



# The Role of Sustainability in the Healthcare Sector: *A New Story*

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**CIELAP:**

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## CIELAP is...

**... a sustainability think-tank with a 40-year history of providing balanced, objective, evidence-based environmental and sustainability research in the public policy arena.**

## CIELAP Vision

Governance structures at the national and provincial/territorial levels of government in Canada that provide a strong foundation to achieve Sustainability: the balancing of a resilient natural environment, social equity, and a supportive economy.

## CIELAP's Mission

CIELAP informs legislative, policy and regulatory outcomes for Sustainability at the national and provincial/territorial levels of Canadian government. We do so by engaging a broad diversity of stakeholder perspectives in the development of evidence-based research, recommendations, frameworks, and models that inform Canadian governments and help them build a strong foundation for Sustainable Development.

## CIELAP's Research Areas

CIELAP has identified the following specific *Research Areas* for our focussed attention:

- **Sustainability Strategies (Agenda 21s/Local Agenda 21s);**
- **Protecting Our Water Resources In Light of Climate Change;**
- **Innovative Approaches to Extended Producer Responsibility; and**
- **Sustainable Solutions to Land Use Conflict.**

## - Context -

- “A context without a subtext is a pretext”:

*Let's consider...*

*...What is it we think we know about sustainability / sustainable development?*

***- Context - , cont'd.***

***Let's also consider...***

***...If at all, why do we think  
Sustainability is important?***

# Top 10 Myths about Sustainability (i)

*(Scientific American 3.0, Michael D, Lemonick)*

## *Myths:*

- 1. Nobody knows what sustainability really means.*
- 2. Sustainability is all about the environment.*
- 3. Sustainable” is a synonym for “green.”*
- 4. Its all about recycling.*
- 5. Sustainability is too expensive.*
- 6. Sustainability means lowering our standard of living.*

# Top 10 Myths about Sustainability (ii)

*TOP 10 Myths about Sustainability, cont'd*

*Myths, cont'd:*

- 7. Consumer choices and grassroots activism, not government intervention, offer the fastest, most efficient routes to sustainability.*
- 8. New technology is always the answer.*
- 9. Sustainability is ultimately a population problem.*
- 10. Once you understand the concept, living sustainably is a breeze to figure out.*

# Some Principles: Sustainability...

- Is grounded in an inherent respect for all.
- Entails an awareness of the need for learning about the collective whole through individual parts.
- Recognises that each and every person, no matter their station in life, has valuable knowledge to share related to the advancement of Sustainable Development.
- Understands every human being to be both a student and a teacher of life.
- Affirms that each and every person is identified as a leader in their own right, recognising that all of humanity can - even must - contribute to the advancement of Sustainable Development on Earth.
- Requires active listening, as we intuitively know we can learn more by listening to others than we can ever learn through hearing our own voice.
- Actively seeks or facilitates other peoples' participation in discussions on Sustainable Development, for the more people who join together in discussing sustainability, then the greater the number of people who will be both learners and practitioners of Sustainable Development.
- Is interested in facilitating engagement amongst humans and so listens to and acknowledges all ideas as having potential and value.

# Sustainability defined (1)

*Our Common Future*, Report of the UN's World Commission on Environment and Development

“Chapter 2: Towards Sustainable Development - Introduction” [paragraphs 1, 2, 3].

- DEFINITION: Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:
  - the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and
  - the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.

## Sustainability defined (2)

In simple words, *sustainability / sustainable development* has three equal and mutually-reinforcing pillars of the *social*, *economic* and *environmental*.

Collectively, these three parts are popularised as either of the “*Triple-Bottom-Line*” (3BL-approach), or “*People [social], Profit [Economic] and Planet [environmental]*.”

# Sustainability defined (3)

*Our Common Future, “Chapter 2*

- *International Points of comparison*: The goals of economic and social development must be defined in terms of sustainability in all countries.
- *Incorporates longitudinal time*: “implies a concern for social equity between generations, a concern that must logically be extended to equity within each generation.”

