

THE SOLUTIONS AGENDA

A CALL TO ACTION FOR AND BY CANADIANS

Professor Ann Dale¹, Rob Newell, Yuill Herbert, Rebecca Foon, et al.²

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INTRODUCTION

"Find your place on the planet. Dig in, and take responsibility from there."

(Gary Snyder)

We live in a time of wicked, messy problems that cannot be solved by any one sector, discipline, government, Indigenous Nations, or community acting alone: the challenges we face demand unprecedented collaboration and government coordination.³ This agenda⁴ was developed by several ways. The concept emerged from the results of a 10-year [Canada Research Chair in Sustainable Community Development](#), looking at what makes a community vital, and the principal investigator's [climate change research](#) in British Columbia. A series of e-Dialogues was then led over the next two years on key sustainable development issues⁵ bringing together the research team and three to five leading innovators from across the country, concluding with a peer-to-peer learning exchange in March 2015.⁶

This agenda reflects our unanimous belief that the time is ripe for Canadian communities to become leaders in the implementation of climate change adaptation and mitigation, sustainable technologies, infrastructure and building design, but this leadership is highly dependent on local, provincial and federal governments facilitating further innovation. How, by advancing bold legislation, congruent and coherent policies, and incentives to share and expedite the uptake of leading-edge practices. There was also unanimous agreement on the capacity of communities to embrace this agenda now given the urgency of the issue presently facing our country.

Canadian researchers, practitioners, decision-makers, policy makers and civil society leaders from communities, small to large, are its authors. A range of professions is also represented—planners, engineers, elected officials, local government staff, not-for-profit and co-operative leaders, artists, musicians and post-secondary researchers.

The agenda is organized into two sections. The first section includes the key issues facing Canadian communities; the second section includes substantive solutions to these issues with an action agenda arranged under seven thematic imperatives.





KEY ISSUES

There was remarkable convergence between the participants on the key issues facing Canadian communities: there are serious asymmetries between communities in access to resources—knowledge, research and funding, not the least of which is moving from knowledge to action. There are huge implementation gaps between national policies and local action, overwhelming infrastructure deficits, and challenges with accessing the big data (r)evolution. Specific issues identified by the learning exchange, in no particular order of priority, include:

- climate change adaptation and mitigation;
- lack of strong government legislation and regulations to incentivize local innovation;
- community planning that emphasizes vehicle transportation over walking, cycling or transit;
- access to sustainable energy choices;
- access to local, resilient food systems;
- reducing the infrastructure deficit and implementing sustainable infrastructure;
- lack of policy coherence and congruence by governments;
- failure to value aesthetics, beauty and culture;
- negative framing of public policy issues for political ends;
- decreased civic engagement, low voter turnout, and behavioural inertia;
- entrenched economic paradigm of growth and consumption and inadequacy of GDP measurement, and
- lack of civility and outdated government systems not reflective of modern society values.

Within every challenge, however, are opportunities for modernization, change and innovation. Canada is at a cross-road; the country can either re-engage as a world leader in the environment and sustainable development or continue as a world laggard. More urgently, the implementation of sustainable community development is critical for Canadian community resilience. ⁷

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AN ACTION PLAN FOR CANADIANS

The steps below are bold and ambitious, and require unprecedented levels of co-operation and collaboration for implementation. Many of the agenda action items imply the need for major shifts within Canadian society; for example, reducing our carbon footprint and focusing heavily on renewable energy sources will result in major changes within the oil and gas industries as well as in many manufacturing industries which rely on the oil & gas. We strongly recommend that the Federal Government, in partnership with the Federation of Canadian Municipalities convene a round table of business and civil society leaders, practitioners, leaders from quasi-institutional organizations and researchers to begin to plan how to transition from hydrocarbon-based energy to far more benign energy sources.

