



“YOUR HEALTH AND CLIMATE CHANGE”

Suzuki Elders Project

Spring 2018

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PROJECT INDEX

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ORGANIZED BY SUZUKI ELDERS

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Attachments:

- Program of the Salon (June 7, 2018)
- BC Climate Change brochure by Suzuki Elders
- Biographical notes for all presenters at the Salon

1. Introduction

The project **"Your Health and Climate Change"** originated in Suzuki Elder Eva Wadolna's pursuits exploring various aspects of healthy aging in a supportive and nurturing environment, and her desire to combine strands of her diverse professional background into the composition of this Project.

Her volunteer involvement in the City of Vancouver Seniors Advisory Committee (SAC), the Community Engagement and Advocacy Network at Vancouver Coastal Health (CEAN - VCH) and the Suzuki Elders (SE), associated with the David Suzuki Foundation (DSF), acted as a spring board to the project that would allow others to get engaged in the exploration of the subject of health and environment.

The Suzuki Elders appeared to be the best setting for staging a public education event for older adults relating the issue of health to environmental conditions surrounding our lives. She shared this idea with her MLA, the Honourable George Hayman, Minister of Environment and Climate Change Strategy. He has expressed interest in her approach to seeking the grass-roots opinions of older adults on health in the context of the growing importance of climate change.

Having secured cooperation from the South Granville Seniors Centre (SGSC) in Vancouver and the friendly support from her colleagues at CEAN, Eva embarked on the project. A small team of Suzuki Elders agreed to back her endeavour.

To increase the likelihood of success, Eva suggested the two-steps process she calls the "escalator process". It includes the staging of a rehearsal or a pilot project as a learning tool before embarking on the more complex and more significant public event. For her, it means an intensified opportunity for learning and broader exposure to a particular issue, giving it increasing public prominence.

2. Project Summary

The “**Health and Climate Change**” Suzuki Elders Project found its expression in two public events, and the Report. The key event, the Salon, took place on June 7, 2018, from 1:00 - 4:30 pm at Christ Church Cathedral in Vancouver. The Salon was attended by about 90 people, including volunteers. It constituted an enlargement of the workshop of the same name held on May 4, 2018, at the South Granville Seniors’ Centre that was attended by 30 people; the expansion applied to the scope, size and complexity of the event.

The **learning part** of the Salon included a brief presentation by **Eva Wadolna** on **climate change** (PowerPoint and 2 videos). She used, among other relevant sources, the materials from the City of Vancouver, the “Metro Vancouver Climate 2050” project, and research on the public health impact of climate change from the BC Ministry of Health (MOH), the World Health Organization (WHO) and data from the United Kingdom medical journal *The Lancet*.

Brad Badelt, the Assistant Director of Sustainability for the City of Vancouver, talked about the city’s “**Climate Change Adaptation Strategy**” 2012 report; he emphasised that the City is focused on adaptation, while still involved in mitigation efforts as per the “Greenest City 2020” report. Brad also explained various means the City is using to help citizens with the impact of heat, wind, severe rain and air pollution.

Dr. Robert Woollard, a UBC professor, who provided a stimulating overview of the key salon subject “**What is known about the health consequences of climate change?**” The topic continued with a thought-provoking presentation by **Dr. Tim Takaro**, an SFU professor. **Amy Lubik**, Ph.D., introduced the Canadian Association of Physicians for the Environment (CAPE) and discussed her research on socio-economic determinants of health. She was followed by **Emily Peterson**, an Environmental Health Scientist from Vancouver Coastal Health (VCH), who offered information on her organization’s health prevention policies in response to climate change. **Dr. Lisa Mu**, a Medical Health Officer with the Fraser Health Authority, provided an excellent wrap-up to the panel by putting the issues into the broad context of public health and international research.

Dr. Woollard closed this part of the salon by supporting the panelists' position that the Ministry of Health (MOH) should allocate more resources to preventative activities, and, in conjunction with the Ministry of Environment and Climate Change Strategy (MOE), develop a clear policy on climate change and its impact on the health and well-being of the general public.

In the **second part of the Salon**, eight facilitators at eight tables each with eight participants obtained input from the older adults (seniors) to 3 questions:

1 - What are your experiences of climate change to date?

2 – How does climate change affect personal and family health and well-being?

3 – What do you see as the role of regional health authorities, the City of Vancouver, and the provincial and federal governments in terms of climate change impact?

The summary of the notes collected on the flip-charts from the Workshop at SGSC, flip-charts (27) from the Salon, and a thorough evaluation of the event is included in the Report.

The **operational goals of the project**, a fruitful collaboration with other organizations and expanding the interest in SE, have both been met.

The project involved a total of **18 volunteers** (7 from SE), and the technical assistance of an employee of DSF and one from SGSC.

The Salon was also attended by three observers from the government.

The **promotion of the salon** included various organizations beyond SE, DSF, CEAN-VCH and SGSC.

3. Project Goals

During six months of work on this project, the initial goals got reformulated into two categories.

A. The external goals of the Project:

“To obtain grass-roots input from older adults living in Vancouver of their perceptions of the impact on personal/family health and public health of climate change, and to probe their expectations of the responsibility of the various government agencies for prevention, adaptation and mitigation.”

The mechanism for accomplishing this goal included organizing a public event that offered a learning opportunity while seeking input to the above goals of the Project.

B. The internal goals of the Project included:

- Bringing a higher profile to the brand of Suzuki Elders-DSF,
- Increasing the SE membership,
- Collaborating with other organizations (e.g. SGSC),
- Reaching out to a new audience by expanding the promotional activities.

The project's external goals were posted in promotional fliers (e.g. Eventbrite registration form), the event's programs (the Salon Program in Attachment #1), and divided into three questions for the conversation part of the Workshop at SGSC and the Salon (See above in Chapter #2, Project Summary).

The goals constituted the base for the evaluation of the Salon.
(See Chapter #8, Evaluation of the Salon).

4. Project Trajectory & Project Team

Using the chosen “**escalator process**”, the **first step** event took place on May 4, 2018 (1-3 pm) at the South Granville Seniors Centre (SGSC) in Vancouver, 1420 West 12 Avenue. (<http://southgranvilleseniors.ca>)

The workshop was organized by Suzuki Elders Eva Wadolna, Bob Worcester, Cynthia Lam, and Don Marshall in collaboration with the SGSC, and its Executive Director, Clemencia Gomez. It also involved two outside volunteers, Ira Heidemann and Esther Palivoda, as well as SGSC staff member, Alex Korotchenko.

The event was promoted by SE and SGSC mostly to their membership; it attracted maximum room capacity of twenty-four attendees at four tables.

The program consisted of a short PowerPoint presentation by Eva Wadolna on the subject of the workshop, followed by three short videos shown by Bob Worcester, and the collection of reactions to those videos.

