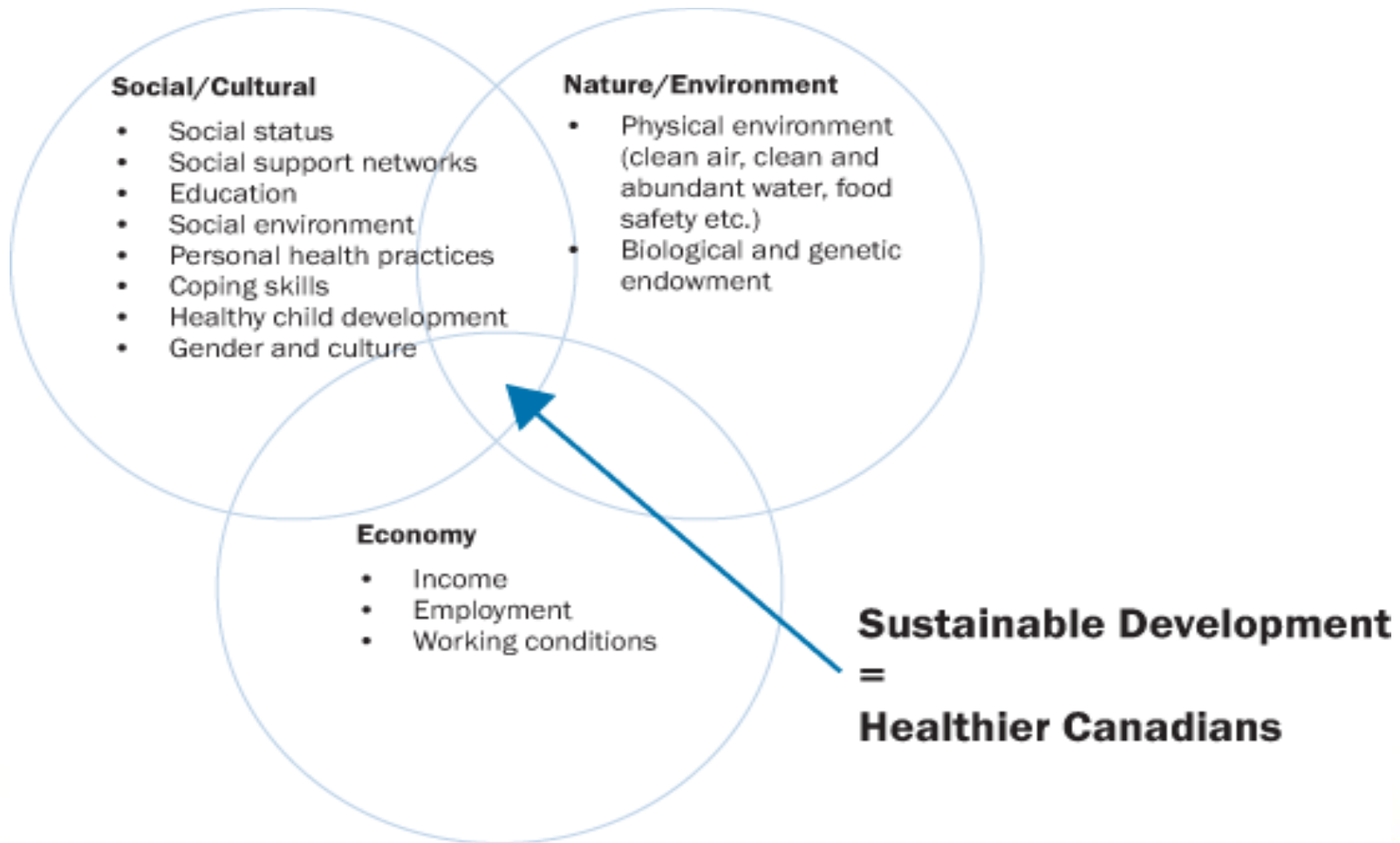
- Grounded in Public Health values and ethics
 - Recommendations must be ethical, practical, reasonable and based on scientific evidence and good public health practice, including a social determinants of health approach
- Identify measures to favour a net benefit to public health if shale gas development proceeds in NB
- Provide information to the public and all who have a role to play in protecting public health
 - Much broader than just the Health sector
- Start a conversation on the acceptability of risks
 - How to maximize benefits and minimize risks?