RECONCILIATION WITH INDIGENOUS NATIONS

The overarching critical imperative that must be addressed is to recognize the contributions of First Nations, Inuit, and Metis communities to the political future of this country and to resolve outstanding governance issues, fairly and as soon as possible. Outstanding land claims will continue to ensure protracted disputes over future land development, as will the persistent drive to expand traditional extractive rather than sustainable natural resource development. Similarly, contested land use conflict will continue without new forms of community engagement and enlarged decision-making contexts in a highly connected and sophisticated Internet society. New models of collaborative leadership, rather than competitive elected electioneering, are urgently needed, to implement these on-the-ground solutions, and to close the knowledge-to-action gaps, accelerating local innovation across the country.



ACCESS TO OPPORTUNITIES AND SERVICES


Equitable access to opportunities and services for communities was identified as a national priority to reduce asymmetries between large urban, mid-sized and smaller communities. The connectivity and interdependence of the urban to the hinterland was highlighted.⁸ Concern was expressed about the increasing divide in employment opportunities, especially for younger people. Many of them are now working in the service industry without access to the same pension opportunities as previous generations. Accessibility to big data sources, their openness and data sharing is intimately connected to better decision-making and local innovation everywhere. The top policy actions to address this imperative are the following.

- Implement a guaranteed annual income (research evidence show it is less costly than the current patchwork of programs)⁹
- Develop a national pension plan system in partnership with Canadian financial institutions, banks and financial cooperatives, to which all Canadians have access
- Provide access to high speed internet services to all Canadian communities
- Increase investment in community infrastructure—shared resources, tool libraries, shared facilities, multi-functional spaces, public art, community gardens, art, music and food festivals, free cycling, public libraries, public washrooms, collaborative meeting spaces
- Increase access to legal assistance¹⁰
- Increase visibility of and awareness around urban-rural interdependence through regional conferences, networks and co-planning sessions involving rural, urban and provincial governments



CLIMATE CHANGE ADAPTATION AND MITIGATION

In light of the most recent IPCC Assessment¹¹, it is clear that immediate and unprecedented action is needed to address the climate imperative. Climate change is an issue to which communities across the planet are contributing while suffering its effects. It is, therefore, a global challenge necessitating unprecedented levels of national and international governmental cooperation. Accordingly, the issue cannot be ignored if we are to transform current development paths to more sustainable ones¹². The current fossil fuel pathology cannot continue; policies and incentives need to be put into place to ensure the development and implementation of renewable energy and low-carbon innovations become commonplace across the country. In addition, we need to recognize that the climate has already changed our world and understand how to adapt to these new conditions. As a society, we need to plan for a transition to a carbon neutral economy. These efforts not only contribute to climate change adaptation and mitigation, but also provide important co-benefits for communities such as increased air quality and improved health outcomes.¹³

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- Eliminate all oil and gas subsidies immediately¹⁴
 - Implement a nation-wide price on carbon
 - Develop carbon supply-chain tracking on all consumer products by 2018
 - Incentivize community-owned renewable energy systems, through legislative and market strategies¹⁵
 - Implement a nationwide Climate Action Charter¹⁶ and commit to a carbon neutral economy by 2050¹⁷
 - Systematically reduce the current infrastructure deficit in current building stock, looking at differential incentives for rental buildings
 - Increase the energy performance requirements in the building codes to international best practice levels
 - Implement national energy security and food security legislation
 - Explore and incentivize opportunities for regenerative sustainability solutions that move beyond net zero to net positive incomes, and in so doing simultaneously improve both environmental and community well-being
 - Adopt California's automobile emissions standards

SOCIAL INFRASTRUCTURE

Communities are about relationships. Increased investment in local communities is vital to the health and wealth of the nation. Adopting a systems approach for policy development that focuses on integrated ecological, economic and social outcomes, along with improved government inter-relationships is key to forging a strong Canadian identity, with greater civic engagement in voting, action, and volunteering. Revitalization of the social sector, building novel partnerships among civil society organizations and convening social actors focused on issues rather than traditional structures is key to bridging asymmetries of scale and access to resources, and closing the implementation gaps between Canadian communities. New engagement processes are key to co-operative networks and using a diversity of communication channels, to both inform and bring critical feedback back to decision-makers for continuous improvement and government policy innovation¹⁸.