1, Video by Frank Gregorio – 2016 (3.44 min),
<https://www.youtube.com/watch?v=SX7WyyMIqAs>

2. Video by National Geographic – 2017 (3.14 min)
https://www.youtube.com/watch?v=G4H1N_yXBiA

3. Video by NRDC (National Resources Defense Council) (2.54 min)
<https://www.youtube.com/watch?v=Pk-PUcXZfa8>

The participants at the workshop indicated a preference for videos offering “solid knowledge” versus “evocative images” only. In the context of climate change, seniors considered the health issues most important to them. They also wanted to know more about what the City of Vancouver is doing to address the impact of climate change on their lives.

The video feedback at SGSC as well as other participant input helped determine the final programming of the Salon on June 7. Videos 1 & 3 were selected for showing at the Salon, and a speaker from the City was added to the panel.

The comments noted on the flip-charts at the four table conversations are part of this Report, and are included in Chapter #7, “Learning from older adults in Vancouver.”

Again, using the “**escalator process**”, the **second step** event took place on June 7, 2018 (1:00 - 4:30 pm) at Christ Church Cathedral in Vancouver, 690 Burrard Street, in the rented Parish Hall.

The Salon was organized by Suzuki Elders Eva Wadolna, Bob Worcester, and Diana Ellis, with the assistance of Antonia Williams (DSF employee). The event also received support from SE volunteers Don Marshall and Erlene Woollard, as well as contributions from the outside volunteers Ira Heidemann, Esther Palivoda, Lynn Shepherd, Joan Vincent, Belinda Boyle (CEAN), Saori Yamamoto (CEAN), Clemencia Gomez (SGSC), and SFU Gerontology Department students Eddy Elmer, PhD(c), and MA students LaDonna Miller and Mia Cho.

The SE brochure “Climate Change in B.C.”, a part of the registration package at the Salon, was updated & designed by Suzuki Elder, Jim Park. (Attachment #2)

The event was promoted by SE, DSF, CEAN, Patient Voices Network (PVN – MOH), SGSC, Vancouver Public Library (VPL), West End Seniors Planning Table (WESPT), West End Seniors Network (WESN), in person by Eva Wadolna at the 26th John K. Friesen Gerontology Conference at SFU (May 18-19, 2018) and at the Jewish Seniors Alliance event at the Peretz Centre (The Annual Spring Forum on May 13, 2018); the fliers were posted at the Kitsilano Neighbourhood House and provided to the Vancouver Seniors Advisory Committee (SAC).

The Salon attracted the targeted capacity for the event: sixty-four individuals joined eight conversation tables, and a few more attended only the panel part of the Salon.

5. Climate Change Context & Municipal Adaptations To CC

The original intention of the SE team was to have a CC scientist to present the climate change context for the medical presentations on health impact and to inform attendees of the latest research. This did not materialize due to the unavailability of such a presenter for the Salon on June 7.

To retain the integrity of the project, project manager **Eva Wadolna** stepped in to provide a brief introduction to the subject based on her long-term interest in the environmental sciences, using materials from various sources (e.g. reports by Metro Vancouver, City of Vancouver, BC Ministry of Public Safety and Solicitor General), as well as drawing on the reports by the EU and Canadian environmental agencies and the World Meteorological Organization. She combined this perspective with information on health issues related to climate change from VCH, MOH, the World Health Organization (WHO), including the respected UK medical journal *The Lancet*.

At the Salon opening, Eva mentioned the earlier SGSC event which provided valuable insights into creating an enhanced learning opportunity for more attendees. **Cooperation was her central theme:** cooperation among seniors in order to bring the critical issues to the attention of the appropriate authorities, and inter-organizational cooperation to help achieve better outcomes in addressing climate change issues and the health of older adults.

To help the attendees to know the organization behind the Salon, Eva asked, former Chair of the SE Council, Diana Ellis, to introduce SE.

Diana Ellis shared with the audience the SE mission to mentor and support older adults through dialogue and various actions regarding the environment. She mentioned a few of the options available to members by being involved in the SE, and outlined the work performed during the last year under the Education and Public Engagement Working Group banner: six salons pertaining to clean energy, green chemistry, plastics, pollution from the fast fashion industry, talking to younger people about climate change, and the impact on health from climate change. Diana acknowledged that this Salon was the most well-attended and the most complex to

organize. She also mentioned that in September other salons would be planned for the upcoming year and encouraged others to join SE.

Eva introduced the first guest speaker at the Salon, **Brad Badelt**, Acting Director of Sustainability for the City of Vancouver, to share with the audience the main themes of the City of Vancouver report "Climate Change Adaptation Strategy" (2012).

Brad started by signaling that Vancouver is trying to reduce greenhouse emissions as best as it can, but even all the aggressive actions being taken by countries around the world would not halt the global warming in progress. He mentioned that the City launched the Climate Adaptation Strategy in 2012, one of the first cities in Canada to do this; this Strategy document is being updated and describes various adaptations the City is making and how they relate to the public health of Vancouverites.

He cautioned attendees that we should expect warmer and wetter winters and limited summer precipitation with a potential of storm bursts, potentially increasing flood risk. The city is anticipating hotter summers and more extreme heat events; i.e. more days over 25 degrees Celsius, a threshold for "extreme heat" in Vancouver, negatively affecting plants and trees, the frequency and intensity of forest fires, and putting severe strains on the water system. In this context, he acknowledged that unlike cities such as Miami, most buildings in Vancouver are not designed with cooling in mind. To address this issue, the city is changing how buildings are designed; one example is adding solar shading (e.g. an awning) to buildings, so they do not overheat in the summer and perform better in the winter. It also prevents light from being directed onto a building which is especially useful on southern exposures, e.g. in Olympic Village.

The heatwaves are another challenging issue to deal with, and the city is planting more trees, especially in areas with no trees. He used the West End as an example of an area with a good tree canopy, which can lower temperature by a few degrees.

Another area that requires updating is the lack of planning to handle the impact of wildfires outside the city, especially since these can have a significant effect on health (e.g., breathing problems).

Eva, in her introduction to the medical panel, expanded on Brad's talk by promoting the "Metro Vancouver Climate 2050 Strategy" currently in the process of gathering public input, emphasizing that climate changes do not stop at the administrative boundaries and at least should be considered at the regional level.

People living in the Metro Vancouver area are noticing recent changes in weather patterns, specifically more unpredictability of daily weather and the growing severity of some weather events, and are influenced by what is happening in other parts of Canada, on the continent, and in the world. Metro Vancouver has a very multicultural population with families and friends scattered around the world and they have lived in or visited many countries. Those who attended the SGSC workshop and the Salon remember various environmental issues of the past, such as acid rain, DDT, asbestos, tobacco, coal-burning pollution, nuclear reactor leaks, and believe that governmental regulations curtailed the detrimental impact of those health hazards. They expect that now is the time for the current governments to seriously tackle the climate change impact on health and well-being, particularly on vulnerable populations.

