Prepared by the CCAC Secretariat and the Scientific Advisory Panel on 16.04.2020

BRIEFING ON COVID-19 AND SHORT-LIVED CLIMATE POLLUTANTS BY THE CLIMATE AND CLEAN AIR COALITION (CCAC)

We are seeing significant reductions around the globe in many air pollutant and greenhouse gas emissions due to the response to COVID-19[i]

All messaging about the COVID-19 crisis needs to be cautious to not sound celebratory about the reduced emissions of greenhouse gases and air pollutants. This is important both from an ethical standpoint and we also don't want to send the wrong message that "all we need to get clean air and less climate change is to shut-down the global economy."

- While the scale and breadth of the impact of the pandemic is unprecedented in modern history, we have also observed decreases in air pollutant and greenhouse gas emissions during previous short-term events and recessions such as the 2008 Beijing Olympics[ii] and 2008 global recession.[iii]
- While these decreases result in public health benefits[iv] (as they have in the past[v]), they come at the cost of major mental and physical health problems and deaths, rapidly increasing unemployment and staggering economic dislocation.
- As was the case with past shocks, these reductions in emissions are not sustainable and will return to pre-event levels unless policy measures are implemented to promote transformational change.[vi]

WHAT DOES THIS TELL US?

- **Air pollution and greenhouse gas emissions are inherently linked**. This is a stark confirmation of the fact that many of our everyday activities contribute significantly to the air pollutants that we breathe and the greenhouse gases that drive global warming.
- Not all types of air pollutant emissions are decreasing at the same rate. For example, we would expect to see pollutants from the transport and industrial sectors to decrease significantly, but not necessarily see significant reductions from residential or agricultural sources. Moreover, some pollutants result from secondary atmospheric processes resulting in non-linear links between reduced emissions and ambient concentrations (e.g. ozone).
- The speed at which emissions have fallen shows how quickly we can impact our environment when we change our behavior.
- However, the threat posed by climate change and air pollution continues to be near and long-term threats requiring us to dramatically reduce global emissions within this decade. As we continue to work to address the acute challenge of this global pandemic, we cannot allow this crisis to compromise our efforts to tackle the world's inescapable challenge.
- **It is more important than ever to make the connection between health, climate and the environment**. This applies not only to protecting people and the planet from fundamental risks, but also to the opportunities that come from investing in a more resilient, zero-carbon, and healthier future.

CLIMATE & CLEAN AIR COALITION
TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS

Prepared by the CCAC Secretariat and the Scientific Advisory Panel on 16.04.2020

ISSUES BEING EXPLORED BY THE SCIENTIFIC ADVISORY PANEL (SAP)

The scientific community is exploring possible links between exposure to high levels of air pollution and vulnerability to COVID-19

- Locations with worse air quality are likely to have higher case-fatality. **This needs to be addressed in solid epidemiological studie**s, which must include as well smoking habits as possible modifiers of susceptibility to COVID-19. If this can be confirmed, the air pollution modifying effect would be even more plausible given the similar pathologies related to smoking, residential cooking and ambient air pollution.
- When the initial wave of infections and deaths decreases there will be a need for extra vigilance during air pollution episodes.
- Air quality (and likely also temperature) should be included in COVID-19 modeling. Some of the post-hoc analyses from SARS indicated that air quality and temperature were predictors of daily variations in cases. Things are more challenging in the current situation as there are so many more cases and most infections are not actually being tested/recorded in most places, but this is likely to change over time/for next year.
- Researchers are also examining the distributional aspects of air pollution and examining what remains after parts of the economy or human activity are severely constrained or stopped altogether (e.g., factories shutting down; restrictions on vehicle transport; etc.). We know that pollution continues to occur even with significant government-imposed constraints (e.g., emissions from power generation; goods transport to keep food supplies available, and household cooking, lighting, and heating). And, at the individual level, some people/families may be exposed to greater emissions levels (e.g., increased open-burning cookstove meals in “locked-down” families).

HOW DOES THIS IMPACT THE CCAC’S WORK?

- The CCAC Secretariat and the Scientific Advisory Panel are continuing to track the emerging data and studies. There are several broader considerations that should also be considered.
- The crisis isn’t over, and the full extent of the human and economic toll is not yet fully known, but it will be extensive. According to the IMF it is the worst recession since the Great Depression, and indeed depending on how long the crises last may be more significant than the Great Depression of the 1930s.[vii]
- The research and conclusions re-enforce the CCAC’s core message that human health and environment/climate are inextricably linked. Reducing climate pollutants will benefit both human health and the environment.
- The importance of health, and its links to climate, will rise on the international agenda, including in delayed but up-coming global meetings on biodiversity, on oceans, and on climate.
- Some countries, including major economies, have relaxed environmental control measures, including on SLCPs and other air pollutants, to “limit the impact” on the economy.
- There are fears that the economic stimulus to be provided to the economy post-crisis will similarly (and more broadly). Conversely, there is a growing movement afoot to keep a clear focus on climate change and broader environmental sustainability, embodied in the message of “build back better”.