## Sustainability defined (4)

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- Sustainable Development is commonly referred to as being a “journey” over a “destination” for it is a continual, ongoing, process.
- SD is future-oriented, more in-line with “Earth-time scales” over “human-time scales”.
- At all levels it will differ in approach in both time & scale.
- Sustainability also entails “social justice” implications, as it connects poverty and inequitable access to Earth’s abundant natural resources.

# Sustainability defined (5)

*North Americans tend to perceive sustainability through a very different lens than it is commonly envisioned by many other human societies.*

*We tend to narrow sustainable development to “things green”, thereby choosing to limit sustainability’s potential.*

*Other cultures have tended to accept its original expansive definition and thereby perceive – even realise – sustainability’s greater opportunities.*

## Sustainability defined (6)

*Consider how differing perceptions of sustainability might impact how we then choose to apply the theory and practice...*

*You will apply sustainability very differently as a “greening” method than you would as a 3BL approach.*



*One difference would be understanding that Sustainability entails  
“Thinking in Systems”: A web of interconnexions.*



*What is...*  
*.... “Systems Thinking”?*

*Since times prior to the arrival of Europeans on their shores, the Nuu-chuh-nulth First Nations of Vancouver Island have spoken to systems thinking when they say:*

*"Hishuk ish ts'awalk"*

*or*

*"everything is one and interconnected."*

# *Donella Meadows and Thinking in Systems (1)*

- “A system is a set of things... interconnected in such a way that they produce their own pattern of behaviour over time.”
- “Systems happen all at once. They are connected not just in one direction, but in many directions simultaneously.”
- “Once we see the relationship between structure and behaviour, we can begin to understand how systems work, what makes them produce poor results, and how to shift them in to better behaviour patterns.”
- “..the basic operating unit of a system: the feedback loop.”

# *Donella Meadows and Thinking in Systems (2)*

- **Systems: Are more than the sum of the parts.**
- **Interconnexions *and* non-linear (“Look beyond the players to the rules of the game”).**
- **Understanding Systems behaviour over time.**
- **Measurability: stock, flow and dynamics.**
- **Feedback loops:**
  - **Stabilising loops: Balancing feedback.**
  - **Runaway loops: Re-inforcing feedback.**



**Donella Meadows:**  
***Thinking in Systems (3).***

**Systems Thinking:**

**“...self-organizing non-linear feedback systems are inherently unpredictable. They are not controllable.”**

# *Jane Jacobs and Systems Thinking*

## Jane Jacobs (from *Ideas That Matter* 2004)... on connexions.

- “everything is connected”. This has both “positive and negative connotations for society.” [for] “it is worthwhile to make any improvement, for if everything is connected to everything else then good is connected to good”.
- There are two kinds of scientific approach: bivariate connexions and organic connexions. “But no science takes into account that everything is connected to everything else.” To show more than these two types of connexions makes for “tremendous difficulties” in science.
- “Remember that the future is always being made up in the present or it doesn’t happen at all.”

# *Vaclav Havel and Systems Thinking*

**“...we are parts of a greater whole. If we endanger her, she will dispense with us in the interests of a higher value - that is, life itself.”**

(Vaclav Havel, former President of the Czech Republic, speech of July 4, 1995, cited in Berghofer & Schwartz, 2007; p. 77.)



*And this lead us to....*



*...Humanity's need for a  
New Story.*

# *Humanity's need for a New Story – Jane Jacobs*

Jane Jacobs (from the *Jane Jacobs Award for 'Ideas That Matter' 2004 in Toronto*)... on Stories :

- Early human civilisations “got along through stories. Stories are about everything being connected to everything else. But we don't think stories are important anymore. In fact, they have been downgraded even by scientists themselves who call them anecdotal evidence. [Yet] much of science is founded on anecdotal evidence.”
- [Jacobs' quoting unknown sources] “every story only has a middle, because the beginning is forgotten and the end is unknown.”

