COVID-19 and climate change interlinkages: what we know and emerging questions

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Swiss TPH, COVID-19, Climate Change

Swiss TPH / University of Basel

• The largest Public Health Institute in Switzerland (#868 employees, 86 nations, 135 countries)

• Past, current, and future global health challenges, in Switzerland and worldwide

• Pandemics (COVID-19) in Switzerland and worldwide (21 related projects, 30 countries)

• Transdisciplinarity, One Health, Ecosystem Health, Health System Strengthening, Climate change, SDGs, …
This Presentation

1. What are the major planetary challenges?
2. What are the connections between COVID-19 and Climate Change?
3. What have been the responses to COVID-19?
4. What lessons are taken from the responses to COVID-19 that could be helpful for future Climate Action?
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1. Planetary challenges
The most important risks to the planet?

The most severe **global risks** in terms of **impacts**

- Climate change
- Extreme weather
- Biodiversity loss and ecosystem collapse
- Food crisis
- Water crisis

The threat of **cascading** crises with one worsening another; … risk of global systemic collapse

**Impacts:** … diseases, deaths, pandemics

(Source: Future Earth 2020: Our Future on Earth)
1. The most important risks to the planet?

- Natural habitat destruction
- Climate crisis
- Loss of Biodiversity
- Drowning in waste
- Water crisis
- Food crisis

... diseases, deaths, pandemics

... human health impacts from disruptions of Earth's natural systems

... pandemics (COVID-19)  Climate change

Planetary Health!!!
2. Climate change and COVID-19 linkages
2. Climate change and COVID-19 interlinkages?

- Vast amount of research on climate change
- Climate change … a problem for the entire planet
- Limited information on COVID-19
- COVID-19…. a pandemic, rapidly expanded planet
- They are both:
  - Huge in scale, with high death tolls
  - Important “shocks”, public “bads”
- The have both:
  - suffered from delayed, insufficient or mistaken actions
  - highest impacts on the most vulnerable people

2. Climate change and COVID-19 interlinkages?

- “… the virus survives longer under cold, dry and low ultraviolet radiation conditions”

- No evidence of a direct connection between climate change and the emergence or transmission of COVID-19 disease

- Key anthropogenic drivers: agricultural intensification, increased demand for animal protein, conversion of land and climate change

- Strong link between air pollution and higher rates of COVID-19-related deaths

Climate role on COVID-19 emergence: indirect, through major planetary disruptions affecting human-animal-environmental health

(Source: WMO 2021; UNEP 2020)
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3. Responses to COVID-19
3. Responses to COVID-19?

- Health authorities slow to recognize the gravity
- At least 150 millions diagnosed with COVID-19 (as of May 2021), hundred of thousands died
- Governments forced to strict lockdowns and massive financial investments
- Governments had, by August 2020, put in place short-term recovery measures estimated to cost at least US$11.8tn or 8.7% of global GDP (World Bank, 2020)
- On average, government debt ratio to GDP would rise by almost 20 % by end-2022 for the OECD countries

(Source: Swiss TPH 2021, OECD 2020, WMO 2021)
3. Responses to COVID-19… and climate change?

- Global carbon dioxide emissions dropped about 7% in 2020
- At end of restrictions and lockdowns, emissions returned to their normal climb
- 2011-2020: the warmest decade on record (WMO). The six warmest years have all been since 2015
- In 2020, the average global temperature is already about 1.2°C warmer than the preindustrial times
- There is at least a one in five chance of exceeding 1.5°C by 2024

(Source: WMO 2021)
3. Responses to COVID-19… and climate change?

Global annual mean temperature difference from pre-industrial conditions (1850–1900) for five global temperature data sets

(Source: WMO 2021)
4. Lessons for Climate Action from responses to COVID-19
4. Lessons from Responses to COVID-19?

• Increased belief in science in general (vaccins)

• Infectious diseases (COVID-19): **effects immediate** and hitting directly

• Climate change: slow motion, **effects less visible**, less concentrated

• Overlapping impacts: the two crises to be **tackled concurrently**

• UNFCC, National Determined Contributions (NDCs) COP26, to step forward with enhanced commitments, **COVID-19 and climate crisis in tandem**
4. Lessons from Responses to COVID-19?

• COVID-19 highlighted how vulnerable are all countries in an interconnected world, **even richest countries like Switzerland**

• Climate crisis: major threat to the capacity for a good pandemic response (need **One Health**)

• Rapid and radical action is possible and humans can handle together a global crisis, **global cooperation, health systems strengthening**

• Global community able to move beyond sector-specific crisis reactions?
Thank you for your attention

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