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QUESTIONS RAISED BY THE SCIENTIFIC ADVISORY PANEL

- What are the similarities and the difference between the pandemic and the risk from climate impacts, including the importance of being prepared for the risk and taking precautionary measures in advance of impacts; the non-linear nature of both risks; and the potentially catastrophic consequences for society, including our social, civic, and economic systems?
- What can we learn from the communication of the respective risks of the pandemic, climate and air quality impacts?
- What role might air quality and climate policy, including short-lived climate pollutant policy, play in the recovery plans following the pandemic, including plans to speed the economic recovery?
- The virus is causing us to physically distance from one-another and radically alter our everyday social, economic and political lives, but it is also showing us how closely interconnected we all are. We can now see, both as individuals and as a society, how capable we are of making major changes, if the safety and sustainability of our society is at stake. What can we learn from the response to COVID-19, and previous shocks, which we can use for action on climate and air pollution?
- Community activism is increasing, and people are dramatically changing their lifestyles as a response to the virus. Can community activism be sustained and used to enhance action for climate and clean air once the world overcomes the pandemic?

NEXT STEPS

- The Secretariat has been engaged with key partners seeking to limit the degradation of environmental controls and re-enforce the message of "**build back better**" (e.g., UNEP, WHO, OECD, WRI, IGSD). We will continue to do so.
- The Secretariat and the SAP will continue to monitor the research work that is on-going. We will report back regularly.
- The Secretariat will also engage with and track pandemic response measures from our partner countries and organizations. Collaboration on this will be undertaken with partner organizations (NGOs; IGOs).
- We will support our work with partner countries to incorporate SLCP reduction measures into their country-level economic response plans.
- We will engage with the Steering Committee and key partners (e.g., the WHO; Chile as the current COP Presidency; UK as the incoming COP Presidency) to put SLCP mitigation front and centre as a response to the pandemic. We will engage, at the appropriate time, with CCAC Ministers and leaders to re-enforce our core message.

CONTACTS

Nathan Borgford-Parnell, CCAC Secretariat nathan.borgford-parnell@un.org
Tiy Chung, CCAC Secretariat tiy.chung@un.org

[i] *See* Copernicus, *Amid Coronavirus outbreak: Copernicus monitors reduction of particulate matter (PM2.5) over China*, Press Release, 4 March 2020, https://atmosphere.copernicus.eu/amid-coronavirus-outbreak-copernicus-monitors-reduction-particulate-matter-pm25-over-china; CarbonBrief, *Coronavirus has temporarily reduced China's CO2 emissions by a quarter*, 19 February 2020, https://www.carbonbrief.org/analysis-coronavirus-has-temporarily-reduced-chinas-co2-emissions-by-a-quarter); *and* BBC News, *Coronavirus: Air pollution and CO2 fall rapidly as virus spreads*, 19 March 2020, https://www.bbc.com/news/science-environment-51944780?utm_campaign=Carbon%20Brief%20Daily%20Briefing&utm_medium=email&utm_source=Revue%20newsletter

[ii] NASA, *Pollution trials for the Beijing Olympics: Satellites reveal that traffic restrictions successfully reduced atmospheric nitric oxide by 40 percent*, 2007 https://earthdata.nasa.gov/learn/sensing-our-planet/pollution-trials-for-the-beijing-olympics.

[iii] Guardian, *Growth of global carbon emissions halved in 2008, say Dutch researchers*, 25 June 2009, https://www.theguardian.com/environment/2009/jun/25/carbon-emissions; NY Times, *Emissions Fell in 2009, Showing Impact Of Recession*, 16 February 2011, https://www.nytimes.com/2011/02/17/science/earth/17emit.html; Financial Times, *Economic crisis cuts European carbon emissions*, 2011 https://www.ft.com/content/b26d579e-3d99-11df-bdbb-00144feabdc0

[iv] Forbes, *Coronavirus Lockdown May Save More Lives By Preventing Pollution Than By Preventing Infection*, 11 March 2020, https://www.forbes.com/sites/jeffmcmahon/2020/03/11/coronavirus-lockdown-may-save-more-lives-from-pollution-and-climate-than-from-virus/#cf13c25764d8; *and* CICERO, *The flip side of the new Coronavirus outbreak - reduced air pollution mortalities?*, 09 March 2020, https://cicero.oslo.no/en/posts/single/the-flip-side-of-the-new-coronavirus-outbreak-reduced-air-pollution-mortalities.

[V] Rich DQ, Liu K, Zhang J, Thurston SW, Stevens TP, Pan Y, Kane C, Weinberger B, Ohman-Strickland P, Woodruff TJ, Duan X, Assibey-Mensah V, Zhang J. 2015. *Differences in Birth Weight Associated with the 2008 Beijing Olympics Air Pollution Reduction: Results from a Natural Experiment*. Environ Health Perspect 123(9):880-887; CBS NEWS, *Reducing air pollution during 2008 Beijing Olympics boosted residents' heart health, research reveals*, 16 March 2012, https://www.cbsnews.com/news/reducing-air-pollution-during-2008-beijing-olympics-boosted-residents-heart-health-research-reveals/.

[vi] South China Morning Post, *Pollution-free days of Beijing Olympics now just a happy memory*, 10 August 2013, https://www.scmp.com/news/china/article/1295644/pollution-free-days-beijing-olympics-now-just-happy-memory.

[vii] IMF Blog, The Great Lockdown: Worst Economic Downturn Since the Great Depression (14 April 2020) https://blogs.imf.org/2020/04/14/the-great-lockdown-worst-economic-downturn-since-the-great-depression/.