Public health values and objectives

It's a balancing act

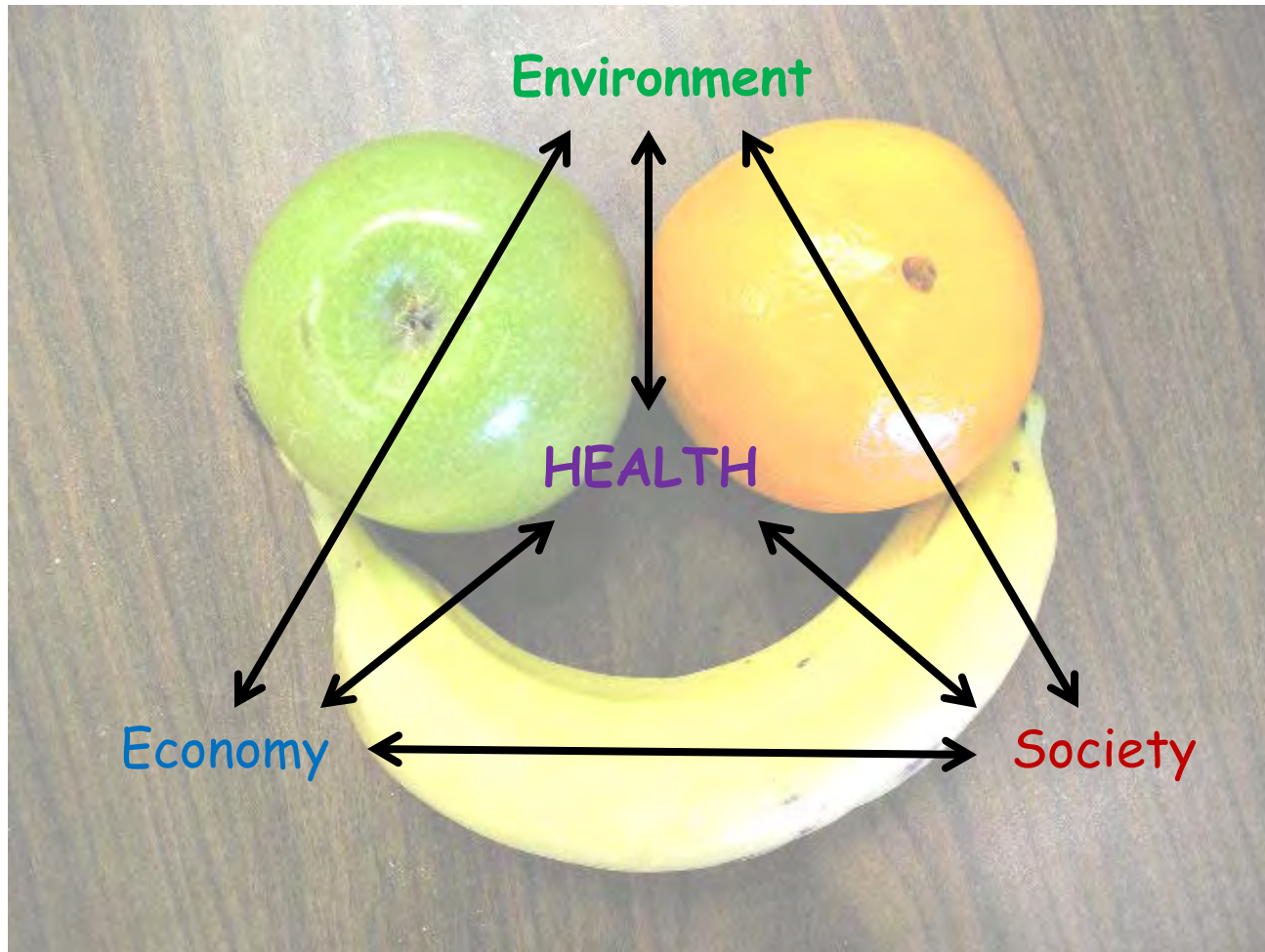


Determinants of Health and the Pillars of Sustainable Development



Adapted from the Public Health Agency of Canada

Finding the “Sweet Spot”