- Implement a national policy on zero tolerance for violence against women, children and animals immediately
- Build institutional support and infrastructure to 'seed' collaboration, information and community exchanges, engaged scholarship, inter-disciplinary research partnerships through community collaboratories¹⁹



- Enhance local agency for action by closing the knowledge-to-action gaps through a system of community collaboratories working closely with post-secondary institutions, and regenerating existing public infrastructure such as libraries, and repurposing of existing building stock such as vacant churches, and closing post offices



- Experiment with new models of engagement, such as participatory budgeting, and share successes and lessons learned from these experiments with other communities and local governments
- Convene a multi-sectoral, multi-level, multi-stakeholder round table to develop transition strategies, build capacity, changesculture, facilitate multi-level governance, and stimulate shifts in demand²⁰



- Develop a publicly structured accessible open data system with national dissemination, including infrastructure and building energy use and GHG emissions data
- Amend the Charities Act to allow charities to keep a percentage of donations for reinvestment in infrastructure and long-term viability

PHYSICAL INFRASTRUCTURE

Our physical infrastructure, similar to the backbone of the human body, influences how and how well we we travel²¹, our well-being in our workplaces, and our productivity²², almost all facets of daily life. The dynamic balance between built and non-built space is also important to community vitality.²³ Green spaces have tremendous health benefits, our sociability, connectivity to place, and access to other species.²⁴ There is a huge deficit in infrastructure maintenance and essential retrofitting in this country²⁵, which is both a liability and an opportunity. We can retrofit for sustainability²⁶, for example, thereby achieving additional co-benefits by reducing GHG emissions and improving the quality of life in our existing building stock. This infrastructure deficit has to be systematically reduced over the next ten years to ensure both the resilience and future vitality of Canadian communities.

- Develop and implement a federal/provincial strategy that spans beyond any individual government's mandate to systematically address the infrastructure deficit of the existing building stock (including rental stock), and create new financing options
- Involve banks, credit unions, utility companies, insurance companies and investors in developing innovative financial mechanisms and strategies for shorter pay-back periods for both individuals and private sector companies to retrofit to the highest innovative sustainable standards
- Implement national legislation that mandates 100% waste reduction by 2020
- Reinvest the savings from eliminating oil and gas subsidies into multi-modal sustainable transportation infrastructure
- Account for stranded assets related to GHG emissions and develop disinvestment strategies,
- Implement district energy in high density developments and provide incentives (e.g., rebate programs) for distributed energy in lower density developments
- Develop a nationwide feed-in-tariff program to accelerate investments in renewable energy across the country, with additional incentives for community-owned generation, via a well planned transition program that would take into consideration vulnerable industries and vulnerable citizens such as those living in the north and Indigenous Nations
- Re-purpose libraries and vacant existing building stock as multi-purpose spaces serving as community hubs for social innovation, collaboratories, meeting places, and civic literacy²⁷

GOVERNANCE

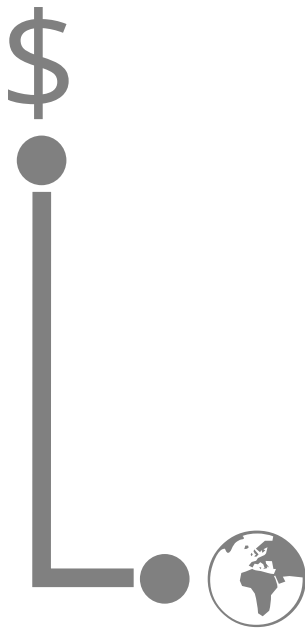
Changing the political 'rules of the game' was unanimously seen as crucial to rebuilding public confidence in elected officials and particularly, to engaging younger people. The policy-to-action to implementation gap will not be resolved unless the federal level takes an active leadership role in moving to multi-level governance systems, grounded in the subsidiary principle. The 'gong' show in Question Period does not reflect general values about what Canadians want from their politicians²⁸, as demands for more open, transparent governments based on evidence-based decision-making grow. The language of fear and division has to be reframed to re-engage Canadians from all walks of life, and more critically to increase civic literacy and dialogue around the issues and challenges society now faces. These challenges require collaborative leadership and cooperative federalism, as well as new partnerships with civil society organizations and the research community.