Eva was pleased to note that Doctors BC is in the process of developing for the first time a policy on Disaster Preparedness. They are looking at the engagement into preventative measures and stronger involvement in disaster responses by medical professionals. The linkage between climate change and extreme weather events has highlighted the requirement for comprehensive emergency management.

She also shared information about *The Lancet* publishing in 2017 a manifesto: "*The Lancet Countdown on Health and Climate Change: From 25 Years of Inaction to a Global Transformation for Public Health*" ([https://doi.org/10.1016/S0140-6736\(17\)32464-9](https://doi.org/10.1016/S0140-6736(17)32464-9)), and another relevant article (<http://www.lancetcountdown.org>).

To stress the importance of the issue, *The Lancet* launched a new Journal: *Lancet Planetary Health*. This fits well into the World Health Organization's desire to increase global capacity to respond to CC.

<http://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

Before introducing the medical/healthcare panelists, Eva showed two videos (1 & 3) previously screened at the Workshop at SGSC. (For the video links see Chapter #4, Project Trajectory and Project Team.) (For biographies of all presenters see Attachment #3)

6. Climate Change Impact on Health (Medical Panel Presentations)

Dr. Robert Woollard, MD, Professor of the Department of Family Practice at UBC, moderated the Salon panel of the healthcare scientists and practitioners.

He acknowledged that we could be bombarded with too much information on climate change, health issues and many other subjects. “We need to take all the information that we have and come up with actual knowledge and wisdom”. He proceeded to introduce the speakers.

The first speaker, **Dr. Tim Takaro**, MD, is Professor of the Faculty of Health Sciences at SFU; he is known for his position “**The health impacts of climate change are the greatest health challenge of our time**”. He quickly reviewed problems associated with climate change all over the world, and his broad perspective on the subject was well received by the audience. He correlated climate change with various health impacts, including the fact that lowering greenhouse gas emissions would reduce cardiovascular disease and death, and advocated for improved air quality, food safety and preservation of green spaces, all of which would offer many health benefits.

Tim shared Metro Vancouver research that anticipates the following climate change effects in BC: extreme rain events precipitating flooding and landslides; heat stress; increased pollen in the air; reduced freshwater storage due to glacier shrinkage and snowmelt; an increase in ozone and fine particulate matter due to wildfires - all would challenge the urban infrastructure. He used as an example of emerging new health problems an increase in waterborne diseases and shifting infectious disease patterns as sea levels rise, and noted new mental health problems (e.g., PTSD from the Fort McMurray wildfires) that additionally could strain emergency services and increase the number of “climate refugees”.

Dr. Takaro also showed a pertinent diagram from an article in *The Lancet*, “The Lancet Countdown: Tracking Progress on Health and Climate Change” ([https://doi.org/10.1016/S0140-6736\(16\)32124-9](https://doi.org/10.1016/S0140-6736(16)32124-9)).

At the end of his presentation, Tim cautioned that at a broader level, climate change can exacerbate political conflict, e.g. the dramatic loss of precipitation in the Mediterranean area has doubled the risk of exacerbating the Syrian conflict and he noted the potential for other military interventions related to climate changes.

Amy Lubik, Ph.D., who represented the **Canadian Association of Physicians for the Environment (CAPE)**, shared the mission of that organization: “**to protect human health by protecting the environment**”. To fulfill this mandate, CAPE has done campaigns on various topics: pesticides; coal plants; fracking, Site C Dam; asbestos; nuclear energy, and active transportation. CAPE also provides health impact assessments emphasizing the health benefits of nature.

Amy observed that the poorest countries bear the brunt of climate change; these countries have droughts and food shortages among other challenges, and lack the medical infrastructure to help people who suffer from the health effects of these disasters. This broad point brought her to the Canadian situation where poor people also face the most significant burden of climate change, including Indigenous people.

Dr. Lubik later provided specifics on climate change health implications. Every year in all of our major cities, about one hundred people die from extreme heat, it is to a large degree related to how prepared we are to deal with it. She mentioned the role of various socio-economic health determinants in adversely impacting people’s lives, and climate change is adding one more layer. Another contributing factor to poor resilience to climate change events is social isolation; it makes people more susceptible to heat events (e.g. they live in buildings with no elevators, no air conditioning and do not know the neighbours); they are also less likely to survive heat events. She went on to add that people on certain medications are more vulnerable to the adverse impact of climate change because the medications can interfere with the body’s ability to regulate heat (e.g. antidepressants, sleep aids, beta-blockers, anti-Parkinson drugs). Amy also mentioned the 2013 paper: “Civil Society Organizations and Adaptation to the Health Effects of Climate Change in Canada,” printed in *Public Health*, 127(5), 403-409.

She concluded her presentation with a recommendation for Suzuki Elders to advocate for a food security strategy because our sources of food (e.g. California, Mexico) may become severely impacted by climate change and imported food would become less reliable to obtain and more expensive.

Emily Peterson, M.PH, Environmental Health Scientist for Vancouver Coastal Health, supported the other researchers by also mentioning the health impacts from heat, poor air quality and extreme weather. She elaborated on the inequity of climate consequences emphasizing that health impacts will depend on exposure to climate variables (e.g. location and quality of housing, occupation), sensitivity to these exposures (e.g. health status, medication), and adaptive capacity (e.g. social capital, access to technology and resources).

Emily mentioned that VCH is currently working with researchers at UBC to prepare map overlays using climate variables, demographic data, and information about current health conditions to determine which areas are at highest risk for the health impacts of climate change. She emphasized that climate change actions also have health co-benefits. Some of the examples she gave included enticement to do more walking, cycling, and using public transit, since these activities can increase physical fitness and reduce traffic-related air pollution and noise.

The preventative measure of increasing tree canopy coverage and green space in the city may provide mental health benefits and opportunities for social connection in addition to reducing exposure to excessive temperature. Emily also mentioned actions people can take to protect themselves during heat and wildfire smoke events including going somewhere with air conditioning and using a stand-alone HEPA air filter.

Dr. Lisa J. Mu, MD, a Medical Health Officer with the Fraser Health Authority, described the relationship between climate change and mental health such as PTSD, depression, violence, aggression, addiction, vicarious trauma, survivor guilt, **solastalgia** (existential distress caused by environmental change). She also mentioned some positive effects of surviving an environmental event, such as increased community cohesion after a disaster and, at a personal level, “post-traumatic growth”.

Lisa proposed a valid question: why does one community experience post-traumatic growth whereas another experiences PTSD following a weather event? In her opinion, the resilient community may exhibit protective factors: sense of community; social capital; mental health literacy; cultural competence; self-efficacy (feeling that you can respond to changes happening in your environment); access to psychosocial support and mental health services (e.g. emergency response; psychotherapy; faith-based support). She stressed the importance of being prepared: knowing the risks by looking at local weather forecasts and following health alerts. Also, she suggested that we “make a response plan and have an emergency kit handy”. She provided excellent links to resources, e.g. www.resilientneighbourhoods.ca.