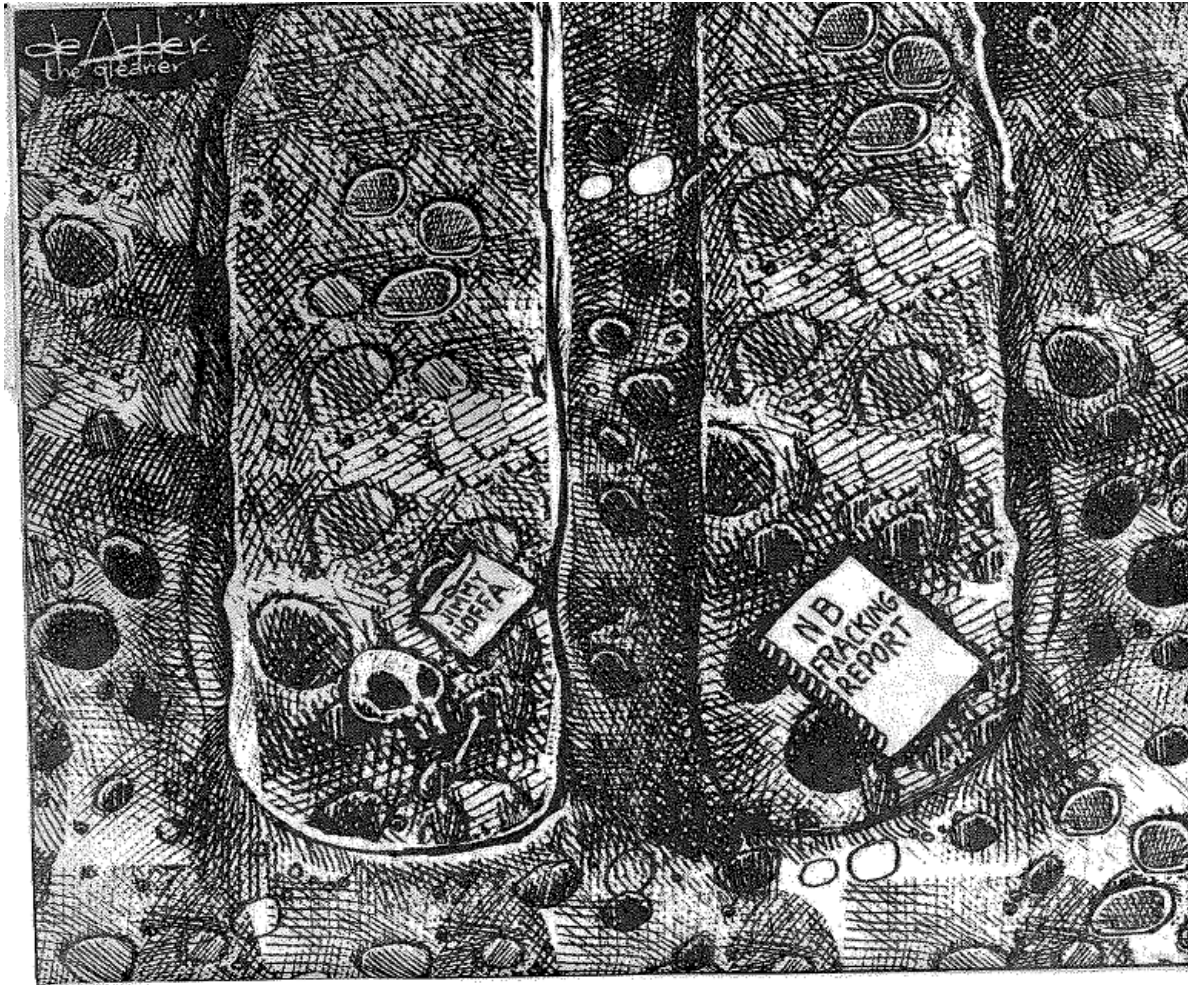
The Results

- *The issue is much more than just toxic chemicals...*
- Final Report presented 30 recommendations related to protection of health and community wellbeing due to:
 - Changes in the Social Environment
 - Changes in the Physical Environment

As well as:

