

London's Climate Emergency - Be Part of the Solution - Green in the City

Dr. Dianne Saxe Keynote Presentation - "Climate Changes Everything"

November 19, 2019

KNOWLEDGE (*hold on, it's grim!*) Dr. Saxe presented on why climate changes everything drawing from the latest reports of the International Panel on Climate Change (IPCC) among other sources. Our country is among the top ten polluters in the world. The country has the highest rate of climate pollution, among highest levels of climate pollution and it is heating up faster than the global average. The heat buildup has occurred in the last three generationsher lifetime. 1% of the heat is in the air, 3% is trapped in solid vegetation, 3% with warmed up ice. The bulk is in the water! Warmed up water takes more space, (sea levels rise) and has less oxygen (greater acidity). The oceans have become the storm engines. The warmer the water, the more powerful and explosive the storms.

"When people get bad news, people want to hang on and wait for normal to come back". The reality is that is not going to happen. Our infrastructure, insurance, laws are designed for a 20th century that no longer exists and to which we can never return. Dr. Saxe debunked the thinking that we're living in the new normal. As she put it, the new normal is when you gain 10 lbs and buy a new pair of pants.

But that doesn't make sense if you're getting fatter every month. That's what we're doing, emitting more climate pollution every month, and at faster rates. 350 ppm: was our best estimate of how high carbon dioxide can be and still enable a world that has low-island states, predictable weather, coral reefs and mountain glaciers. The planet hit 415.70 ppm in May 2019. We are in completely uncharted territory. <https://350.org/science/>

Ontario is in a blessed position – not near any oceans, fairly removed from the equator. The province is however on track to be warmer than most other places in a range of > 2.5-3.7c by 2050. While it's a global problem, the impacts differ regionally and often are felt more acutely. Winter is wetter; cities are warmer (Toronto 3c +). Then there are climate extremes. Just going back to the 1960s, climate extremes are 4 xs worse in North America.

It's not if, it's when: drought, floods, fire, storms. It is showing up in insured losses. Just in Ontario, insured losses were up \$1.4B in 2018. The insurance companies issued a report in March where they said that for every billion they are spending for losses due to catastrophic weather; their best guess is that the public sector (all levels of govt) is losing \$3B in damaged assets. The biggest short-term Canadian risk is catastrophic damage to physical infrastructure in the next 20 years i.e., damage that will cost billions of dollars.

The emergency is coming into focus. The Intergovernmental Panel on climate change (IPCC) was established after the signing of the Paris Accord to provide reliable, scientific, factual data. They issued their 5th assessment report in 2014 and more recently a series of special reports. Staying under 2c may not be okay. (We're almost at 1.5c) One of their recent reports says that the difference between 1.5 v 2c is **major**. A world that is 2c warmer will be much worse off: Heavy precipitation, extreme heat, droughts, sea levels and most importantly, the ability of human and natural systems to adapt will be near collapse.

IPCC Scnd report August 2019 on land and food: The climate crisis is already affecting food quality and security. It was a similar assessment on the oceans and cryosphere (everything frozen). The oceans are in crisis and everything frozen is melting faster, and faster and faster. The coast of Alaska was ice-free in summer 2019; last year one-third of the Bering Sea melted in the dark in five days (before the sun started to come out)....

Another set of science coming out on biodiversity shows 1 M species are at risk. The World Health Organization considers climate change as one of the biggest global health threats of this century. The health damage is going to be twice as much as the cost of climate change.

Life-changing infections are on the move. Lyme disease incidence is soaring as ticks can overwinter. In Dr. Saxe's opinion, we have already wasted so much time – The science tells us that without massive, immediate reversal; i.e., getting off fossil fuels, it really means the bringing human and natural systems to the brink of extinction.

If we want a 2c world, which is much less stable and safe than today, with major economic damage but survivable for most, then we can only emit 75% of 2010 GhGs by 2030. We must cut emissions annually by 5% NOW. And Canada is among the luckiest places in the world.

Is it too late for today's young people to have the environment we have enjoyed? Yes, it is too late. YET there is time to forestall more damage.

ACTION



Set Paris Agreement consistent targets: for a 2c (warmer) world or a 1.5c (warmer) world. Set an emissions budget that is linked to capital planning, fleet operations, building renovations, flights, waste management, and investments. You must measure and be accountable. If building a new road, something else has to be given up.