In this context, she expanded her thoughts on critical features of resilient communities: caring; intentionally reaching out to those at the margins; having infrastructure that supports community belonging; a strong local economy; leadership and community-based planning; positive attitudes and values. For those interested in a broader perspective, she offered the link: • WHO Operational Framework for Climate Resilient Health Systems (<http://www.who.int/globalchange/publications/building-climate-resilient-health-systems/en/>)

• As articulated in the UN Sustainable Development Goals, social and environmental issues cannot be conquered in isolation; they are interrelated and interdependent and must be addressed as a whole in order for any to be achieved. To have sustainable development, we need to eliminate hunger and poverty, improve sanitation & access to clean water <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>.

In conclusion, Dr. Mu, emphasized the need for a **cross-government and cross-sector approach** to deal with these issues, treating them as a system rather than in isolation. We already know that all the issues are connected, and we need strong public-sector leadership on this.

Her parting words were, “Suzuki Elders can help with this by asking the authorities to **develop a comprehensive climate change policy**; if the government does not hear from the public that climate change and its impact on

health is a priority, it will not make it a priority. If they wish, Suzuki Elders and other groups can help to **make this a priority.**”

Due to time constraints, there were only a few questions from the audience, but one triggered a response from almost all speakers.

Q - Should we turn an acute care system into one of prevention?

Dr. Takuro: Yes, we need to spend more on prevention; right now, it is less than 5% of the total budget. He also mentioned that we need to eat a more plant-based diet to be healthy and to keep the environment sustainable.

Dr. Lubik: People on the lower end of the totem pole are more vulnerable to the impact of environmental factors. We need a more comprehensive approach to address that problem, involving other ministries to deal with the inequality and to help all people to stay in good health.

Dr. Mu: We need more cooperation between municipalities to address the social determinates of health, and should acknowledge the many outside influences that impact a person’s health. Building strong communities, big and small, contribute to healthier lifestyles.

Dr. Woollard: It is important to have personal control over one’s life and mentioned the results of a Whitehall study that concluded “the more agency that people had, the longer they lived, regardless of their health status”.
https://en.wikipedia.org/wiki/Whitehall_Study

7. Learning From The Older Adults In Vancouver; SGSC and Salon Round Table Conversations

A – Experience of climate change & its effect on health

The analysis below incorporates input from participants of the Workshop at SGSC on May 4, 2018 and Salon attendees.

The panel presentation on various health issues arising from changes in the climate was followed at the Salon by the facilitated conversations among older adults that focused on three topics:

1- What are your experiences of climate change to date?

2 - How does climate change affect personal and family health and well-being?

3 - What do you see as the role of regional health authorities, the City of Vancouver, and provincial and federal governments in response to CC?

In discussions around the eight tables with eight participants each, facilitated by skillful volunteers with various personal backgrounds, participants shared views on the subject in general terms, some disclosing personal experiences as well as self-reflecting or directing comments at others, mainly governmental agencies.

A few topics emerged from semi-structured exchanges on the impact of climate change:

In the responses to the question about **experiences with climate change**, we noted a mixture of incidents impacting oneself, family, or friends attributable to CC. There was also a reiteration of the general knowledge about events taking place in other locations or anticipated to happen in BC. It was possible to hear a repetition of freshly learned bits and pieces from the earlier presentations.

The question about **CC impact on health** brought comments on its various manifestations and the health consequences, showing the group to be reasonably knowledgeable. It is fair to assume that those drawn to the Workshop at SGSC and the Salon have a personal interest in the subject and most likely obtained some

knowledge prior to it. It is valuable to note that the source of familiarity frequently comes from TV (e.g. BC Knowledge Network channel), newspapers, other printed materials and an occasional documentary film.

The statements on **the impact of climate change (CC)** were of an actual, anticipatory, or preventive/coping nature.

The responses to questions one and two were combined and are separated thematically.

1. Seniors have limited resilience to **high temperatures**. They are aware of potential dehydration and other health implications of heat exposure. Heatwaves are forcing them to adjust their daily-life patterns making those less healthy. It appears that they tend to stay home and not do gardening; they also walk and cycle less. When going outside their home, they use adaptive strategies such as walking on a shaded side of the street, looking for an AC (air-conditioned) place to rest or a bench and a water fountain.

The heatwave impact on those living in residential care facilities without AC, those living on the streets, isolated seniors in poor health, all brought compassionate concern. There is a perception that not all “places of refuge” have AC, are “senior-friendly” and an awareness that many seniors live in housing conditions that do not provide respite from the heat.

2. The other issue that adversely impacts older adults is, in general, **poor air quality (smog)** from wildfires in BC and Alberta, which tend to aggravate a person’s respiratory problems; the consequences are similar to those of a heatwave and tend to be combined.

3. There was a concern expressed about **new insects** (e.g. beetles, spiders) showing up locally and more mosquitos in the post-flood areas. Changes in moisture patterns related to rain and floods are seen as contributing to the growth of mold, particularly in the poor-quality older housing that frequently serves as accommodation for seniors. The publicized issue of the danger of ticks resonates well with those who like going for walks in the forest or grassy areas; some with

pets noted that ticks could also be brought in on animals. (They were referring to Lyme borreliosis disease, spread by ticks).

4. People are noticing more **allergies**, attributing the situation to pollen blown with stronger winds for longer distances, or many plants pollinating at the same time or for longer. This could extend the suffering from Bronchitis and other pulmonary illnesses such as Asthma.

5. Another consequence of CC mentioned is an increase in **skin cancer** from a high UV index; there is a false perception that frequent cloud coverage in the coastal areas keeps it in check.

6. **Concerns about food** dominated a number of the conversations, such as damage to crops, the poor nutritional content of vegetables and fruits, decrease in food quality due to worsening of soil quality, and concern about more GMO food. Another area of impact is related to **gardening**: increased restrictions on watering gardens, general unpredictability of weather, and drought due to less rain, are all impeding the local production of food; people are not clear what they would be able to grow.

People eating too much meat as well as farms polluting local water, land and air were also mentioned as negative factors. This usually also brought a concern about the poor treatment of animals on industrial farms. Most participants are worried about the increased cost of food, primarily healthy local crops, as well as that imported from other countries that are suffering CC impact (e.g. California, Mexico).

7. There are also consequences resulting from the unpredictability of CC events (fires and floods) that **impact the personal life** of seniors by forcing them to forgo vacations or family visits to the interior of BC or Alberta. The differences of opinions related to CC can also bring “polarization between family and friends (that) is depleting personal energy” and putting a strain on relationships, but seniors wisely suggest: “keep talking to (CC) deniers”.