- Instill a House of Commons code of civil discourse²⁹ and evidence-based decision-making
- Augment access to the voting public³⁰ by implementing on-line voting and phone apps that increase information sharing on voting times, places and candidates
- Convene business leader round tables from various sectors to speed the take-up of sustainable technologies, infrastructure, best practices and innovations
- Build policy coherence within governments and policy congruence between orders of government to reduce overlap, duplication and make the 'rules of the game' more consistent
- Engage in multi-sectoral collaboration around policy-making, and open-policy development processes to close implementation gaps and accelerate take-up of innovation
- Amalgamate services, programs and facilities by federal/provincial/local governments based on the subsidiary principle
- Transition to multi-level governance³¹

NEW ECONOMIC/FINANCIAL ACCOUNTING MEASUREMENTS

The profound insight of the field of ecological economics is that economic growth is constrained by ecological limits. This model is supported by a comprehensive survey of the state of ecosystems (MEA, 2005), theoretical elaboration (Daly, 2004), evidence from the ecological footprint model (Wackernagel, 2002); and many examples from the real world identifying a full spectrum of social, ecological and economic implications arising from attempts to negotiate a coordinated global response to human-induced climate change (UNFCCC, 2009). Modern capitalism, which can be considered the 'operating system' of the world economy (Speth, 2008), is growth dependent and becomes unstable in the absence of growth. Economic theory indicates that human welfare is dependent on and therefore justifies economic growth, yet such growth continues to undermine the ecological systems that support life on earth.

Recent economic crises have opened up intellectual space for discussions regarding the centrality of growth in policy-making.²⁰ As society's end goal, the definition of human well-being is at the heart of the matter. The relevance of economic performance is that it must be viewed as a means to an end. That end is neither the consumption of beef burgers, nor the accumulation of television sets, nor the control of inflation rates, but rather the enrichment of humankind's well-being. Economic performance matters only in so far as it makes people happier (Oswald, 1997). A broader concept of well-being requires a more complex analysis, provided through the accumulating evidence of research into what factors support happiness, and how this relates to economic growth (e.g. Layard 2006).



- Work with accounting bodies to advance closed-loop and or true cost accounting frameworks
- Include shadow prices that reflect the cost of externalities in corporate reporting
- Phase out subsidies for unsustainable natural resource development
- Implement regulations that facilitate greater use of recycled materials and repurposing
- Focus public sector investment vehicles on the transition to a low carbon economy
- Transition to sustainable rather than exploitative resource extraction
- Implement policies such as Robin Hood taxation, or Hawkin's redirection of taxes (tax undesirables and let desirables flourish, reducing the inequities between uneven, under and over-development of communities)
- Incentivize greater take-up of local co-operatives by working with community colleges to develop a 2-year diploma program to assist with the promotion and growth of these important community catalysts

²⁰ Articles have made their way into the mainstream press. For example: Canwest News Service (2009). Time for a Green Bottom Line. March 28, 2009. Published in the Vancouver Sun, Ottawa Citizen. Accessed March 2009 at: <http://www.canada.com/technology/Time+green+bottom+line/1438673/story.html>

LIST OF AUTHORS

Professor Ann Dale, Professor, School of Environment & Sustainability, Royal Roads University, Canada Research Chair in Sustainable Community Development (2004-2014), Trudeau Fellow Alumna (2004), Adjunct Professor, Carleton University

Michael Ableman, Founder, Sole Foods, Vancouver, British Columbia

Paul Allison, Head Gardener, Royal Roads University

Dominica Babicki-Moore, Doctoral Student, Universite d'Aix and University of Western Ontario

Dr. Patricia Balamingie, Dept. of Geography and Environmental Studies, Carleton University, Just Foods