- Study what other leading communities are doing. Carbon-free Boston: become carbon neutral by 2050. In 30 years, the community can only release as much carbon pollution as the environment can safely absorb. <https://www.boston.gov/departments/environment/carbon-free-boston>

Transportation (examples)

- electric buses
- Set examples and send messages through action: City officials on bikes, e-bikes, small EVs
- Visible EV charging at all municipal sites
- Priority bike parking

Presentation synopsis to the City of London Advisory Committee on the Environment Rose Sirois

- Approach Libro for loans to buy e-bikes

Buildings (examples)

- Building energy benchmarking and disclosure (live reports on energy use in foyer of muni bldgs.)
- Establish green building standards
- Cool/Green roofs
- Sensor activated LEDs (sensors are cheap!) Send messages constantly and consistently
- Renewable energy/storage systems
- Implement top climate change makers from Drawdown.org
- Solar on waste facilities (Raymond AB)
- Fayetteville Alabama - solar panel supplier built a solar generation system and the city signed a multi-year contract to buy that power.

Operations (examples)

- Serve no meat
- Use no disposables
- Temperature regulation (dress codes, persona space fans and heaters)
- Ban organic waste
 - o Co-digest with sewage sludge, use the methane for transport (intermediate step to electric buses or for city fleet (City of Stratford is going this way!) Toronto organic waste-fuelled garbage trucks
- Transparency on flights- How many? How far? Purchase of carbon offsets?
- Who is accountable? Are you prepared to accept responsibility for emission budgets?

Nobody can do it all, but we all can do something. Municipalities can lead in areas they control.

- Direct footprint
- Infrastructure
- Bylaws (ban idling, ban drive-throughs, launch a no idling campaign)
- Tax structure
- Procurement
- Investments
- Site Use

Lead through collaboration

- Partnerships with business / NGOs / UWO and Fanshawe
- Act as host or enabler of: tool library, clothing swaps, waste exchange, EV charging, community solar, B2B dating service... helping to match small businesses with markets and suppliers who want to make a change for the better
- joint purchasing with other municipalities to have the buying power to make bigger investments in solar or other green investments

Have a climate lens for every discussion

- Will this reduce our total GhGs per service-based target?
- Will this make the transition to a low carbon economy easier?

Transportation is the #1 GHG emitter in Ontario. Ontarians drive more than ever, in the most polluting cars. In fact Canada has beat out all other countries...

Exhaust from tail pipe emissions has enormous public health harm. We drive so much b/c of land use decisions. 3 out of 4 Ontarians live in areas that require them to drive to work, shop, recreate.... Need to stop urban sprawl.

We need to grow in, not out and make zero carbon mobility fast and safe. Seville Spain turned 5,000 parking spots into 170 km of raised bike lanes, built at the same level as the sidewalks. It started with a poll “would you like to ride safely around Seville” majority said yes. It was followed by lots of public input (on the how) and the first 80 km were done in 18months. This was all done before the next civic election, such that everyone had a chance to get used to it. The investment had a BIG payoff: the 32M euros cost serves 70,000 bike trips/day - - the same cost as a 6km highway. Subway cost 800M euros to serve 44,000 trips / day.

Urban-rural opportunities

- Measure and value ecosystem services, e.g. Protection of woodlots and wetlands by farms and other landowners – given them compensation, or at least recognition
- Perhaps offsets can be created from the above example. With the carbon tax having survived the federal election, there will be a growing market for offsets from the industrial sector.
- Consider food waste to animal feed; compost to soil amendments
- Bike tourism

Having a future will cost money; no one will do it for us. Since we’ve put money first for so long it’s time to change the yardstick used to measure progress and development.

Some options: generate local revenue through road pricing, parking

Polluter pays re. Land use costs, e.g., storm water

Reallocate existing assets / revenue

Collaborate with major local players

Community ownership (create opportunities for local people to invest in green economy initiatives, e.g.

Approach libro)

Seville arranged for affordable bike rentals by approaching a marketing company who put up billboards in area of the bike rentals in exchange for subsidizing first half-hour free on bikes.

KNOWLEDGE + ACTION = HOPE

Brief update on City action by Jan Stanford

Panel discussion:

Amber Cantell - Director of Programs, ReForest London

John Fleming - Managing Director, Planning and City Planner, City of London

Genevieve Langille - Grade 12 Student and the London Climate Strike Organizer

All panelists endorsed Dr. Saxe’s message that climate change is THE single most critical issue for life on the planet. London won't face the kind of flooding coastal cities will, or the wildfires already impacting the west coast and the boreal forest to the north. Drinking water supplies may not be in immediate danger; but at the end of the day - if food, water, and resource systems are collapsing in other communities around the globe, it is reason enough to take action. The knock-on effects to water supply, air quality, food security, demand for housing, and the dramatic increase in the need for humanitarian aid will all be devastating. Climate change will impact everything, and we need to start considering that impacts elsewhere can be every bit as important as impacts here.