National Collaborating Centre
for Healthy Public Policy

www.ncchpp.ca

Ecological Economics and Public Health: An Interview with Dr. Trevor Hancock

May 2020

Centre de collaboration nationale
sur les politiques publiques et la santé

National Collaborating Centre
for Healthy Public Policy

Institut national
de santé publique
Québec

National Collaborating Centre
for **Healthy Public Policy**

www.ncchpp.ca

Ecological Economics and Public Health: An Interview with Dr. Trevor Hancock

May 2020

AUTHOR

Trevor Hancock
School of Public Health and Social Policy, University of Victoria

EDITING

Michael Keeling
Olivier Bellefleur
Marianne Jacques

National Collaborating Centre for Healthy Public Policy

LAYOUT

Royse Henderson
Communications, développement des compétences et transfert des connaissances

ACKNOWLEDGMENTS

The NCCHPP wishes to thank Dan O'Neill, Associate Professor in Ecological Economics at Leeds University, for his comments on the ecological economics section of this document.

We would also like to thank Dr. Marie-Jo Ouimet, public health and preventive medicine specialist at l'École de santé publique de l'Université de Montréal for her comments on an earlier version of this document.

SUGGESTED CITATION

Hancock, T. (2019). *Ecological Economics and Public Health: An Interview with Dr. Trevor Hancock*. Montréal, Québec: National Collaborating Centre for Healthy Public Policy.

Production of this document has been made possible through a financial contribution from the Public Health Agency of Canada through funding for the National Collaborating Centre for Healthy Public Policy (NCCHPP).

The National Collaborating Centre for Healthy Public Policy is hosted by the Institut national de santé publique du Québec (INSPQ), a leading centre in public health in Canada.

The views expressed herein do not necessarily represent the views of the Public Health Agency of Canada.

This document is available in its entirety in electronic format (PDF) on the Institut national de santé publique du Québec website at: www.inspq.qc.ca/english and on the National Collaborating Centre for Healthy Public Policy website at: www.ncchpp.ca.

La version française est disponible sur les sites Web du Centre de collaboration nationale sur les politiques publiques et la santé (CCNPPS) au www.ccnpps.ca et de l'Institut national de santé publique du Québec au www.inspq.qc.ca.

LEGAL DEPOSIT – 2nd QUARTER 2020
BIBLIOTHÈQUE ET ARCHIVES NATIONALES DU QUÉBEC
ISBN: 978-2-550-86707-4 (FRENCH PDF)
ISBN: 978-2-550-86708-1 (PDF)

About the National Collaborating Centre for Healthy Public Policy

The National Collaborating Centre for Healthy Public Policy (NCCHPP) seeks to increase the expertise of public health actors across Canada in healthy public policy through the development, sharing and use of knowledge. The NCCHPP is one of six centres financed by the Public Health Agency of Canada. The six centres form a network across Canada, each hosted by a different institution and each focusing on a specific topic linked to public health. The National Collaborating Centre for Healthy Public Policy is hosted by the Institut national de santé publique du Québec (INSPQ), a leading centre in public health in Canada.

About Trevor Hancock

One of Canada's leading public health physicians, Trevor Hancock is no stranger to the topic of ecological economics and public health. He first became interested in the topic while still a medical student in London in the early 1970s, as part of an ecological and political awakening that led him to become an area organizer for the People Party (later the Ecology and then the Green Party) in the UK in 1974, and later as the first leader of the Green Party of Canada in the mid-1980s.

One of his early book chapters, in 1986, was "Towards a healthier economy" in *The Living Economy.* He also co-authored a brief monograph with Ron Labonté in 1986 entitled *Healthy Economic Development: Toward a Health Promoting Economic System.* He has continued to have a strong interest in the links between the economy, the environment, and health, most recently exhibited in the 2015 report on the ecological determinants of health that he led for the Canadian Public Health Association.

Dr. Hancock recently retired as a Professor of Public Health at the University of Victoria. In 2015 he was awarded an Honourary Fellowship in the UK's Faculty of Public Health, and in 2017 he was awarded the Defries Medal, the CPHA's highest award, presented for outstanding contributions in the broad field of public health.

Table of Contents

Introduction

In 2019, the National Collaborating Centre for Healthy Public Policy (NCCHPP) reached out to Dr. Trevor Hancock to discuss ways to introduce the core ideas of ecological economics to public health practitioners and decision makers. Some of those ideas were previously exposed in a 2015 report on the ecological determinants that Dr. Hancock led for the Canadian Public Health Association (CPHA) (Hancock, Spady, & Soskolne, 2015).

Those discussions eventually took shape in the form of the interview published here. As governments around the world, including the Canadian federal government, are thinking about ways to move beyond a narrow focus on economic growth toward the implementation of “well-being budgets” or “sustainable budgets” the ideas contained in this interview are timely to inform those reflections.

In what follows, Dr. Hancock addresses seven main areas:

1. Ecological determinants of health
2. The Anthropocene
3. Ecological economics
4. Alternative economic models
5. Making the transition to another economy
6. The role of public health
7. Advocacy in public health

The overarching themes of this discussion concern respecting ecological limits and focusing policy and public health on achieving well-being for all. Dr. Hancock has targeted these areas for his entire career in public health. Ideas like these have never been timelier than they are today.

1 The ecological determinants of health

[NCCHPP] Why should our thinking on health promotion and healthy public policy include ecological determinants?

[Dr. Trevor Hancock] Healthy public policy is rooted in our understanding that many of the most important determinants of health lie beyond the health care sector, and that therefore many of the important policy decisions that affect the health of the population are made in ministries and departments other than the Ministry of Health (Hancock, 1985). One of the key policy sectors – and a constant preoccupation of governments – is economic policy, and the health impacts of economic policy are profound.