Eric Brown, Research Assistant, MC3: Meeting the Climate Change Challenge

Dr. Wayne Caldwell, Director of the School of Environmental Design and Rural Development University of Guelph

Ben Clarke, MA Candidate, Royal Roads University

Dr. Ashlee Cunsolo Willox, Canada Research Chair in Indigenous Health and Climate Change, University of Cape Breton

Maureen Cureton, Business Manada, Vancity Green Business Program

Dr. Bill Dunshenko, Adjunct, Royal Roads University

Dennis Foon, Writer and Screen Writer, Vancouver, British Columbia

Rebecca Foon, Founding Director, Sustainability Solutions Group

Yuill Herbert, Founding Director, Sustainability Solutions Group

Mary Herbert-Copley, Former Executive Director, 1125@Carleton

Professor Leslie King, School of Environment & Sustainability, Royal Roads University

Eric Tusz-King, Founder and Manager, EnerGreen Builders Cooperative

Dr. Chris Ling, Director, School of Environment & Sustainability, Royal Roads University

Dr. Diane Looker, Professor Emerita, Mount Vincent University, Canada Research Chair in Equity & Technology

Mike Milinkovich, Former Mayor, The Township of Black River-Matheson, Ontario

Alastair Moore, Doctoral Student, Royal Roads University and University of Manchester

Jodi Mucha, Executive Director, BC Healthy Communities

Rob Newell, Doctoral Student, Royal Roads University and the University of Victoria

Dr. Lenore Newman, Canada Research Chair in Food Security and the Environment, Professor of Geography, University of the Fraser Valley

Professor Bill Reimer, Professor Emeritus, Concordia University and Adjunct Professor Brandon University

Vincent Schutt, Co-founder, Stable Climate Choices

Marika Smith, Victoria Compost Education Centre

Chris Strashok, Research Assistant, Royal Roads University

Peggy Taillon, President and CEO, Canadian Council on Social Development

Stani Veselinovic, Manager, Hornby Recycling Depot

ENDNOTES

- 1 For further information, ann.dale@royalroads.ca
- 2 The full list of authors appears at the end of the agenda.
- 3 Trist, E. 1983. Referent organizations and their development of inter-organizational domains. *Human Relations* 36(3): 269-284; Paquet, G. 1989. A social learning framework for a wicked problem: The case of energy. *Energy Studies Review*, 1(1): 53-69
- 4 In 2012, Royal Roads University's Canada Research Chair in Sustainable Community Development and partner, Sustainability Solutions Group, launched a two-year research program exploring eight key issues impacting Canadian communities—food security, multi-functional spaces, energy security, the cooperative movement, rural revitalization, mental health, the future of work, and waste. The project consisted of virtual e-Dialogues that brought together the research team with three to five leading innovators, identified through extensive network mapping, around each of these themes. In March 2015, all the participants convened in a peer-to-peer learning exchange at Royal Roads University in Victoria on February 27, 2015 to draft the Solutions Agenda. The document is a synthesis of key findings from both the virtual conversations and the face-to-face meeting.
- 5 Food security, multi-functional spaces, energy security, cooperatives, rural revitalization, mental health, the future of work and waste
- 6 A peer-to-peer learning exchange builds on the [lessons learned](#) from Canada's leadership in convening national and provincial round tables on the environment and the economy. They are deliberately designed to bring together diverse groups of experts, researchers, practitioners, and civil society leaders using the principles of Socratic Dialogue to close implementation gaps and identify solutions to current public policy issues.
- 7 Dale et al. 2012. *Urban Sustainability. Reconciling Space and Place*. Toronto: University of Toronto Press; Intergovernmental Panel on Climate Change, <http://www.ipcc.ch/>, United Nations Millennium Goals, <http://www.unmillenniumproject.org/goals/>, Rockstrom and Klum. (2015). *Big World. Small Planet*. Max Strom Publishing; Potvin et al. (2015) *Acting on Climate Change: Solutions from Canadian Scholars*, United Nations Secretary-General's High-level Panel on Global Sustainability. 2012; Resilient People, Resilient Planet, A Future Worth Choosing. New York: United Nations; Resilient Cities Acceleration Initiative (RCAI). Resilience: Resilient Cities Acceleration Initiative Action Statement; UN 2014 Climate Summit. Collaborative; ICLEI -Resilient Cities 2011 Congress results in brief.
- 8 Rural places and people provide the timber, food, minerals, and energy that aid in urban growth, and they are stewards of the water and other resources upon which urban people depend. Rural and northern places also process urban pollution, refresh and restore urban populations, and maintain the heritage upon which much of our Canadian identity rests. In return, urban Canada provides the markets for rural goods and employment, technology, financial capital, consumer goods, and much of its media- based culture (Reimer, Bill (2013) "Rural-Urban Interdependence: Understanding our common interests" Pp 91-109 in Parkins, John R. and Maureen G. Reed, *Social Transformation in Rural Canada: Community, Cultures, and Collective Action*, Vancouver: UBC Press.)
- 9 One of the key recommendations of the 1985 the Royal Commission on Economic Union and Development Prospects for Canada was the implementation of a guaranteed annual income to offset the dislocation effects of the recommended free trade agreement. biencanada.ca; Pereira, R. 2009. *Economic Security in the Twenty-First Century—Guaranteed Annual Income (GAI). An Ecological, Democratic, Justice and Food Security Imperative*. MA Thesis. MacMaster University; Tweddle et al. 2014. *Welfare in Canada 2013*. Toronto: Caledon Institute of Social Policy
- 10 Globe and Mail. 2015. Alberta justice minister says legal help approaching 'crisis point'. August 14th, <http://www.theglobeandmail.com/news/national/alberta-justice-minister-says-access-to-legal-help-approaching-crisis-point/article25971694/>