8. Another category of impacts is related to the broad spectrum of the **emotional consequences of the uncertainty** of climate change on an aging population. The

participants were open about feeling overwhelmed, anxious, being in denial, experiencing unspecified anger, despair, sadness, unease, a sense of loss and grief, foreboding, and fear about a scarcity of water and food or even the loss of one's home.

One statement sums it up interestingly: “ I feel unempowered but can also feel empowered when finding different solutions to being healthy; thinking about solutions made me feel connected a bit more and more in control”. Others said: “we have to accept a new normal in our lives and our mental health”.

9. There was evidence of general, **future-oriented** concern about CC impact on children and future generations as well as potential deaths related to CC. For some, the guilt of burdening future generations is intense, but they acknowledge the difficulty in making changes in our well-established lifestyle to address the human contributions to CC.

The issue of personal impact from potential disasters is particularly traumatizing for older single women in poor health who do not have the support of family or the financial means that would allow for comfortably handling disastrous results like the loss of home or community. There was also an observation of the perception of lowered compassion for others such as people with disabilities, the homeless, those who are or feel isolated and lacking personal support, and who, in the case of disaster, may be forgotten.

10. People lamented on the **loss of our connection to nature**, not seeing the healing and spiritual value of nature.

11. There is also the expectation that CC could lead to an increase in **social unrest and the new type of refugees escaping CC-related calamities** (point of reference was a situation in EU).

12. Seniors shared their personal **advice** on handling weather-related issues, e.g. wearing clothes made from natural fibers, eating local honey to improve the immune system (and protecting the bees), successfully planting drought-resistant plants, not wasting water. The advisory offerings included information about specific stores selling eco-products. There was one work-related suggestion: if the climate

gets hotter, businesses should provide cooling spaces for employees and possibly establish “siesta time”.

There was a critical opinion of pre-cooked, packaged food replacing fresh food cooked from scratch as sources of health issues and environmental damage, including comments on plastic pollution (increase in use of containers). Some quoted relevant slogans: make more with less - change your behaviour - reduce air travel - buy less - drive less - eat less meat.

13. It was worth noting that the issue of **travel and transportation suggested conflicting positions**. On the one hand, there were voices that wealthy seniors should curb their air travel, going on cruises, and excessive car driving; on the other hand, travel is still popular among the retired middle class; some want to see families living far away and possibly enjoy visiting other countries.

There is also a concern for the well-being of the travel industry under CC disturbances; one person mentioned family who lost a campground business during the fires in central BC. “We need to think about people’s livelihoods being lost.” It is an issue of importance as BC has a large tourism industry. All of it was modified by a reflection that travel is being impeded by CC: Chile - drought and floods; China – air pollution, dust blown by strong winds; Cuba – hurricanes; California, BC and Alberta – wildfires; other parts of Canada and Vancouver Island – floods and landslides.

14. **Community orientation** was presented by statements like “talk to your neighbours”, “rely on each other”, “build strong relationships”.

15. **Additional comments** were made by many participants at the SGSC Workshop and also shared by many Salon participants. One such comment noted that science has shown that there are too many people on the planet for the Earth to sustain, and was suspicious as to why the subject is not talked about anymore, as it is a major reason for the overuse of Earth’s limited resources.

Seniors realize that a comfortable life comes at a cost to the environment and feel responsible for some of the environmental damage. They would like to “take better care of the planet” and do something to correct the damage done. “We are killing ourselves due to a lack of effort to make changes and obsessive greed”.

B - The role of various government authorities

The responses to question #3, “ What do you see as the role of regional health authorities, the City of Vancouver, and provincial and federal governments in response to CC?” are presented either as specified by the attendees of the SGSC Workshop and the Salon, or as noted by the author of the report.

1 - Comments directed at the City and Metro Vancouver

There is an understanding that to adapt to the new environmental and climate change circumstances, the changes would have to be made in the **planning of cities**. Seniors understand that when legally addressing CC issues, “municipal areas seem to have more flexibility and capacity for change”.

The most comments addressed to the City or Metro Vancouver dealt with land use planning, preventing building on risk-prone land (floodplains and slopes), and protecting agricultural land. There is also a desire for inclusion in the local planning of more urban gardens, roof gardens, the provision of more green spaces, planting appropriate vegetation (shade trees), and the installation of proper rainwater collection and drainage systems.

Seniors are looking forward to the City of Vancouver implementing “Green City Policies” and are asking for “organizing a competition to spur new ideas in community development” that would address climate change issues. Those more familiar with real estate development believe that changing the **building code** is necessary. The reference to “implement net ZERO housing codes” & “increase LEED certification” most likely refers to implementing the City program “Zero Emissions Building Plan” and the “Renewable City Strategy”, adopted in 2015.

Local transportation also received the attention of seniors, who would like to see more transit options, less polluting diesel buses and more vehicles with AC. Some would go even further: “make the city car free, supported by free transit” or “charge cars when they get into downtown like London or Singapore.”

Older adults want to be part of the City effort at mitigation and adaptation to CC, and are asking to “make the public aware of how they can contribute to positive change”. It is a plea for better communication and more opportunities for meaningful engagement that deals with seniors’ concerns.

2 - Comments directed at the Health Authorities

On the top of the list appears to be the desire for the health authorities to engage in the education of their staff in CC issues and to “increase funding for maintenance of health and prevention of illness”, in the context of environmentally and CC-related health issues.

People expect that the health authorities would identify climate change as an opportunity to make organizational changes, “to be greener in their operations”, to better communicate their plans and actions, helping people to self-manage in the case of environmental events and to “disseminate information on practical things citizens can do to stay healthy”.

Older adults would like to see changes in the provision of food in hospitals and residential care facilities; “buy local healthy food” and “encourage local product consumption in health organizations”.

An overriding wish is for the provincial government “to mandate health authorities to work on CC impact” and “present (to the public) the cost of healthcare impact of illnesses related to the changes in environmental conditions and climate change”.

3 - Comments directed at the Provincial Government

In addition to the request that the BC government mandate all government agencies to look at their plans and actions from a CC perspective and to cooperate, the emphasis seems to be on the province-wide land-use issues; examples: “support local farmers”, “encourage local farming”, “protect the agricultural land for food production”, “have stricter food controls”, “research for crops that are climate-adapted for the anticipated changes”.

Seniors are asking politicians for greater accountability. They also would like more involvement in the decisions: “listen to your constituents – what matters most to them”, “consider constituent assembly to help with governance”, “take direction from citizen groups”, “manage and deliver public services based on input from citizens”, and “increase gender parity at all levels of government”.

Older adults want more info about what’s done in other countries (EU), particularly in the area of new energies and would like to see the government act on Andrew Weaver’s (BC Green party) ideas to provide more governmental support for alternative energies.

Someone suggested that the BC government should consider suing polluting companies for damages to the environment as other countries do, while others were disturbed when learning about the high cost of disasters related to CC, as this diverts money from other purposes and most likely would increase taxes.