We have become accustomed to addressing the social determinants of health over the past couple of decades, and to thinking about the health consequences of poverty and inequality, which flow in large part from economic policy. But just as important – and also greatly influenced by economic policy and all that flows from it – are the ecological determinants of health. These are the fundamental determinants of health that we derive from nature, and they include air, water, food, materials, fuels, waste decomposition, nutrient cycling and a relatively stable and warm climate (Hancock, Spady, & Soskolne, 2015).

But the ecological determinants of health have been largely neglected until recently, even though they were explicitly included as prerequisites for health in the *Ottawa Charter for Health Promotion* (World Health Organization [WHO], 1986), which represents the very origins of our modern approach to health promotion.

However, in the past decade or two, both the scale and rapid growth of the ecological crisis have become increasingly apparent. This is most obvious for climate change, but in fact there are multiple human-induced global ecological changes underway that threaten the health and well-being of the human - and also the non-human – population and, indeed, the very survival of modern civilization.

These global ecological changes have become known collectively as “the Anthropocene.”

2 The Anthropocene

[NCCHPP] So what is the Anthropocene, and what does it have to do with public health?

[TH] Technically, the Anthropocene is the name given to a proposed new geological epoch, named after humans – we are the anthropos in the word Anthropocene, *anthropos* being the Ancient Greek word for human. We humans – especially humans in high-income countries – have become a force of nature, creating massive and rapid global ecological changes.

The Anthropocene can be understood in at least three distinct ways: as a geological phenomenon, as a set of interrelated global ecological changes, and as a sociological phenomenon.

- *First, it is a geological phenomenon*, marked by the deposition in sedimentary layers of uniquely human-made materials, chemicals, and a shift in fossil assemblages (Waters et al., 2016; Zalasiewicz, 2016).
- *Second, the Anthropocene is shorthand for the massive and rapid global ecological changes we have triggered*, including climate change, ocean acidification, widespread resource depletion, massive pollution and ecotoxicity and a sixth, human-created "Great Extinction" (Hancock, Spady, & Soskolne, 2015).
- *Third, it is a sociological phenomenon*, as these changes are all driven by massive socioeconomic changes, characterized as the "Great Acceleration" that began around 1950 (Steffen, Broadgate, Deutsch, Gaffney, & Ludwig, 2015).

These massive global ecological changes have important implications for human health. After all, the ultimate determinants of health are not social determinants but our basic need for air, water, food, materials and fuels, a stable climate – all of which come from nature. These are referred to as ***the ecological determinants of health,*** the focus of a 2015 report for the CPHA (Hancock, Spady, & Soskolne, 2015) and an accompanying Discussion Document (Canadian Public Health Association [CPHA], 2015).

So while public health has placed a great deal of emphasis on the upstream social determinants of health, we need to go even further upstream to understand and address the threats that we are creating to the fundamental ecological determinants of our health and, ultimately, to our survival – not to mention the health and survival of the many other species with which we share this planet.

Moreover, it is clear that these ecological and social crises are not independent of each other, but rather are related and interact. This calls for an ***eco-social*** approach to health.

We can clearly see the interdependence of the social and ecological determinants of health in the way that ecological changes are experienced unequally, both within and between countries.

But since both the ecological and social determinants of health are driven by economic policy – and the cultural values and social norms that underpin the economic system we have created – we need to reconsider economic policy and its health impacts in light of the twin threat of the Anthropocene and ongoing social, economic and health inequities.

Public health's goal in the 21st century must be not only healthier and more just but also more sustainable societies and communities (CPHA, 2015).

3 Ecological economics

[NCCHPP] What is ecological economics?

[TH] First, we need to recognize that the economy is not some form of god-like creation standing apart from and dictating to humanity. It is a human artefact, a social construct that we have created and that we can change if it is not meeting its social purpose.

That purpose, I suggest, is to meet all people's needs and improve human well-being within the capacity of this one small planet that is our home. So if the current system – an industrial, growth-focused neoliberal economy – seems incapable of delivering that outcome, we must replace the current economic model with a new one that is capable of supporting these goals. That new model is called ecological economics, which the Canadian Society for Ecological Economics (n.d.) defines as:

> The study of relationships and interactions between economies and the ecosystems that support them. It is an interdisciplinary collaboration of economics, ecology and other social and natural sciences that aims to understand what sustainability is and how it can be achieved.

There are several key points that must be discussed in order to understand what ecological economics is and its implications for society in general, and health in particular:

- *First, the Earth is a finite system, and thus there are limits to growth,* as we cannot expand beyond the Earth's biophysical limitations.
- *Second, ecological economics is not focused on economic growth.*

  This is a core difference, and it follows from the first point because, as Kenneth Boulding said: "Anyone who believes exponential growth can go on forever in a finite world is either a madman or an economist" (US Congress, 1973, p. 248).

- *Third, it does not use GDP as a measure of progress.*

  GDP has become the main indicator used by governments, the business sector and the media to gauge a nation's progress, despite the warning to the US Congress in 1934 by one of its leading creators, Simon Kuznets, that "the welfare of a nation can ... scarcely be inferred from a measurement of national income" (Kuznets, 1934, p. 7).

  Perhaps the biggest fault in the current use of GDP – and there are many – is that it fails to distinguish between beneficial and harmful economic activity. For example, all the activities in treating tobacco-related diseases, oil spills, house fires and other disasters add to GDP.

  A number of alternative measures have been proposed that make adjustments for these and other problems with GDP. These include the Genuine Progress Indicator (GPI)[1], Bhutan's Gross National Happiness measure[2] and the Happy Planet Index[3]. Here in Canada, the Canadian Index of Wellbeing tracks changes in eight quality of life categories; tellingly, between 1994 and 2014 the CIW only increased by 9.9%, while the GDP rose 38% (Figure 1).

