Hard hit Urban Populations, Air Pollution and Energy System Reboot all Connected to a Sustainable World[1]

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Key Messages

- The COVID-19 pandemic has magnified issues on sustainability, equity, and inequalities in large urban centers and racialized communities.
- Air pollution can weaken immune systems and allow for greater susceptibility for COVID-19, especially for populations which live in highly polluted areas.
- The pandemic has offered a great opportunity to make green and clean public investments for a low -carbon future towards a more sustainable economic recovery.

Introduction

In 2020, and in the context of the climate change and COVID-19 crises, we may have already taken up small sustainable actions to better our future. Sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (McGill University, 2020). We have seen increased support for local and small businesses, reusable masks, reduced car use, and small start-up vegetable gardens on balconies and yards. In doing so, we are trying new things and adopting new practices for the future.

We may have heard of the term Sustainable Development, in the context of the environment, however, Sustainable Development is made up of environmental, social, and economic factors which interact with each other to frame what actions a sustainable future should consider ("What is sustainability?", 2020). The United Nations has 17 Sustainable Development goals based on these three components which must be achieved to address a variety of factors such as climate change, poverty, and ensuring economic benefits leave no one behind ("The 17 Goals", 2020). Now more than ever, sustainable actions are crucial for our post-COVID recovery to ensure we bounce forward to a sustainable future, and not back to how things were.

In the third session of the webinar series "Learning and Relearning for Planetary Health: Early Lessons from a Pandemic", the presenters focused on Sustainable Development opportunities stimulated by the COVID-19 Pandemic.

Air Pollution in our Atmosphere & COVID-19

Air pollution is a direct consequence of unsustainable development, where industries and transportation are given pre-eminence in spite of the high levels of pollutants they release in the

[1] On April 29th, 2020, a webinar with the above title, was presented as a contribution to a series on *"Learning and Relearning for Planetary Health",* which spoke on sustainability for after the COVID-19 pandemic. The presenters were Dr. Cheryl Teelucksingh, a professor in the Sociology department at Ryerson University, Dr. Jeff Brook, a faculty member from the University of Toronto in the Dalla Lana School of Public Health, and Marc Lee, a senior economist with the Canadian Centre for Policy Alternatives (CCPA).
All the recordings of this webinar series can be accessed here:
https://learningforplaneta.wixsite.com/website/past-webinars

environment (Friis, 2018). We already know that air pollution has a negative influence on health, in addition to causing heart and lung disease, it can weaken our defenses to infection. Those living in areas of higher pollution are more likely to be affected by respiratory viruses like COVID-19. Due to stay-at-home regulations, we were able to conduct a global "natural experiment" (Brook, 2020) on the levels of air pollution and air quality worldwide. The result has been the decrease of air pollution (specifically traffic-related NO_2) which has given us better air to breathe and clearer skies. We can now see what is possible when we reduce NO_2 and other pollutants in the air and how it positively affects the visibility and air quality as well as our health (Brook, 2020).

Wearing masks is essential for preventing the spread of COVID-19. Some actions related to masks that we could take to support a sustainable transition would be to increase access to washable masks for distribution in homeless shelters. In addition, a greater need for safe indoor spaces opens opportunities for sustainable technological development as well as the redesigning of indoor spaces. Safe indoor spaces need to be available for everyone, not just those who can afford to provide their own.

Magnified Inequities Amidst a Pandemic

COVID-19 has magnified the existing social inequities in our communities and we clearly see that not everyone is affected by the virus in the same way: low-income and people of colour are more likely to become infected and have more severe disease (Gay, Hammer & Ruel, 2020). In Canada, we have also seen health disparities during this pandemic. Differences in neighbourhood and housing designs, zoning regulations and wealth, all play a role in health and access to services. Those living in poorer racialized neighbourhoods, and/or in old and highly dense housing, are more likely to test positive for COVID-19; in addition, more essential workers are likely to live in these areas (Teelucksingh, 2020). Essential workers are bravely on the frontlines delivering services, but are more likely to face crowding and unsafe conditions at work and getting to and from work. In Canada, race-based data is limited, hampering efforts to reduce inequalities.