People were pleased about the amount of research done on the subject of CC; now they want to see more action.

4 - Comments directed at the Federal Government

Attendees of the Suzuki Elders Salon would like to see the federal government “support Canadians’ rights to clean air and a healthy environment”. Also, they expect “stronger legislation on recycling, packaging, food, toys, clothing, single-use plastic bags”, and that the government should “offer subsidies for renewable energy projects”.

There was evidence of anger at the federal government for approving the Kinder Morgan Project; “they are supposed to mitigate climate change, but they are supporting the pipeline”; “put climate change and the environment at the forefront of decisions”. More dissatisfaction was expressed at spending taxpayers’ money on purchasing the pipeline; “we need to have a dialogue on the allocation of resources – do we need to buy a pipeline?”; “purchasing KM goes against any attempt to deal with climate change”. Some are upset at actions of the government, e.g. “stop subsidies to fossil fuels and mega dams”, and demand government publicly report on “Carbon tax – accountable for CO2”.

5 - Comments directed at all governing bodies

This bold statement addresses the issue: "Climate Change is Political!"

A significant number of comments were related to the political context of decision making, and to "plan and act beyond your electoral term"; "politicians should be held to firm platforms and not be concerned about re-election"; "expect the leadership to follow through and to back up what they say"; "let governments focus on long-term costs of CC"; "develop economies in sustainable ways"; "create different economic models that include CC"; "transition to sustainable alternative renewable energy"; "have watchdogs for monitoring policies"; "create a mandate to deal with the impacts of climate change".

Specific policies were suggested: "push governments to address what is important for children"; "address child health and climate change", and "put value on equality and compassion rather than on money."

Seniors expect government officials to offer "leadership by example", and "to "make big personal sacrifices" to show the way for others. A persistent theme was expressed once again: "All levels of government should work together".

Various comments show dissatisfaction related to interaction with government agencies: "they need to listen to what people want", and "respond to letters people write". They complain about the lack of accessibility to appropriate officials to voice concerns: "I feel despondent when I can't find who to speak to when calling the government". From the context of conversations, seniors would prefer to deal with a real person, not an electronic device, or being asked to use the computer and "Go to our webpage!").

Older adults believe in the power of law and that "laws change behaviour"; examples used include using one's seat-belt and drinking and driving.

C - Comments directed at others

1 – Comments directed at the business community

It is interesting to see that seniors have hopes that businesses would do something positive about CC on their own volition; e.g. they would like to see them “acting on the packaging and environment when marketing”.

They also believe in the power of consumers, and they ask others to “make choices as consumers”, and to “appeal to corporations”.

2 - Comments directed at those attending the Salon

What is encouraging is that attendees are using the Salon as a challenge to themselves, “What are the ways and means of influencing the (gov’t.) leadership?”; “How can we collectively get their attention?”; How can we ensure that governments “have goals, targets and implementation rules?”; “coordinate efforts across all levels of public involvement”.

Seniors are admonishing themselves that “we need to address our concerns to the appropriate level of government” to be effective. To accomplish that, “individual strengths are required”, and one must “be forthright” and “take risks”, as well as “show leadership” with “charisma and intelligence”; “be a good networker”, and do not forget to “talk/teach kids about climate change”, and “tell friends what you learned at the Salon”.

Attendees went even further in their proposed solutions: “run for council in Vancouver”, and on a daily basis “try to convince people to be concerned about climate change” and to “move toward issues of CC”.

8. Evaluation of Salon (More learning from older adults)

The post-salon evaluation (60% of attendees) yielded additional valuable input to the main subject of the Salon.

1 - The most important thing or idea you learned from today's presentation.

A – The attendees at the Salon were pleased that health took a prominent position at the event, hoping that this could help with developing a strategy on responding to climate change by the health authorities.

Participants were surprised and dismayed that only 5% of health spending in BC goes to the prevention of illness. They are unwavering in their desire to see this considerably changed and expect that all government agencies would be mandated to use climate change as a filter when deciding on policies, actions and budgets.

High accolades were offered to the speakers for educating themselves on environmental issues and individually doing their part, and for their openness in sharing concerns on deficiencies in addressing climate change impact on health at the system level.

The presenters from FAH and VCH expanded awareness of what is being done by the local health authorities and shed light on the progress being made by those organizations. The broad-ranging scope of the presentations (using PP) helped the audience to understand a constantly expanding range of issues the medical professionals have to address.

B – The Salon energized the participants and mobilized them to acknowledge the need for engagement in the political process and general activism. They remember the effect of their activism during their youth and how much difference it made to society (e.g. feminism, the peace movement, racism, social justice). It was clear that getting involved was on their minds as well as the process that needs to be followed.

They recommend that older adults talk with friends and neighbours, join various groups and participate in civil society opportunities to influence decisionmakers. There is an unmistakable realization that all actions need to be coordinated and focused on making a difference.

Politicians were mentioned a number of times and the need to speak to them directly or by writing letters; those are seen as the most effective ways to influence them; e-surveys are considered restrictive and ineffective for influencing policy. Some stressed the importance of stories generating “human interest” in abstract issues. “Be the “squeaky wheel – speak up!”

The importance of collective action, a realization that government policies reflect grass-roots pressures, and reliance on civil feedback is well understood. The seniors at the Salon agreed that the best remedy for feeling depressed and overwhelmed is being involved and active.

They see it as essential to take a holistic approach when looking for solutions as the interconnectedness becomes visible with contemporary research, new technologies and expanded communication.

“Change comes from ‘church basements’ movements; people can initiate and push the government to act from this seed of a vision to get better outcomes.” “Be passionate and make a difference from a positive thinking perspective; look for opportunities to contribute.”

2 - What, if anything, might you do or think about differently as a result of what you learned from today’s presentations?

It is no surprise that many attendees know about the central issues of climate change (mostly from TV and printed media) and feel the need to make changes in their personal “footprint”, and have the desire to enhance personal and community resilience to climate changes.

There is awareness among seniors that the issue of CC generates different perspectives and has some detractors. However, they support openness and

accepting the reality of many different perceptions and opinions that need to be accommodated to maintain social cohesion and effect change. Hence there were suggestions to learn to better understand opposing positions and work with those we do not agree with.

They speak with the true elders' wisdom "be compassionate to different life circumstances generating different perspectives". "Be grateful for widening the circle of like-minded people ready to expand and embrace others."

Older adults support the need to "speak your mind" but suggest seeking a "point of agreement" to do something positive benefiting others, taking chances with others, entertaining new perspectives, risking disagreements, moving forward in small increments. These are all possible - if we care enough about ourselves, others, and the planet.

3 - What do you see as the role of regional health authorities, the City of Vancouver, and provincial and federal government in addressing the climate change impact on health?

Most participants were clear that Health Authorities need to include climate change in their strategic priorities and need to work with all BC cities to effectively tackle the issues at the municipal level. They need to recognize that climate change is a healthcare issue and will cost money.

