Can a Planetary Health Lens Inform Pandemic Response?

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Glo-cal Think-and-Do Tank for People and Planet
Whoever wishes to pursue properly the science of medicine must proceed thus. First, he ought to consider what effects each season of the year can produce; for the seasons are not at all alike but differ widely both in themselves and at their changes. The next point is the hot winds and the cold, especially those that are universal, but also those that are peculiar to each particular region. He must also consider the properties of the waters; for as these differ in taste and in weight, so the property of each is far different from that of any other.

Hippocrates, Airs, Waters, and Places (400 B.C.)
Father of Western Medicine
How is health produced?

(Sowada, 2003)
Anthropogenic Change and Human Health

(Myers, 2017)
DAMAGING THE PLANET DAMAGES HUMAN HEALTH

**CLIMATE CHANGE**
If unchecked climate change related impacts could cause an extra 250,000 deaths per year between 2030 and 2050.

**BIODIVERSITY LOSS**
Overfishing together with increasing acidity and other environmental changes threaten fish supplies.

**UNDER NUTRITION**
Millions of people are at risk of under nutrition due to the combined effects of climate change and other environmental changes.

**WATER USE**
By 2050 over 40% of the world’s population could be living in areas under severe water stress.

**SOIL DEGRADATION**
This leads to a loss of 1-2 million hectares of agricultural land per annum.

#planetaryhealth

THE LANCET
“The pandemic is a portal, a gateway between one world and the next.”

Arundhati Roy

and we need a new compass!
From public health to planetary health

Our patients? PEOPLE and PLANET
It is time for a new discipline.

The Rockefeller Foundation–Lancet Commission on planetary health

Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation–Lancet Commission on planetary health
Planetary Health

“the health of human civilization and the state of the natural systems on which it depends”

(Lancet-Rockefeller Commission, 2015)

“the international and interdisciplinary field focused on characterizing and addressing the human health impacts of global environmental change”

(Planetary Health Alliance, 2019)
“The health sector must lift its gaze to bigger, ecological horizons. This will require a radical extension of the public health agenda, new forms of professional training in environmental health, a preparedness to base policy advice upon predictions and best guesses (as opposed to empirical data), and an ability to collaborate with unfamiliar disciplines (e.g. climatology and ecology).”

Anthony McMichael
Climate and Health Pioneer
Planetary Health is...

- A field
- A scientific paradigm
- A policy framework
- A communication strategy
- A moral imperative

(Frumkin, 2017)
Evolution of Planetary Health

Tropical Medicine

Public Health

International Health

Global Health

Environmental Health

One Health

EcoHealth

GeoHealth

(Guinto, 2019)
Planetary Health: Old Wine in New Bottle

“The Earth does not belong to man; man belongs to Earth. Man did not weave the web of life; he is merely a strand in it. Whatever he does to the web, he does to himself.”

Chief Seattle
Planetary Health: Three Challenges

- Conceptual and empathy failures (imagination challenges)
- Knowledge failures (research and information challenges)
- Implementation failures (governance challenges)

(Whitmee, et al., 2015)
Planetary Boundaries

(Steffen, et al., 2015)
Doughnut Economics

(Raworth, 2017)
A Good Life For All Within Planetary Boundaries

(O’Neill, et al., 2018)
Ecological transition

Improved engineered infrastructure & access to markets

Improved engineered infrastructure & access to markets leads to improved health status

Mediating influences

Degraded natural systems without access to improvements or markets lead to less healthy populations

Degradation of ecological systems
Health impacts are unfairly distributed

Cumulative emissions of greenhouse gases, to 2002

WHO estimates of per capita mortality from climate change, 2000

Coronavirus, Flu And Climate Change: Is There A Connection?

by: Joris Zuid January 23 2020
The planet's health is essential to prevent infectious disease

The new field of planetary health examines the link between human health and the environment to prevent viral pandemics such as Zika and Ebola
ANIMALS | WILDLIFE WATCH

More Chinese push to end wildlife markets as WHO declares coronavirus emergency

Media coverage of China's wildlife markets sends the message that they're hugely popular. In reality, many Chinese can't relate.
Emergence of Pandemic Zoonoses

(Kreuder Johnson, et al., 2015)
Health Care System in a State of Shock

Not ready for pandemic – or even climate change
The COVID-19 outbreak is adding to plastic pollution
NASA images show fall in China pollution over virus shutdown
Fake animal news abounds on social media as coronavirus upends life

Bogus stories of wild animals flourishing in quarantined cities gives false hope—and viral fame.
Carbon emission reduction during the COVID-19 pandemic

Global daily fossil CO$_2$ emissions
MtCO$_2$ day$^{-1}$

© Source: Le Quéré et al. Nature Climate Change (2020); Global Carbon Project

(Le Quere, et al., 2020)
Carbon emission reduction (by source) during the COVID-19 pandemic

Source: Le Quéré et al. Nature Climate Change (2020); Global Carbon Project

(Le Quere, et al., 2020)
As countries reopen, emissions are surging back

Estimated change in CO₂ emissions from fossil fuels, compared with 2019

Early April: Global emissions fell by an estimated 17 million metric tons per day, or 17 percent.