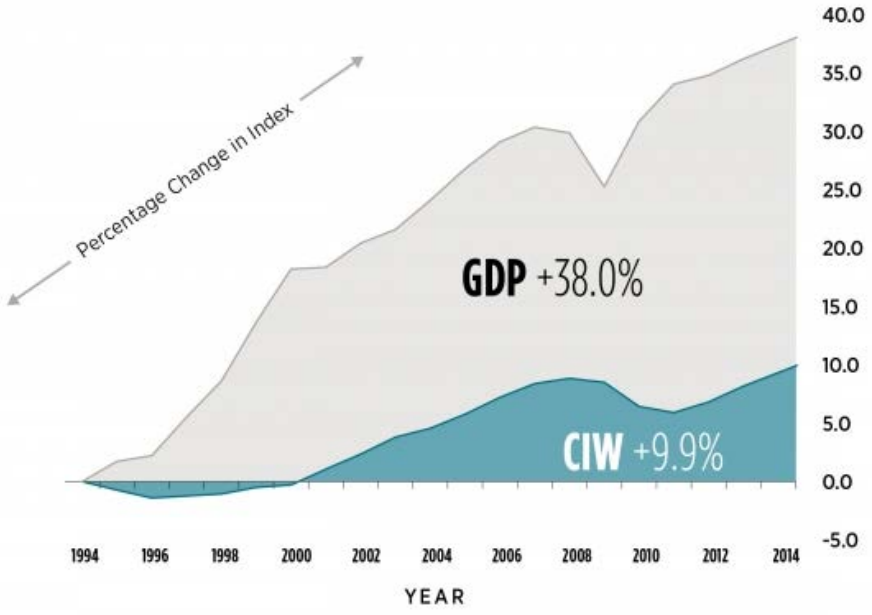
---

1 See: Pembina Institute, https://www.pembina.org/pub/58

2 See: Centre for Bhutan Studies & GNH, https://www.grossnationalhappiness.com/

3 See: New Economics Foundation, http://happyplanetindex.org/

Figure 1 Canadian Index of Wellbeing – Composite Index, 1994 – 2014



Source: Canadian Index of Wellbeing (Reproduced with permission)
https://uwaterloo.ca/canadian-index-wellbeing/what-we-do/how-it-works/our-index

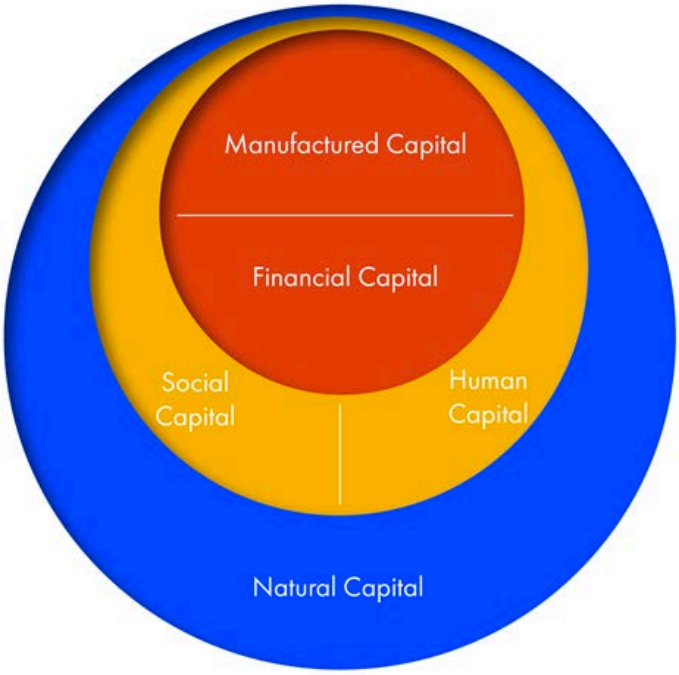
- *Fourth, in addition to the material and monetary wealth that we usually think of when we talk about capital, there are three other forms of capital that must be preserved and increased:*
  - *Ecological or natural capital* – the Earth's biocapacity and resources, both locally and globally;
  - *Social capital* – the capital that is vested in the way we relate to other people through informal networks of association and formal programs of social welfare as well as the "invisible" social capital that regulates our peaceful co-existence through political, judicial and constitutional systems (Hancock, 2001);
  - *Human capital* – the knowledge, skills, health and well-being, and capacity for caring, love, creativity, and innovation of individuals (Hancock, 2001).

  But in the current model, the assumption is that all these forms of capital may be substituted for each other as long as the total stock of wealth does not decline, so it is acceptable to degrade these other forms of capital, as long as material or financial capital increases.

  In ecological economics, natural capital is a critical form of capital and must be preserved; we can't replace vital ecosystems that constitute our life support systems with manufactured versions, and damaged lives and communities are expensive - and perhaps impossible - to rebuild.

  This is shown in Figure 2, in which manufactured and financial capital are nested within – and thus are a subset of – human and social capital, all of which are then nested within and a subset of natural capital. As the World Wildlife Fund has pointed out in their own version of this same model, "Ecosystems sustain societies that create economies. It does not work the other way round" (World Wildlife Fund, 2014, p. 8).

Figure 2 The Five Capitals



Source: *Forum for the Future (*Reproduced with permission)
https://www.forumforthefuture.org/the-five-capitals

So we must redefine what it means to be a successful capitalist in the 21st century, focusing more on growing human, social and natural capital and not just material and financial wealth.