People expect various levels of government to work together, coordinate more, and engage in preventative actions. Older adults expect the health authorities to address environmental issues, including CC, at their operational level, e.g. providing training to all staff; buying local healthy food for hospitals and residential care facilities; making appropriate adaptations to the facilities (e.g. AC).

They ask the elected officials to remember that the role of the government is to respond to the needs of their constituents.

4 - Comments about operational issues related to the salon:

It is rewarding for the organizers of the Salon to read that attendees considered the content excellent, liked the presentations and the panelists and wished for even more time with them. Some unavoidable overlapping of info has been noticed, an indication of an attentive audience. As usual, some people need more time to absorb new information and more time to talk things over, but generally there was a high level of satisfaction with keeping to the schedule. There were positive words on the excellent organization of the event and coordination of the activities. There are always those who were hoping for something different, like “bringing up Kinder Morgan pipeline”, “skipping bios, thank-you’s and clapping”.

From a **practical** point of view, there is still a need for asking attendees to turn off cell phones. As far as the facility is concerned, the preference is for an open floor plan (no columns) allowing for an unobstructed viewing line to the presentations. The salon took place in the basement of the CCC in the general meeting room, not ideal, but satisfactory.

We would like to acknowledge the availability of the space provided by the Christ Church Cathedral based on a donation from the Suzuki Elders, and express our appreciation for their excellent technical and practical support.

9. Conclusions

This project “Your Health and Climate Change” provided an insight into the subject that could be utilized in practical actions by various government agencies. It also offered a motivating factor for attendees to build up personal resilience and expand community networking. The project activated the desire to be invited to contribute in appropriate and meaningful ways to adaptation and mitigation actions of the authorities.

Although the input was provided by fewer than 100 older adults at the two events in Vancouver, the comprehensiveness in scope and depth of the input offers much more than a simple survey would provide.

The experience gained from the Project could facilitate organization by various agencies of similar grass-root gatherings to broaden understanding of what needs to be done to address the climate change impact on citizens in BC.

It is evident that as more people become aware of climate change manifestations e.g. this summer’s heatwaves in Vancouver, other parts of the country, and the world, make them more worried about the impact on their health and community; they are particularly troubled about the lives of the most vulnerable, elderly, disabled, chronically ill, poor, homeless, and children.

Project participants are pleased with the City of Vancouver policies and actions, but expect an increase in focus on the needs of older people having difficulty coping with CC, especially those of limited means and those already affected by health issues.

Providing more public places and transit options with AC, enabling more green spaces and food gardens would help. This needs to be supported by changes in the planning for future CC events (e.g. floods, wildfires, landslides and rising sea level) as well as actions directed at alleviating potential shortages of water and food at the Metro Vancouver level.

The expectations from the provincial health authorities:

1 – Change in approach to healthcare, by taking preventative attitude to patients’ physical, mental and emotional health and well-being, including consideration of environmental and CC factors and putting more emphasis on lifestyle and access to healthy food and safe water.

2 – Change your management model; “green” your operations; offer appropriate training to staff of healthcare organizations on the health consequences of CC and deliver higher quality locally produced food to your clients.

The requests addressed to the BC Government

1 – Develop a comprehensive and effective policy on climate change and health in cooperation between the Ministry of Environment and Climate Change and the Ministry of Health, while also involving all regional and municipal governments.

2 – See CC as an opportunity to address the socio-economic determinants of health, by increasing the availability of affordable and appropriate housing, improving public transport, protecting agricultural land and expanding natural green spaces.

The question of the role of various governmental entities in addressing the climate impact on health yields the full spectrum of suggestions and requests. It also raises some degree of confusion in respect to the differing mandates of government agencies. More public engagement could address that issue.

The overall request addressed to all level of governments is to develop a more long-term vision; refocus policies and actions on prevention; consider whole communities when planning; and most of all - to cooperate and “create a culture of caring” as the guarantor for effectiveness in addressing the challenges we all face with climate change.

Attachment no 1

Your Health and Climate Change

The Influence of Climate Change on Individual and Public Health



SALON INFORMATION

Location: Christ Church Cathedral, 690 Burrard Street

Date: Thursday, June 7, 1-4:30pm

Event Goals:

- To explore the impact of climate change on the personal health and well-being of older adults in Vancouver
- To assess the community implications of extreme weather events
- To examine seniors' expectations from regional health authorities, the City of Vancouver, and higher levels of government

PROGRAM

1:00 Introduction to event—[Eva Wadolna](#)

1:10 Introduction to the Suzuki Elders—[Diana Ellis](#)

1:15 Introduction to climate change—[Eva Wadolna](#), MA

1:30 Climate Adaptation Project—[Brad Badelt](#), P.Eng., City of Vancouver

1:40 Panel discussion: Moderated by [Robert Woollard](#), MD, Professor, UBC.

“What is Known About the Health Consequences of Climate Change?”

Panelists:

- [Tim Takaro](#), MD, Professor, Faculty of Health Sciences, SFU
- [Lisa J. Mu](#), MD, Medical Health Officer, Fraser Health Authority
- [Amy A. Lubik](#), PhD, Canadian Association of Physicians for the Environment
- [Emily Peterson](#), MPH, Environmental Health Scientist, Vancouver Coastal Health

2:40 – 3:00 Break and refreshments

3:00 Introduction to conversation tables—[Eva Wadolna](#)

Questions for each table:

1. [What are your experiences of climate change to date?](#)
2. [How does climate change affect personal and family health and well-being?](#)
3. [What do you see as the role of regional health authorities, the City of Vancouver, and provincial and federal governments?](#)

4:00 Summary of conversation tables—[Eva Wadolna and Eddy Elmer](#)

4:20 Next steps—[Eva Wadolna](#)

4:25 Evaluations and membership information—[Diana Ellis](#)

4:30 Displays:

- David Suzuki Foundation, Suzuki Elders, SE-DSF
- Community Engagement and Advisory Network (CEAN-VCH)
- South Granville Seniors' Centre (SGSC)
- The City of Vancouver

PROJECT CONTRIBUTORS

Suzuki Elders: Eva Wadolna, Diana Ellis, Bob Worcester, Cynthia Lam, Erlene Woollard, Don Marshal, Jim Park

DSF: Antonia Williams

CEAN: Belinda Boyle, Saori Yamamoto

SGSC: Clemencia Gomez, Alex Korotchenko

SFU Gerontology: LaDonna Miller & Mia Cho, MA students; Eddy Elmer, PhD(c)

Volunteers: Ira Heidemann, Esther Palivoda, Lynn Shepherd, Joan Vincent,

Email: elders@davidsuzuki.org

Web: www.suzukielders.org

Attachment no 2

Summary

Climate change is a naturally occurring phenomenon that has shaped the planet's environment for billions of years. The Earth and its creatures, including humans, have adapted to these changes over time, living through ice ages and periods of extreme heat. However, the pace of change has increased dramatically since the dawn of the Industrial Age in the early 1900s due to humanity's introduction and use of petrochemical-based industrial processes and wholesale extraction and destruction of Earth's natural resources.