- 11 IPCC. 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland
- 12 A development path has been defined as the 'complex array of technological, economic, social, institutional, cultural and biophysical characteristics that determines the interactions between human and natural systems, including consumption and production patterns, over time at a particular scale' (Sathaye et al. 2007, p. 700). Current research underway by MC3 2.0. Meeting the Climate Change Challenge, www.mc-3.ca
- 13 For example, densification co-benefits include reducing obesity and co-morbidities, such as hypertension, osteoarthritis, sleep apnea, and stroke- decreasing aggression and violence, improving mental fatigue, increasing social capital and community building, increasing the life span of the elderly, increasing urban biodiversity. ;Cohen, D., S. Inagami, & B. Finch. 2008. The built environment and collective efficacy. *Health Place*, 14: 198-208; Leyden, K. 2003. Social capital and the built environment: the importance of walkable neighborhoods. *American Journal of Public Health*, 93: 1546-51; CDC. 2007. Overweight and obesity: health consequences. www.cdc.gov/nccdphp/dnpa/obesity/consequences.htm; Taylor, A., F. Kuo & W. Sullivan. 2001. Coping with ADDL the surprising connection to green play settings. *Environmental Behaviour*, 33: 54-77; Takano, T., K. Nakamura & M. Watanabe. 2002. Urban residential environments and senior citizens' longevity in megacity areas: the importance of walkable green spaces. *Journal of Epidemiology and Community Health*, 56: 913-918; Harlan, S. and D. Ruddell. 2011. Climate change and health in cities: impacts of heat and air pollution and potential co-benefits from mitigation and adaptation. *Environmental Sustainability*, 3: 126-134
- 14 The International Monetary Fund estimates the oil and gas subsidies are \$500 billion a year globally. The Economist has repeatedly called the elimination of all oil and gas subsidies. The Economist, June 14th, 2014
- 15 [Acting on Climate Change: Solutions from Canadian Scholars](#). 2015. McGill University:Sustainable Dialogues Canada
- 16 Dale, A., J. Robinson, Y. Herbert and A. Shaw. 2013. Climate Change Adaptation and Mitigation: An Action Agenda for BC Decision-Makers, <http://crcresearch.org/solutions-agenda/climate-action-agenda-bc-decision-makers>
- 17 The Sustainable Canada Dialogues document, *Acting on Climate Change: Solutions from Canadian Scholars*, provides 10 concrete steps for achieving this backed by the most up to date scientific evidence (2015).
- 18 This type of data is critical for those who are early adopters. Inclusion of this data keeps the early adopter on the leading edge and maintaining the economic benefits of its leadership role as other communities turn to this leader for guidance, training, resources, products and more.
- 19 A collaboratory can be both virtual and place-based and can iterate between the two fora. <http://www.crcresearch.org/collaborative-spaces>
- 20 Building on the lessons learned from the National Round Table on the Environment and the Economy and a similar approach to the Four-Directional Model of Development developed by Sustainable Cities International, <http://sustainablecities.net/our-work>
- 21 [Suburban Sprawl: Exposing Hidden Costs, Identifying Innovations](#). Ottawa: Sustainable Prosperity Institute; Road subsidies are estimated to be [\\$13-billion per year](#) (net of fuel taxes and other revenues),
- 22 <http://crcresearch.org/sustainable-infrastructure/sustainable-infrastructure>
- 23 Dale, A., R. Foon, Y. Herbert & R. Newell. 2015. *Community Vitality. From Adaptation to Transformation*. Tatamagouche, NS: Fernweh Press
- 24 2015. Making Room for Unmeasurables: Community Vitality and Green Space. In Dale et al., *Community Vitality. from adaptation to transformation*. Nova Scotia: Fernweh Press; Fuller et al. 2007. Psychological benefits of greenspace increase with biodiversity. *The Royal Society*, 3(4): 390-4; Gies, E. 2006. *The Health Benefits of Parks*. San Francisco, CA: The Trust for Public Land