Interestingly, the New Zealand government released a Wellbeing Budget on 30 May 2019 – a world first – that recognizes these five forms of capital and points to the inadequacy of GDP. According to the Minister of Finance, instead of focusing on "a limited set of economic data," with success defined by "a narrow range of indicators, like GDP growth," this new approach measures success in line with New Zealanders' values, while considering "the intergenerational wellbeing impacts of policies and proposals" (Government of New Zealand, 2019, p. 9).

- *Fifth, environmental, social and human costs are not externalities that can be ignored, but must be fully assessed and accounted for.*

  An externality is "a side effect or consequence, esp. of an industrial or commercial activity, which affects other parties without this being reflected in the cost or price" (Canadian Oxford Dictionary, 2nd Ed., 2004, p. 526). In other words, the cost of the product does not include the economic costs of the health consequences of pollution, climate change, smoking, unhealthy fast foods and so on.

  Herman Daly pointed out that these costs are classified as "'external' costs for no better reason than because we have made no provision for them in our economic models" (cited in Raworth, 2017, p. 123).

  This is a key point from a public health perspective, because failing to acknowledge and account for the health impact of an industrial or commercial activity is, in effect, to deny the existence and importance of health impacts, excluding health from consideration in policy making.

We need to conduct comprehensive impact assessments for major policies, projects and practices to fully account for the "economic, environmental, health, and social costs of an action or decision" (BusinessDictionary.com, n.d.), which can thus enable full cost accounting.

- *Sixth, in the face of uncertainty, a precautionary stance is needed.*

  The Precautionary Principle states: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation" (United Nations, 1992).

  This was Principle 15 in the Rio Declaration, which resulted from the 1992 Earth Summit, and it is entrenched in the Canadian Environmental Protection Act. The concept should be familiar to public health practitioners because, across the country and around the world, public health acts often empower medical officers of health and public health inspectors to act to protect public health on the basis of their opinions, and with only "reasonable and probable grounds," not certainty. This is, of course, an application of the precautionary principle.

- *Seventh, in the face of limits to economic growth, we cannot hold out the prospect of growth as a way to address poverty.*

  It has long been the view of conventional economists and governments that the answer to poverty is economic growth. However, Dietz and O'Neill (2013) cast doubt on this belief, noting that "for every $100 of global economic growth between 1990 and 2001, only 60 cents went to people below the $1–per-day line," which was the World Bank's poverty line for extreme poverty at that time.[4] At that rate, they note, it would take $166 of global economic growth in order for the poor to obtain an extra dollar (Dietz & O'Neill, 2013, p. 27).

  More recently, Woodward (2015) has argued that if the pattern of economic growth and distribution we experienced from 1993–2008 continued indefinitely, it would take 100 years to lift everyone above the $1.25 level and 200 years to get them above $5 per day. And, he adds, to achieve this global GDP would need to increase "to nearly 15 times its 2010 level by the time $1.25-a-day poverty is eradicated in 2115, and 173 times its 2010 level by the time of $5-a-day poverty eradication in 2222" (Woodward, 2015, p. 58).

  But in any case, as we have seen, if we cannot have an indefinitely growing economy in a finite world, then it is no longer possible to argue that the answer to the problem of poverty is more growth. As a result, it is important to note that "reducing poverty without global growth would require the redistribution of income from rich countries to poor countries" (Dietz & O'Neill, 2013, p. 26).

[4] The World Bank increased its extreme poverty line – the income needed for basic shelter, food and clothing - to $1.25 per day in 2008 and to $1.90 per day in 2015. But it should be noted that this does not include clean water, sanitation, electricity, education or health care. In other words, the global poverty line represents mere survival, hardly even a bare existence. Woodward (2015, p. 57) considers a more realistic poverty line would be $5 per day, "the income at which basic needs may be met, and social and economic rights minimally fulfilled."

- *Eighth, what business are we in anyway?*

  Is it the business of governments and society simply to grow the economy?

  Should they not be focused on human and social development, on healthy, happy people, on a supportive community and on a just society? And should not all of that fit within the biophysical and ecological constraints of the Earth?

  The central economic question then becomes: What sort of economy can meet the goal of achieving good health and a good quality of life for everyone, while living within our ecological limits?

4 Alternative economic models

[NCCHPP] So what are the alternatives? What sort of economy can meet these goals?

[TH] We need an economy that is fit for purpose in the 21st century. This will mean both displacing the economy from its central role in government and society – replacing economic growth as the focus with equitable and sustainable human development – and replacing the current economic model with a new one that can support these goals.

This approach, clearly, is very consistent with what must be public health's goal in the 21st century – healthier, more sustainable, more just societies and communities (CPHA, 2015).

Two recent books on ecological economics address this challenge. The first, *Enough is Enough* (Dietz & O'Neill, 2013) includes a foreword by Herman Daly who states, simply: "Enough should be the central concept in economics," where enough means "sufficient for a good life" (Ibid., 2013, p. vii).

Dietz and O'Neill describe a steady-state economy as one where "material and energy use are kept within ecological limits, and in which the goal of increasing GDP is replaced by the goal of improving quality of life" (Ibid., p. 45).

They propose four main features that characterize a steady-state economy:

- *Sustainable scale* – "the economic subsystem is able to function within the capacity provided by the earth's ecosystems" (Ibid., p. 46).
- *Fair distribution of income and wealth.*
- *Efficient allocation* of scarce resources among competing interests, which includes the role of the state and civil society, and not leaving everything to the market.
- *A high quality of life* for all citizens.

In her book, *Doughnut Economics,* Raworth (2017) describes the economy we need as one that has "a social foundation of well-being that no one should fall below and an ecological ceiling of planetary pressure that we should not go beyond. Between the two lies a safe and just space for all" (Raworth, 2017, p. 9).