A major result of these activities is an ongoing and accelerating elevation in average annual global temperatures due to an increase in atmospheric greenhouse gases, particularly CO₂ and methane. The impacts of these changes will affect all life forms on the planet for hundreds, if not thousands, of years to come.

This pamphlet describes the changes that may be experienced in British Columbia, as well as the adaptation and mitigation actions that each of us can take to prepare for these significant changes.

The Association of Suzuki Elders is a group of self-identified elders mostly from the Vancouver area who work as volunteers with and through the David Suzuki Foundation. We bring our voices, experiences, and memories to mentor, motivate and support other elders and younger generations in dialogue and action on environmental issues. Suzuki Elders listen, learn, share and act through educating, communicating, connecting and non-partisan advocacy.

Suzuki Elders

c/o David Suzuki Foundation
2211 West 4th Ave, Suite 219
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Contact us at:

suzukielders.org

Designed and updated by Suzuki Elder
Jim Park— May, 2018

Climate Change In B.C.

Its Impact On You, Your Family, and Your Community



Prepared By:



**Suzuki
Elders**

How Climate Change Will Impact You

- Increase in extreme weather events e.g. heavier precipitation, stronger winds, heat waves, more storms.
- Summer hotter and drier; winter more variable; shift in timing of seasonal changes e.g. early spring and rapid melting of snow leading to flooding; less snow remaining in mountains resulting in less river flow increasing probability of fires and drought.
- Melting of icebergs, warming of ocean waters and turbulent winds increasing size of waves and sea level (up to 1 metre in this century).
- Increase in ocean acidity disrupting lives of sea creatures - impact on food chain, from plankton and salmon to whales and humans.
- Changed wind patterns and warmer local air and water temperatures bringing insects and other creatures from hotter climates with the potential for new diseases impacting animals and people, with serious health consequences.

What You Can Do To Adapt

- **Reduce - Reuse - Recycle**
- Drive less. Walk more. Cycle. Use transit.
- Plant trees and drought-resistant vegetation.
- Promote urban gardens, and buy local food.
- Grow your own food; compost organic waste.
- Conserve water but be well-hydrated.
- Be energy-efficient; install solar panels.
- Live sustainably as much as possible.
- Be prepared for emergencies, e.g. evacuation; infrastructure loss such as broken roads/bridges, no electricity, water, or telephone.
- Be informed about shelters and other services.
- Practice preventive healthcare and stay fit.
- **Stay connected to your community.**

Climate change affects us personally, and on a local, provincial, national, and global level. The safety, security and health of our current and future generations depend on the actions we take now. It is time to reassess our priorities and values.

- **We need** to transition from competition, confrontation, and commercialism to cooperation, co-dependence, and compassion.
- **We need** to contribute to a world of social justice and sustainable living for all the world's peoples, and all the life that depends on a healthy environment.
- **We need** to make positive change in our lives, stay healthy and connected to our families, friends, and communities.

We believe that living in a healthy and safe environment is our human right.

"Our task must be to free ourselves by widening our circle of compassion to embrace all living creatures and the whole of nature and its beauty."

- Albert Einstein

Attachment # 3 – Bios of all presenters at the Salon on June 7, 2018
(in order of speaking)

Eva Wadolna, M.A., is a **Suzuki Elder** with a passion for healthy aging in a healthy environment, which she promotes through ongoing engagement in the “Patients as Partners” and CEAN-VCH community engagement initiatives of the BC Ministry of Health and her involvement with various environmental organizations. Eva’s educational background includes community planning, business, psychology, and gerontology. She was a senior planner in Edmonton, an urban planning and transportation consultant, and also owned a management consulting company in Canada and Europe. More recently she served three terms as a member of the City of Vancouver Seniors Advisory Committee and is on the boards of various non-profit organizations. She calls herself a “**Knowledge Philanthropist**”.

Brad Badelt, P. Eng., is the Assistant Director of Sustainability with the **City of Vancouver**. In this role, he oversees the City’s climate adaptation work, the green operations plan, and works toward advancing the City’s lighter footprint goal. He is also closely involved in partnerships with local universities, including the Greenest City Scholar program with UBC and CityStudio, and recently co-instructed a course in UBC’s Education for Sustainability graduate program. He has a master’s degree in water resources engineering and has worked in local government for more than 15 years, primarily in the areas of water management, green infrastructure and sustainability.

Robert Woollard, MD, Professor of Family Practice at UBC works in the fields of medical education, ecosystem health and sustainable development. He studies complex adaptive systems in human and environmental health. He has worked with community practices in ecosystem approaches to health and co-led a process developing a global consensus on the eco-health community’s responsibilities and commitments to addressing climate change. He is trained in occupational and environmental medicine, public health and toxicology.

Tim Takaro, MD, Professor of Health Sciences at SFU, is a physician-scientist trained in occupational and environmental medicine, public health and toxicology. He taught at Yale, the University of North Carolina and the University of Washington. His research focuses on links between human exposures and disease, and testing public health-based preventive solutions to such risks. The health impacts of climate change are the greatest public health challenge of our times. Dr. Takaro works on this problem at the interface of water resources, extractive industries and human health.

Amy A. Lubik holds a **PhD on cancer research**, is a member for the Canadian Association of Physicians for the Environment (**CAPE**), the Public Health Association of BC and Bridge for Health Coop. She volunteers for Amnesty International, and founded a chapter of Universities Allied for Essential Medicines. She became an environmental advocate and a local organizer for Leadnow, advocating for democratic, economic, and climate justice. Her current interest is in the social and environmental determinants of health.

Emily Peterson holds a **Master's Degree in Public Health**, and is currently Environmental Health Scientist for **Vancouver Coastal Health (VCH)**. She coordinated and moderated a seminar series on the inclusion of health in environmental assessment for public health practitioners in BC; in her work, she analyzed, mapped and reported provincial blood mercury and lead data. She reviewed the potential health impacts of a proposed gold mine in BC as a part of the environmental assessment process. She has also conducted evidence reviews, and coordinated and moderated panel discussions on relevant environmental health topics for public health practitioners across Canada. Her primary focus area was epidemiology and environmental health tracking.

Lisa J. Mu, MD, is a **Medical Health Officer** with the **Fraser Health Authority**. She is a Public Health and Preventive Medicine physician who has worked at the intersection of health, urban environment, and sustainability for over ten years. She is currently working on advancing public health leadership in climate change mitigation and adaptation including the health and economic benefits of neighbourhood design. Dr. Mu co-chairs the Ecological Determinants of Health Standing Committee of the Health Officer's Council.