

Environmental and Climate Impact of the Pandemic: How the Vaccination Fares

Covid-19 : Cause and Cost

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OUTLINE:

The presentation aims to communicate significant details of the following points:

Cause	Covid-19, Climate Change and Cross-Linkages
Cost	Infection and Fatality, Mental Health, Economic Impacts (Long-Term Effects) & Environmental Degradation
Vaccination	Implementation & By-Products
Recommendations	New Technologies and Other Initiatives

INCEPTION:

A.

Climate Change and Pandemics are Public Health concerns.

According to WHO, Climate Change is the single biggest health threat facing humanity. The pandemic of Coronavirus Disease 2019 (COVID-19) is a timely reminder of the nature and impact of Public Health Emergencies of International Concern.

The Relationship of Pandemics and Climate Change

B.

Both crises have pushed regional healthcare systems around the world to the limit. Climate change and COVID-19 have resulted in large numbers of people being hospitalized and dying, forcing countries to reassess how they manage these.

A photograph of a dried plant specimen, possibly a small tree branch with tiny flowers, resting on a white circular plate. The background is a light, textured surface.

01

CAUSE

Covid-19, Climate Change and Cross-Linkages

CAUSE: Covid-19

December
2019

A novel coronavirus disease (formerly known as 2019-nCoV and now renamed COVID-19) had rapidly spread throughout China, leading to a global outbreak and causing considerable public health concern .

January
2020

Following the recommendations of the Emergency Committee, the WHO Director General declared that the outbreak constitutes a Public Health Emergency of International Concern (PHEIC)

March
2020

Proclamation 922 : Declaring a State of Public Health Emergency throughout the Philippines

September
2021

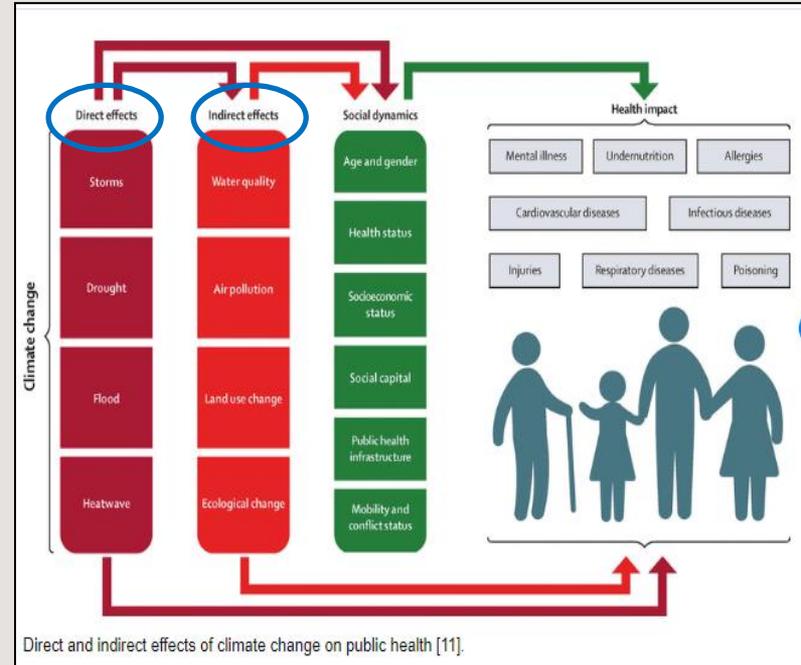
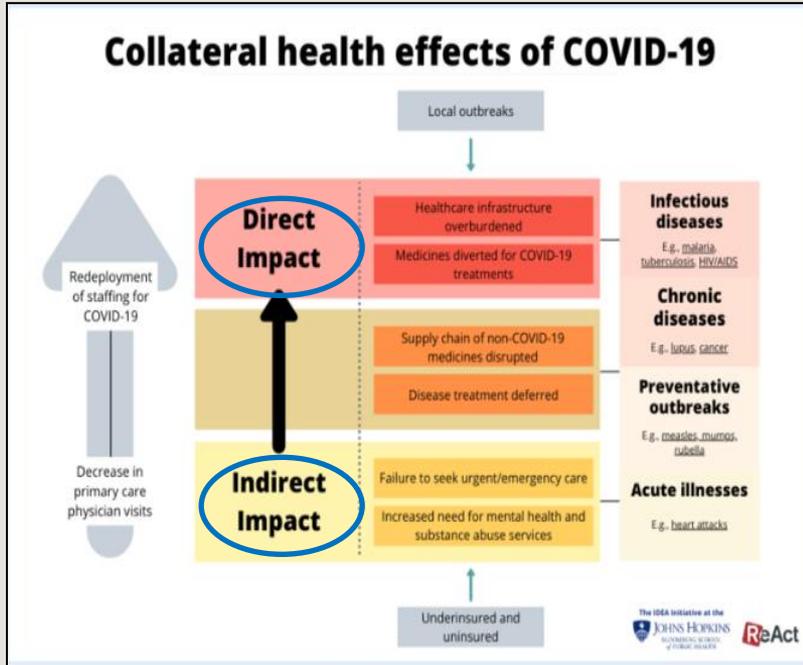
Palace implemented Granular lockdown to lower cases of Covid-19 transmission.