She presents this as a doughnut, where the inner part of the doughnut – the "hole" – contains the key elements of the social foundation for societies: in population health terms, these are the social determinants of health. The economy has to be large enough to ensure that everyone has access to these basic human needs.

For access to an interactive graphic depicting the doughnut economy, follow this link: https://www.kateraworth.com/doughnut/ (consulted February 28, 2020).

The outer zone, beyond the doughnut, consists of the natural systems in which the economy and society exist; in population health terms these are the ecological determinants of health.

Between the social foundation, which defines a minimum size for an economy, and the ecological ceiling, which defines a maximum size (based on resource extraction and ecosystem damage), lies what Raworth calls the safe and just space for humanity. This is the space within which a steady-state economy must operate.

There are other, similar economic models that share much the same assumptions and characteristics as these two. In particular, here in Canada we have the ”no growth” model proposed by Peter Victor, a leading ecological economist and former Dean of the Faculty of Environmental Studies at York University. In his 2008 book *Managing Without Growth,* he explored both a “business as usual” (continuing growth) economy and a variety of alternative low and no growth scenarios for the period between 2005 and 2035 (Victor, 2008).

He found that while a “no growth” scenario could be disastrous, the right combination of low growth leading to no growth by 2035, with high government investment in poverty reduction, literacy and health care and a revenue-neutral carbon tax (at about $200 per ton, with other taxes reduced), could lead to “attractive economic, social and environmental outcomes: full employment, virtual elimination of poverty, more leisure, considerable reductions in GHG emissions and fiscal balance,” as well as wide adoption of renewable energy and energy-efficient technology and other benefits, including increased GDP per capita, as long as it is decoupled from material throughput (Victor, 2008, p. 183-184).

Other, similar models and approaches include the Wellbeing Economy, based on the capabilities approach proposed by Nobel Prize winner Amartya Sen (Dalziel, Saunders, & Saunders, 2018) and de-growth. The latter is defined as “an equitable downscaling of production and consumption that increases human well-being and enhances ecological conditions at the local and global level, in the short and long term” (Schneider, Kallis, & Martinez-Alier, 2010, p. 511), although “whether degrowth should be considered as a collectively consented choice or an environmentally-imposed inevitability constitutes a major debate among degrowth thinkers” (Weiss & Cattaneo, 2017, p. 220).

But whichever version is chosen, the creation of such an economy is one of the greatest challenges faced by humanity, and one of the most vital.

5 Making the transition to another economy

[NCCHPP] What are some innovative ideas that can get us to (and through) the transition to a more just, sustainable and healthy future?

[TH] The ideas that follow are rooted in a very different value system than our present economy (and after all, economics is all about values). This value system is focused on human and social wellbeing and ecological sustainability rather than growing the economy. In fact, the current narrow economic model, which largely fails to account for health, social and ecological impacts of economic activity, is incompatible with an agenda for socially just and ecologically sustainable human development.

There are at least two important issues at the global and national levels where a more sustainable approach would be clearly beneficial for health: energy policy and food policy. Between them, they account for a large proportion of our greenhouse gas emissions and our ecological footprint.

Nationally, Canada's consumption ecological footprint (EF) is equivalent to 4.7 planets-worth of biocapacity, so becoming a One Planet nation will require a reduction in our national ecological footprint of about 78 percent.

While this may seem like a tall order, it is worth noting that more than two-thirds of Canada's EF in 2016 (67.5%) was attributable to carbon; globally, the figure was 60.7% (Global Footprint Network, 2018). So moving to a zero-carbon society could dramatically reduce our EF – hence the importance of energy policy.

There is considerable evidence of the health costs of our current heavy reliance on fossil fuels and the health benefits of a shift away from fossil fuels to clean, low-carbon, and renewable energy and to energy conservation, as highlighted in our report for CPHA (Hancock, Spady, & Soskolne, 2015).

Turning to food policy and agriculture, we again find great synergy between a policy that will be more ecologically sustainable and one that will be more healthy. The recent report of the EAT Lancet Commission on a healthy and sustainable diet (Willett et al., 2019) proposes "a diet rich in plant-based foods and with fewer animal source foods [that] confers both improved health and environmental benefits" (EAT, 2019, p. 3).

In fact, the authors estimate that the diet they propose would save 11 million lives annually, worldwide. It is worth noting that their diet has much in common with the recommendations in the new Canada Food Guide (Health Canada, 2019), which was developed solely on health grounds. In addition, preliminary results from a study of the cost of the new Canada Food Guide found following "the new Food Guide will save Canadian families, on average, 6.8 per cent of their annual food costs" (Charlebois et al., 2019, p. 21), thus providing an example of how to improve health and the environment while at the same time reducing costs.

Healthy Cities 2.0 – Implications for public health at the local level

I am a firm believer in the old environmentalist slogan "Think globally, act locally." After all, we are now an urban planet, and in high-income countries we are 80% - 90% urbanized. So as we enter the Anthropocene, cities have a vital role to play in setting a new agenda by becoming healthy, sustainable and equitable; I call this "Healthy Cities 2.0" (Hancock, 2018), the local application of health promotion 2.0 (Hancock, 2015a).

I have for a long time argued that a healthy city must be a sustainable city (Hancock, 1996a; 1996b; 1996c; 2000), and so it has been a source of some distress that we have often failed to bring together the often parallel streams of healthy city/community work and sustainable city/community work. As we enter the Anthropocene, that fusion becomes ever more important; we must work with environmental organizations, urban planners, community activists and others to create One Planet cities, communities and regions (Hancock, Capon, Dooris, & Patrick, 2017).