# *Humanity's need for a New Story – Thomas Berry.*

## **Thomas Berry:**

- **The *soul* of the global Sustainability field.**
- **Spoke to humanity's chosen **STORY** determining our own fate.**
- **Identified humanity's need for a *New Story*.**
- **Called for a story to reconnect humans and nature.**

A photograph of a lush green forest with tall trees and a wooden bench in the foreground. The text is overlaid on the image.

# **Understanding Sustainability as a *Story*.**

**Sustainable Development is  
nothing less than:**

**“...a profound rethinking of a  
dominant paradigm.”**

**(Berghofer & Schwartz, 2007; p.66.)**



**Sustainability as a story...**

**...calls on humans to develop a  
New Story that eliminates silo-  
thinking and makes required  
interconnexions between the  
social, economic and  
environmental realities that  
collectively intertwine to create  
human societies.**

# A New Story for the Pharmaceutical Sector

- ...In 2006, CIELAP published its groundbreaking report:

**“THERE IS NO-AWAY:  
PHARMACEUTICALS, PERSONAL CARE  
PRODUCTS, AND ENDOCRINE-  
DISRUPTING SUBSTANCES: EMERGING  
CONTAMINANTS DETECTED IN  
WATER.”**

# CIELAP: “THERE IS NO-AWAY” – Recommendations (1)

- 1. Consult and develop a process to determine priority endocrine disruptors in sewage and industrial effluents and review licensing of pharmaceuticals and other chemicals as well as effluent permits in that context.
- 2. Significantly increase research efforts and funding for science related to these issues, including surveillance and monitoring, environmental risks, ecological science, and human and wildlife health.
- 3. Increase research on municipal water treatment technologies that better remove pharmaceuticals and related compounds, and provide ongoing information on such technologies for municipalities. Develop related information programs as part of municipal infrastructure support programs.
- 4. Phase out use of antibiotics and of hormones as animal growth promoters and review the use of preventive antibiotics in animal feed for eventual phase out. Immediately prohibit human use classes of antibiotics for growth promotion and routine prophylactic uses in poultry and livestock operations.

## CIELAP: “THERE IS NO-AWAY” – Recommendations (2)

- 5. Review sewage sludge and animal manure management practices in light of issues related to pharmaceuticals and resistant bacteria in water.
- 6. Support (and/or practice) organic agricultural production; in particular, organic or at least “natural” meat, fish, and dairy products (or eat vegetarian alternatives).
- 7. For personal care and cleaning products, as an interim measure increase public education now through an environmental labeling program and/or identification of products free of both suspected endocrine disruptors and antimicrobial substances linked to antibiotic resistance. As more information is acquired, ban problematic ingredients.

## CIELAP: “THERE IS NO-AWAY” – Recommendations (3)

- 8. Support or develop province-wide product stewardship programs for return of unused drugs.
- 9. Support or develop municipal by-laws banning pharmaceuticals and other chemical discards in sewers and restricting pesticide use; ensure enforcement capability and action.
- 10. Increase support for public education and awareness programs on these issues and leadership to develop action initiatives.
- 11. Identify stakeholders and initiate public discussion and multi-stakeholder consultation in prioritizing government actions, problem areas, and what to do about both.

# *Your Ideas*

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*Begin to consider what you think might be a New Story for a 3BL Sustainability in the Pharmaceutical Sector...*