- 25 The Federation of Canadian Municipalities (FCM) estimates that Canada's municipal deficit is \$123 billion and growing by \$2 billion annually. Crisis and Opportunity: Time for a National Infrastructure Plan, <http://canada2020.ca/crisis-opportunity-time-national-infrastructure-plan-canada/>. Canadian Centre for Policy Alternatives. 2013. Canada's Infrastructure Gap. Where It Came From and Why It Will Cost So Much To Close, https://www.policyalternatives.ca/sites/default/files/uploads/publications/National%20Office/2013/01/Canada's%20Infrastructure%20Gap_0.pdf
- 26 Harvie estimates that we can reduce GHG emissions by 40% simply by retrofitting existing building stock, no new technology. With new technology, he estimates we can reduce current emissions by 60%, http://www.crcresearch.org/files-crcresearch/File/Climate_Change_Sept_2001.pdf
- 27 Some of this is already underway by libraries, for example, borrowing a human story, this could be expanded to borrowing a researcher.
- 28 Kingwell, M. 2012. Unruly Voices: Essays on Democracy, Civility and the Human Imagination. *Harper's Magazine*, <http://harpers.org/print/?pid=234764>
- 29 Kingwell, M. 1995. The Duty of Civility. RBC Letter, http://www.rbc.com/aboutus/letter/may_jun1995.html
- 30 Official turnout for the 41st federal general election held on May 2, 2011 was 61.1%. The participation in 2011 is comparable to the turnout seen in other elections since 2000, but much lower than participation prior to 1993, when turnout typically varied between 70% and 80%. Turnout for votes aged 18-24 was 38.8%.
- 31 The urban scale is the level at which decisions about energy and transportation infrastructure, service and provision decision, forest and biodiversity protection, agro-fuels cultivation, storm-water infrastructure and natural hazard and flood risk systems play out. A new system of governance, that involves local, regional, provincial and federal governments as well as cities is required to respond to modern day issues. A multi-level governance approach highlights the dynamic interaction among scales (Bulkeley & Betsill, 2005), and implicates the fluid, issue-oriented alliances between levels of government and various actors, a polycentric model. It also recognizes the critical role of network formation between key actors and quasi-institutional intermediaries in helping to inform and shape policy (Burch et al. 2014. Triggering transformative change: a development path approach to climate change response in communities. *Climate Policy*, DOI 10.1080/14693062.2014.876342