Sources: Nature Climate Change and Global Carbon Project
Fresher air? Bluer skies?

Decarbonization through a pandemic? Not a good option!
Likely upcoming climate hazards during the COVID-19 pandemic

(Phillips, et al., 2020)
Philippines typhoon recovery, complicated by coronavirus concerns
How to reimagine our food systems for a post-COVID world

A Californian farmer ploughs lettuce back into the ground, April 2020

Image: REUTERS/Mike Blake
Keeping things cornucopious

The world’s food system has so far weathered the challenge of covid-19

**Cropping continents**
Change in food import dependency rate, 1997-2017, percentage points

Source: FAO
The Global Syndemic of Obesity, Undernutrition, and Climate Change

(Swinburn, et al., 2019)
Planetary Health Diet

(Willett, et al., 2019)
A Planetary Health Nexus Solution: Reduce Meat = Quadruple Win

- Decreased NCDs
- Reduced CO₂
- Lowered AMR
- Prevent Zoonosis
21\textsuperscript{st} century health systems in the planetary health era

**Universal**
- Leaving no one behind
- Beyond borders & citizenship

**High-value**
- Good outcomes, quality & safe
- Affordable & responsive

**Climate-smart**
- Climate-resilient, disaster-ready
- Low carbon, green sustainable

**Pandemic-resistant**
- Detects early, responds quickly
- Resources ready, better recovery
Planetary Health Education

- Planetary health lens
- Urgency and scale
- Inequality and inequity
- Bias
- Policy
- Organizing and movement building
- Governance
- Unintended consequences
- Communication
- Systems thinking and transdisciplinarity
- Global citizenship and cultural identity
- Historical and current global values

(Stone, et al., 2018)
School names first director of planetary health
Latest from Planetary Health Alliance

Planetary Health Case Studies

Planetary Health
Protecting Nature to Protect Ourselves
edited by Samuel Myers and Howard Frumkin
Planetary Health Practice

Inspiration

Implementation

Institutionalization

Innovation

Integration

Information

Investment

(Guinto, Working Paper)
Planetary Health Governance
From Global Health to Planetary Health:
What Future Governance for the Health of People and Planet?
The SDGs – The Language of Planetary Health?
**FIGURE 5: COVID-19 AFFECTING ALL SDGS**

**1. No Poverty**
- Loss of income, leading vulnerable segments of society and families to fall below poverty line.

**2. Zero Hunger**
- Food production and distribution could be disrupted.

**3. Good Health and Well-Being**
- Devastating effect on health outcomes.

**4. Quality Education**
- School for many closed; remote learning less effective and not accessible for some.

**5. Gender Equality**
- Women's economic gains at risk and increased levels of violence against women. Women account for majority of health and social care workers who are more exposed to COVID-19.

**6. Clean Water and Sanitation**
- Supply disruptions and inadequate access to clean water hinder access to clean handwashing facilities, one of the most important COVID-19 prevention measures.

**7. Affordable and Clean Energy**
- Supply and personnel shortages are leading to disrupted access to electricity, further weakening health system response and capacity.

**8. Decent Work and Economic Growth**
- Economic activities suspended, lower income, less work time, unemployment for certain occupations.

**9. Sustainable Cities and Communities**
- Population living in slums face higher risk of exposure to COVID-19 due to high population density and poor sanitation conditions.

**10. Reduced Inequalities**
- School for many closed; remote learning less effective and not accessible for some.

**11. Sustainable Cities and Communities**
- Reduced commitment to climate action but less environmental footprints due to less production and transportation.

**12. Peace, Justice and Strong Institutions**
- Conflicts prevent effective measures for fighting COVID-19; those in conflict zones are most at risk of suffering devastating loss from COVID-19.

**13. Climate Action**
- Aggravate backlash against globalization, but also highlights the importance of international cooperation on public health.
Global Green New Deal & Healthy Recovery

Leading economists: Green coronavirus recovery also better for economy

The Solution to the Coronavirus Recession Is a Global Green New Deal

WHO Manifesto for a healthy recovery from COVID-19

Prescriptions for a healthy and green recovery from COVID-19

Coronavirus: how economic rescue plans can set the global economy on a path to decarbonisation
New Normal? There’s no “Old Normal”!
Renovating the Political Economy of Planetary Health
Amsterdam to embrace 'doughnut' model to mend post-coronavirus economy

Dutch officials and British economist to use guide to help city thrive in balance with planet
LET'S FLATTEN THIS CURVE TOO

Business as usual

THE EARTH'S CAPACITY

When sustainability is a priority

@thesustainablefashionforum
MORE TROUBLE.

CLIMATE CHANGE

I'LL BE HAPPY WHEN THIS IS OVER...

BE SURE TO WASH YOUR HANDS AND ALL WILL BE WELL.

COVID-19

RECESSION

CLIMATE CHANGE
Advancing the health of people and planet

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