# One Place to Begin: - Personal leadership:

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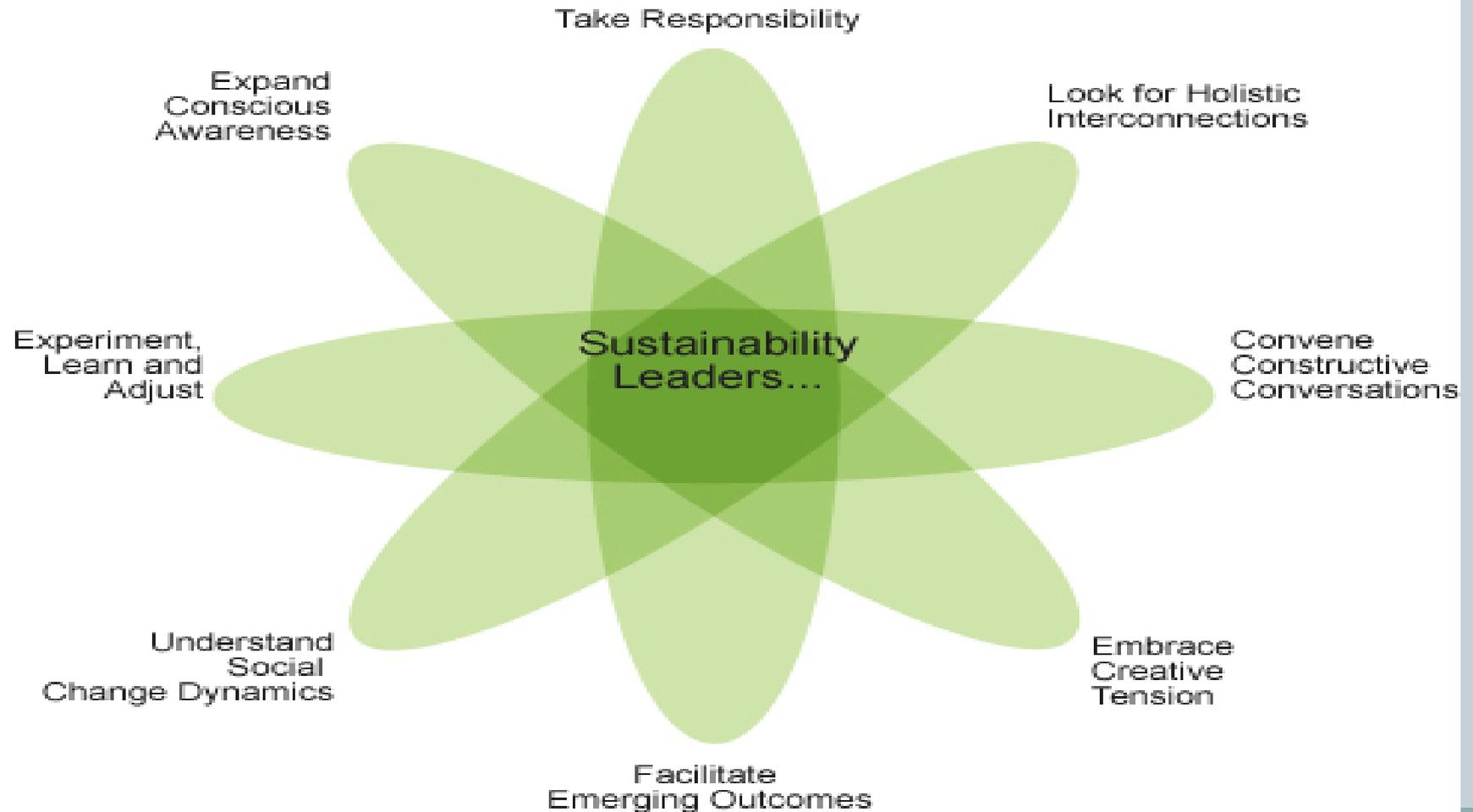
***To practice sustainability...***

***“Begin with oneself. To engender trust a leader must be trustworthy. To promote justice, one must be just; to engage enthusiasm, be enthusiastic. In other words, a leader must model all the qualities and characteristics he or she expects of others.”***

(Berghofer & Schwartz, 2007; p.53.)

# Sustainability Leadership Relational Model

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**Sustainability /  
sustainable  
development... its  
*New Story* is  
much more than  
green.**



**Thank you!**

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