In addition to working on energy and food policy at the local level, all the work in recent years on the health impacts of urban sprawl, a very energy-intensive and resource-inefficient form of urban development, and the health benefits of “smart growth” or New Urbanist development and active transportation shows that sustainable communities are also healthy communities (Frumkin, Frank, & Jackson, 2004; Sallis et al., 2016).

So we need to encourage and support the creation of sustainable communities in order to capture the important potential health co-benefits in all those areas from reducing our local footprint.

6 The role of public health

[NCCHPP] What is the role of public health in all of this?

[TH] All these areas noted above – especially food, transportation and urban design – are already areas in which public health is engaged, so it is not hard to see that public health has an important role to play locally.

As already noted, health promotion and the healthy cities movement, as they developed in the 1980s, included what we now call the ecological determinants of health. So if public health sees its role as promoting population health by addressing the determinants of health, then clearly it needs to address the ecological determinants of health.

The CPHA workgroup on the ecological determinants of health has developed an agenda for public health action, as outlined below. For details see Chapter 8 of the report (Hancock, Spady, & Soskolne, 2015) and pages 18 – 20 plus Appendix B of the Discussion Paper (CPHA, 2015).

It is important to note that we are not suggesting that we replace the social determinants focus with an ecological determinants focus, but rather that we need to address both, using an integrated eco-social approach. Several of the action areas below touch on some aspect of ecological economics; public health actions specific to ecological economics are addressed further below.

<u>An agenda for public health action on the ecological determinants of health:</u>

1. Expand the guiding principles of public health
2. Understand and address the ecological determinants of health
3. Walk the talk: Environmentally responsible health care
4. Change social norms and values
5. Change the focus of development and the way it is measured
6. Strengthen ethical purchasing and investment policies
7. Protect people and communities from harm and health inequity
8. Protect people and communities from the adverse impacts of ecological change
9. Work with others to establish policies and practices that create more ecologically sustainable and healthy societies and communities.

Public health is already doing many of these things, we just need to recognize the connections between our economic and social actions and their ecological and health consequences. Item 9, for example, is simply the application of the concepts and principles of healthy public policy, but seen through an ecological determinants “lens.”

It is particularly important to focus on energy policy, given the large impacts of fossil-fuelled energy systems (including transportation and agricultural systems) in harming both population health and ecosystem health. While fossil fuels have contributed in a variety of ways to improved well-being, that improvement has come at a price we can no longer afford: not only in terms of the health impacts of global warming but also the millions of deaths and much disease from $PM_{2.5}$ air pollution, much of which is associated with the use of coal and other fossil fuels (Watts et al., 2019). Public health should be demanding and, where possible, undertaking comprehensive health impact assessments

of all energy systems, in order to be able to compare their health impacts and support healthy energy policy choices.

Public health and ecological economics

Turning specifically to ecological economics, this is a field that has much to offer public health. Most importantly, it places human well-being, rather than economic growth, at the heart of governance and the economic system. It also provides a way to address the two great upstream determinants of ill health and premature death – social injustice and ecological decline – in an integrated or eco-social manner. As I said earlier, such an approach has been called "health promotion 2.0" (Hancock, 2015a).

Both public health and ecological economics are concerned with how to "sustainably improve human well-being and quality of life" (Costanza et al., 2014, p 93) and with issues of equity and distribution; in other words, with the social and ecological determinants of health and well-being. In particular, ecological economics shares a concern with equity and the fair distribution of resources – and thus wealth and power – that was the focus of the WHO Commission on the Social Determinants of Health (2008).

There are several implications for public health organizations and practitioners, and all the following suggestions are based on the CPHA Discussion Document (CPHA, 2015). At all levels, from the local to the global, public health should:

1. Endorse the concept of ecological economics and of a steady-state economy as the basis for a better way to organize society and the economy, so as to improve human well-being in an ecologically sustainable way.
2. Advocate, both within government and in communities and society as a whole, for the development of an economy that provides a just social foundation for all while staying within planetary boundaries, including:
   - Changing the way progress is measured (replacing the GDP);
   - Implementing comprehensive impact assessments and full cost accounting;
   - Supporting boycotts of or divestment from businesses whose activities are socially unjust, ecologically unsustainable and harmful to health;
   - Supporting "the transfer of public subsidies and tax incentives from economic activities that worsen the ecological crisis to those that improve ecological functions and resource sustainability" (CPHA, 2015, p. 20);
   - Supporting the emergence, locally or globally, of businesses that are creating the just, sustainable and healthy economy we need in the 21st century. These will include social benefit corporations (for example, B Corps - https://bcorporation.net/), worker and consumer cooperatives, and businesses promoting the sharing economy.
3. Partner with ecological economists to further explore the health impacts of such an economy, to understand "what really does contribute to human well-being and to recognize and gauge the substantial contributions of natural and social capital, both of which are coming under increasing stress." (Costanza et al., 2014, p. 94).
4. Work with partners across all sectors to determine the health co-benefits of ecologically sustainable policies and practices and, conversely, the ecological co-benefits (or costs) of policies and practices intended to improve health.

5. Work with partners across all sectors to identify the health equity implications of more ecologically sustainable policies and practices and, where necessary, how to ensure that such policies and practices protect disadvantaged people and communities, thus narrowing rather than widening the health gap within and between communities and nations.
6. Work to develop and implement planetary health in all policies – both public policies and "private" (corporate) policies that improve well-being by meeting the need for a social foundation for all while not exceeding the ecological ceiling of planetary limits.
7. Public health organizations should support the development of local businesses that are working to create the 21st century economy we need by making a reasonable profit while reducing social inequity, enhancing ecological sustainability, and improving population health.

This, then, is the beginning of an ecological economics agenda for public health in the 21st century.

7 Advocacy in public health

[NCCHPP] This agenda will be viewed by many as a strong advocacy agenda for public health. "Advocacy" is a contentious word. Why is it important, and what can public health do to promote this agenda in a professional way?