- Protection of Future Generations
- Implementation and Oversight

Reaction



Cartoon by Michael de Adder, "The Daily Gleaner",
October 5, 2012

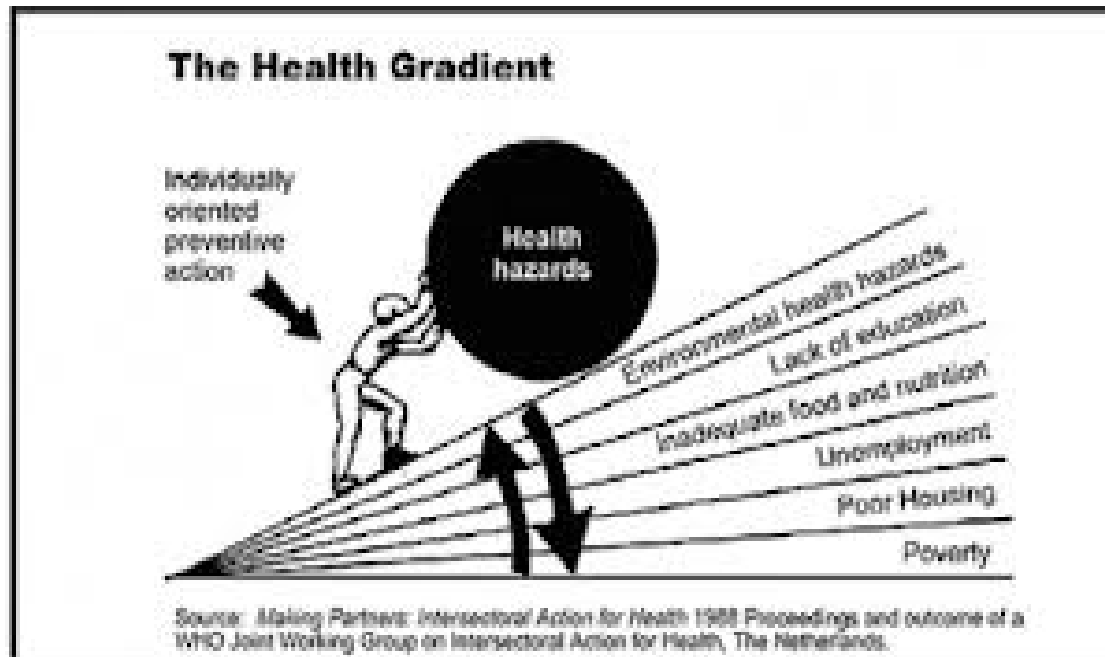
Lessons Learned

- Following the lead of other jurisdictions may not give the desired public health outcomes
 - There is little or no precedent elsewhere
- Recommendations are just that – a more formal approach could give greater certainty of action
- Need to advocate for health and help decision makers understand the value of a public health approach
 - *“... a complete state of physical, mental and social well-being, and not merely the absence of disease or infirmity”*

Cautions from experience with Shale Gas

- Public discourse and media coverage may focus entirely on chemical toxicity / drinking water concerns
- Public Health is often late to the table or absent from discussions on regulation
- True economic and health costs / benefits assessment may be absent
- Significant data gaps limiting health impact assessment may exist
- Cumulative impacts may have been poorly studied

Questions?



Source: *Making Partners: Intersectoral Action for Health 1988*

Recommendations - Protection of Health and Community Well-Being Related to Changes in the Social Environment

- A more balanced distribution of the potential health risks and financial rewards of shale gas development
- Revenue sharing
- Identifying a role for local governments in planning the location of gas industry infrastructure
- Identifying a role for Public Health in community planning
- Transparent consultative process with the public and stakeholders on how these recommendations should be implemented.

Recommendations - Protection of Health Related to Changes in Both the Social and Physical Environments

- Require a health impact assessment be submitted as part of the standard project registration process
 - pan-Canadian approach?
- The development and implementation of a system to monitor the health status of all those working, living, attending school or playing near industry sites
- Linking the health information to information being collected through environmental monitoring as well as socioeconomic statistics.

Recommendations - Protection of Health Related to Changes in the Physical Environment

- Air and water quality should be monitored in areas where industry is expected to be located
- Provisions for handling wastewater be put in place, as well as its testing, transportation, treatment and disposal
- Full and timely disclosure of chemicals used including concentrations and quantities
- Use of least toxic alternatives for hydraulic fracturing fluids

Recommendations - Protection of Health Related to Changes in the Physical Environment

- Safe setback distances that consider human health factors
- Limiting health impacts from noise, vibration and continuous illumination
- Traffic management plans
- Local and provincial emergency response training
- Promotion and protection of employee health

Recommendations - Protection of Future Generations

- Plan for and reduce any potential “Boomtown Effect”
- Strategic Health Impact Assessment
- Identify areas that should not be developed
- Strategic land use plan that considers a more even distribution of health risks and rewards
- Planning with consideration of vulnerable and disadvantaged populations

Recommendations - Protection of Future Generations

- Planning with consideration of First Nations
- Strategic water management plan
- Support NB research including health studies, potential health effects, social impacts, etc.
- Public reporting of environmental and health monitoring data

Recommendations – Implementation and Oversight

- Strengthen government's ability to oversee the industry
- Establish a group to oversee the implementation of these recommendations
- Establish an on-going dialogue between communities, government, academics and the shale gas industry
- Create a multi-disciplinary advisory committee to Cabinet.