In addition, in a time where physical distancing is important to reduce the spread of COVID-19, it has been especially difficult for dense and crowded buildings and homes. There are equity issues, for example, on the etiquette on sharing sidewalks of who must step off to maintain a 2-meter distance and also in the policing and social regulations that are mostly targeted towards racialized groups (Teelucksingh, 2020).

An incredible example of a movement for change occurred in Toronto (in conjunction with Toronto Public Health), when a collective effort of Black health care workers and a wide-spread contribution of others who advocated for the need of race-based data were successful in pushing for new policies around collecting race-based data. Now with continued support for the collection of race-based data on the burden of disease in different racial groups, we can make more informed decisions to distribute the available resources going forward. This now gives us the opportunity to continue actions to "collaborate and consult with racialized experts and communities and rethink how we value labor" (Teelucksingh, 2020).

The Economy and moving towards an energy transition

COVID-19 has shown us what is possible for reducing our carbon emissions and an provided an opportunity to head into a low to zero carbon future. Daily, we emit carbon-pollution from cars, homes, transportation, and buildings. The majority of our emissions are industrial: from taking resources from the earth and from the production of food and manufactured goods. To avoid catastrophic climate changes, we need to keep the increase in earth's temperature below 1.5

°C. This would require about a 7% to 8% decrease of carbon emissions annually. Our pause during this pandemic has reduced our emissions by about 5% (Lee,2020). This shows that although this reduction is slightly less than what is needed, lower emissions are feasible. From here, we can continue to push towards environmental and social policy changes that promote the energy transition needed for a low carbon economy required for the climate emergency (Lee, 2020).

As we head into a post-COVID future, there is a clear need and opportunity to shift away from fossil fuels to more "clean green public investments" (Lee, 2020) and to have more regulations and higher taxes for carbon emissions. We have heard the importance of supporting local businesses, grocery stores, and farmer's markets which move us in the right direction to "build an economy on resilience and redundancy and not hyper-efficiency" (Lee, 2020). Sustainable development goals require economic policies that lower greenhouse gas emissions to manage climate change and improve the environment while investing in people and communities. In response to COVID-19, we have seen actions such as "housing for homeless and wage subsides for businesses along with a guaranteed income" (Lee, 2020). This effort towards initiatives that reduce inequity and support for "affordable housing, community redevelopment, green infrastructure, renewables and jobs" creation must continue (Lee, 2020), based on the analysis of the race-based data we are now collecting in some communities. In the shift from fossil fuel-based industries, we will need to invest in retraining fossil energy workers to ensure a just transition for all (Lee, 2020).

Ending Statement

Sustainable development in environmental, social, and economic areas are crucial to bounce forward to a better future for ourselves and our planet. There may be barriers against change, but we have proven that the increased solidarity during this pandemic powers the demand for change and for a better, more equitable, future.

Stay tuned for our next OpEd about the session of the webinar series on the voices from Zambia and Rwanda on the struggles for a healthier planet and a sustainable world.

References

Brook, J. (2020). *Air pollution COVID-19 interactions, what are we not measuring?* Learning and Relearning for Planetary Health: Early Lessons from a Pandemic, Session 3, https://www.meethere.org/conferences/learning-for-planetary-health

Friis. (2018). Essentials of Environmental Health. (3rd ed.). Burlington : Jones & Bartlett Learning.

Gay, T.; Hammer, S. & Ruel, E. (2020). Examining the Relationship between Institutionalized Racism and COVID–19. City & Community, 19(3), 523–530. https://doi.org/10.1111/cico.12520

Lee, M. (2020). *The energy transition and a low-carbon reboot*. Learning and Relearning for Planetary Health: Early Lessons from a Pandemic, Session 3, https://www.meethere.org/conferences/learning-for-planetary-health

Teelucksingh, C (2020). *Special challenges of urban racialized and low-income populations* Learning and Relearning for Planetary Health: Early Lessons from a Pandemic, Session 3, https://www.meethere.org/conferences/learning-for-planetary-health

Mc Gill University. (2020). What is sustainability? Retrieved 1 September 2020, from https://www.mcgill.ca/sustainability/files/sustainability/what-is-sustainability.pdf

The 17 Goals (2020). Retrieved 1 September 2020, from https://sdgs.un.org/goals