[TH] First, let's dispel the myth that advocacy is somehow a dirty word; it is actually a duty (Hancock, 2015b).

Advocacy has always been an important public health function, whether it be advocating for clean water, sanitation and healthy housing in the 19th century or against the tobacco industry, air pollution and fossil fuels in the 20th and now the 21st centuries. And it has typically been unpopular with governments and the private sector, especially when their policies or products are the targets.

There have been many attempts to silence advocates, sometimes through direct political involvement by firing the offending Medical Officer of Health (see, for example, CBC News, 2002).

More often, however, public health advocates are attacked because economic and social policy is not health policy, so they are said to be acting beyond the scope of their training – "indulging in overt ideological crusades, inventing obscure new problems and claiming jurisdiction in areas well past the limits of their competency" as one commentator stated, concluding that, "[p]ublic health ought to stick to their needles, and leave the economy alone" (Taylor, 2014).

Another common basis for attacking the advocacy role of public health is to argue that the evidence is not definitive so, as scientists, they should wait for certainty. Such criticisms are ill-informed, showing ignorance of the precautionary principle, which was described earlier.

So in the face of climate change – described by the UN Secretary General (2018) as an existential threat, and by the WHO Director General as "the defining issue for the 21st century" for public health (Chan, 2014) - never mind the far larger challenge of the Anthropocene - public health has a duty to speak out, to advocate for changes to our society and our economy so as to protect the health of those now alive and the generations yet to come.

Of course, advocacy alone is not enough; it is but one important tool among many. So we should expect and indeed encourage a growing advocacy role as part of the action agenda for public health in addressing the health impacts of global ecological change, including but not limited to climate change.

And since our economic system is part of the problem, we should expect that advocacy and action will include questioning the existing economic system and proposing and supporting a more healthy, equitable and sustainable system based on ecological economics.

References

Full cost accounting. In *BusinessDictionary.com.* (n.d.). Retrieved November 10, 2019 from: http://www.businessdictionary.com/definition/full-cost-accounting.html

Externality. (2004). In *Canadian Oxford Dictionary, 2nd Ed*.

Canadian Public Health Association [CPHA]. (2015). *Global change and public health: Addressing the ecological determinants of health*. Ottawa: Canadian Public Health Association. Retrieved from: https://www.cpha.ca/sites/default/files/assets/policy/edh-discussion_e.pdf

Canadian Society for Ecological Economics. (n.d.). *About ecological economics* Retrieved from: http://www.cansee.ca/about/about-ecological-economics/

CBC News. (2002, October 5). Kyoto views get medical officer fired. CBC News Retrieved from: https://www.cbc.ca/news/canada/kyoto-views-get-medical-officer-fired-1.308761

Chan, M. (2014, September 15). How climate change can rattle the foundations of public health. *Huffington Post*. Retrieved from: http://www.huffingtonpost.com/dr-margaret-chan/how-climate-change-can-ra_b_5822950.html?1410794135

Charlebois, S., Wambul, B., Racey, M., Flander, D., Smook, M., […] & Music, J. (2019). *Canada's food guide: Awareness, understanding, affordability, and barriers to adoption (preliminary results).* Halifax NS: Dalhousie University and University of Guelph. Retrieved from: https://cdn.dal.ca/content/dam/dalhousie/pdf/management/News/Canada%20Food%20Guide%20March%2014%20EN.pdf Accessed 10 November 2019.

Costanza, R., Cumberland, J. H., Daly, H., Goodland, R., Norgaard, R. B., […] & Franco, C. (2014). *An introduction to ecological economics, second edition*. CRC Press.

Daly, H. (2013). Cited in Dietz, R. & O'Neill, D. (2013). *Enough is enough: Building a sustainable economy in a world of finite resources* (p. vii). Routledge.

Daly, H. (2017). Cited Raworth, K. (2017). *Doughnut economics: Seven ways to think like a 21st century economist* (p. 113). Chelsea Green Publishing.

Dalziel**,** P., Saunders, C., & Saunders, J. (2018). *Wellbeing economics: The capabilities approach to prosperity.* Cham, Switzerland: Palgrave McMillan. Retrieved from: https://link.springer.com/content/pdf/10.1007%2F978-3-319-93194-4.pdf

Dietz, R. & O'Neill, D. (2013). *Enough is enough: Building a sustainable economy in a world of finite resources*. Routledge.

EAT. (2019). *Summary report of the EAT-Lancet Commission on healthy diets from sustainable food systems*. Retrieved from: https://eatforum.org/content/uploads/2019/01/EAT-Lancet_Commission_Summary_Report.pdf

Frumkin, H., Frank, L., & Jackson, R. (2004). *Urban sprawl and public health: Designing, planning and building for healthy communities.* Washington: Island Press. Global Footprint Network. (2018). *2018 edition national footprint accounts: Ecological footprint and biocapacity. (data year 2014).* Retrieved from: http://data.footprintnetwork.org/#/

Government of New Zealand. (2019). *The wellbeing budget.* Retrieved from: https://treasury.govt.nz/sites/default/files/2019-05/b19-wellbeing-budget.pdf

Hancock, T. (1985). Beyond health care: From public health policy to healthy public policy. *Canadian Journal of Public Health, 76*(Suppl 1), 9-11.

Hancock, T. (1996a). Planning and creating healthy and sustainable cities: The challenge for the 21st century. In C. Price and A. Tsouros (Eds.), *Our cities, our future: Policies and action for health and sustainable development*. Copenhagen: WHO Healthy Cities Project Office.

Hancock, T. (1996b). Health and sustainability in the urban environment, *Environmental Impact Assessment Review*, *16*, 259-277.

Hancock, T. (1996c). Healthy, sustainable communities: Concept, fledgling practice and implications for governance. *Alternatives, 22*(2), 18-23.

Hancock, T. (2000). Healthy communities must be sustainable communities too. Public Health Reports, *115*(2 and 3), 151-6.

Hancock, T. (2001). People, partnerships and human progress: building community capital. Health Promotion International, *16*(3), 275–280

Hancock, T. (2015a). Population health promotion 2.0: An eco-social approach to public health in the Anthropocene. *Canadian Journal of Public Health, 106*(4), e252–e255. doi: 10.17269/CJPH.106.5161

Hancock, T. (2015b). Advocacy: It's not a dirty word, it's a duty. (Editorial). *Canadian Journal of Public Health*, *106*(3), e86 – 88.

Hancock, T. (2018). Healthy cities 2.0: Transitioning towards 'One Planet' cities (Key challenges facing 21st century cities, Part 3). *Cities & Health, 1*(3). doi: https://doi.org/10.1080/23748834.2018.1526659

Hancock, T., Capon, A., Dooris, M., & Patrick, R. (2017). One planet regions: Planetary health at the local level. *Lancet Planetary Health, 1*, e92 – e93.

Hancock, T., Spady, D. W., & Soskolne, C. L. (Eds.) (2015). *Global change and public health: Addressing the ecological determinants of health: The report in brief.* Retrieved from: https://www.cpha.ca/sites/default/files/assets/policy/edh-brief.pdf

Health Canada. (2019). *Canada's food guide.* Ottawa: Government of Canada. Retrieved from: https://food-guide.canada.ca/en/

Kuznets, S. (1934). *National income, 1929–1932.* 73rd US Congress, 2nd session, Senate document no. 124, p.7. Retrieved from: https://fraser.stlouisfed.org/files/docs/publications/natincome_1934/19340104_nationalinc.pdf

Raworth, K. (2017). *Doughnut economics: Seven ways to think like a 21st century economist.* Chelsea Green Publishing.

Sallis, J. F., Bull, F., Burdett, R., Frank, L., Griffiths, P., […] & Stevenson, M. (2016). Use of science to guide city planning policy and practice: How to achieve healthy and sustainable future cities (Introduction to a series on Urban design, transport, and health). *The Lancet*, *388*(10062), 2936-2947. doi: https://doi.org/10.1016/S0140-6736(16)30068-X

Schneider, F., Kallis, G., & Martinez-Alier, J. (2010). Crisis or opportunity? Economic degrowth for social equity and ecological sustainability. *Journal of Cleaner Production, 18*, 511–518.

Steffen, W., Broadgate, W., Deutsch, L., Gaffney, O., & Ludwig, C. (2015). The trajectory of the Anthropocene: The great acceleration. *The Anthropocene Review, 2*(1), 81–98.

Taylor, P. S. (2014, November 17). Public health officers should focus on disease, not politics. *The Globe and Mail.*

United Nations. (1992). *The Rio declaration on environment and development.* Retrieved from: https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_CONF.151_26_Vol.I_Declaration.pdf

U.N. Secretary-General. (2018, September 10). *Secretary-General's remarks on Climate Change*. Retrieved from: https://www.un.org/sg/en/content/sg/statement/2018-09-10/secretary-generals-remarks-climate-change-delivered

United States Congress. (1973). *Energy reorganization act of 1973: Hearings, ninety-third congress, first session, on H.R*. 11510. p. 248.

Victor, P. (2008). *Managing without growth.* Cheltenham, UK: Edward Elgar Publishing.

Waters, C. N., Zalasiewicz, J., Summerhayes, C., Barnosky, A. D., Poirier, C. […] & Wolfe, A. P. (2016). The Anthropocene is functionally and stratigraphically distinct from the Holocene. *Science, 351*(6269). doi: 10.1126/science.aad2622

Watts, N., Amann, M., Arnell, N., Ayeb-Karlsson, S., Belesova, K., […] & Montgomery, H. (2019). The 2019 report of The Lancet Countdown on health and climate change: Ensuring that the health of a child born today is not defined by a changing climate. *The Lancet*, *394*(10211). doi: https://doi.org/10.1016/S0140-6736(19)32596-6

Weiss, M. & Cattaneo, C. (2017) Degrowth – Taking stock and reviewing an emerging academic paradigm. *Ecological Economics, 137*, 220-230.

World Health Organization [WHO]. (1986). *Ottawa charter for health promotion*. Retrieved from: https://www.canada.ca/en/public-health/services/health-promotion/population-health/ottawa-charter-health-promotion-international-conference-on-health-promotion.html

World Health Organization [WHO] Commission on the Social Determinants of Health. (2008). *Closing the gap in a generation: Health equity through action on the social determinants of health. Final report of the Commission on Social Determinants of Health.* Geneva, Switzerland: WHO. Retrieved from: https://www.who.int/social_determinants/thecommission/finalreport/en/

Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., (…) & Murray, C. J. L. (2019). Food in the Anthropocene: The EAT–Lancet Commission on healthy diets from sustainable food systems. *The Lancet, 393*(10170), 447-492.

Woodward, D. (2015). Incrementum ad absurdum: Global growth, inequality and poverty eradication in a carbon-constrained world. *World Economic Review*, 4, 43-62.

World Wildlife Fund [WWF]. (2014). *Living planet report 2014: Species and spaces, people and places*. Gland, Switzerland: WWF. Retrieved from: https://www.worldwildlife.org/pages/living-planet-report-2014

Zalasiewicz, J. (2016). A history in layers. *Scientific American Special*, *25*(5), 104–111.

Publication N°: 2668

www.ncchpp.ca