January
2022

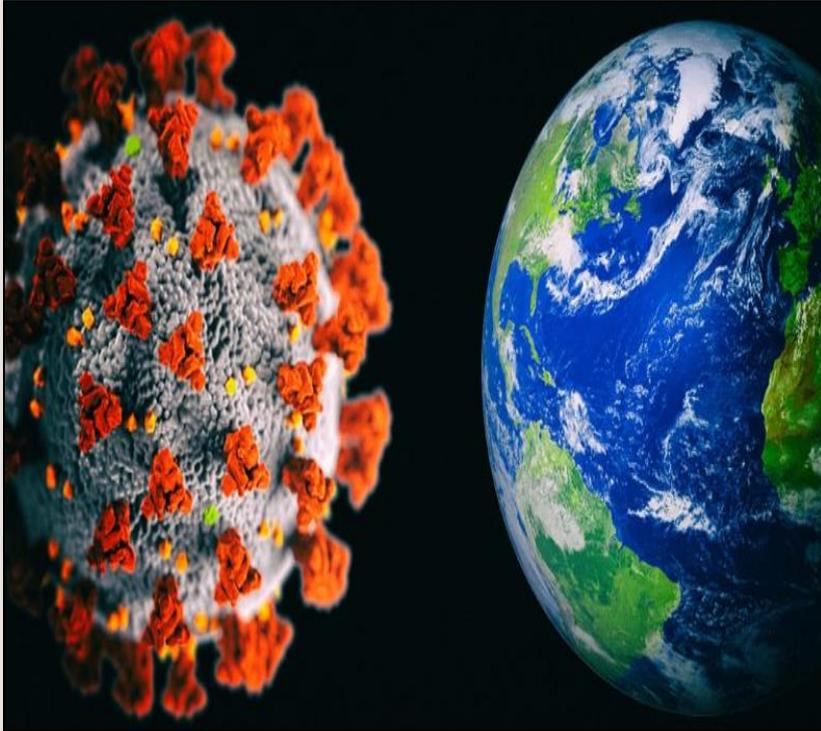
Omicron Surge deals heavy hit to Filipino families . .

CAUSE: Effects & Impacts

Collateral health effects of COVID-19



Cause: Cross-Linkages



- Equitable health systems protect us from health security threats, including climate change.
- Inequality breeds unequal health access, which is a barrier to overall health.
- A long-term perspective and paradigm shift towards effective risk management should be pursued.

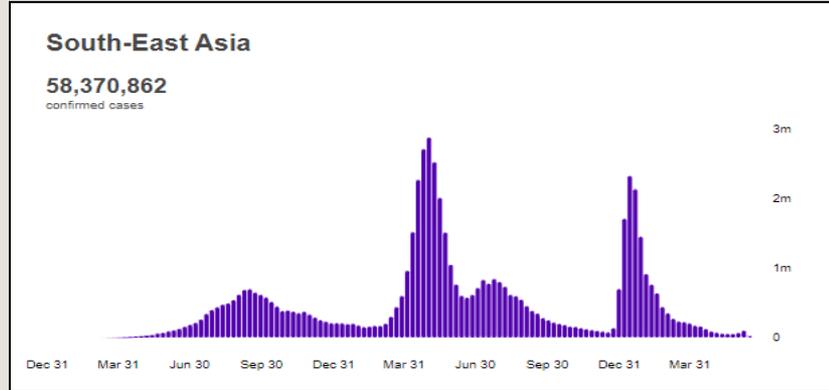
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02

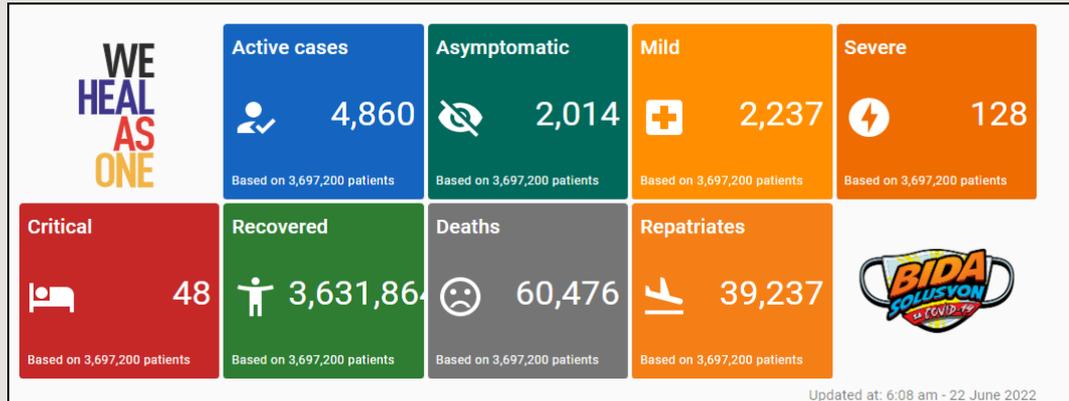
COST

Infection and Fatality, Mental Health, Economic Impacts (Long-Term Effects) & Environmental Degradation

COST: Infection & Fatality



Globally, as of June 21, 2022	
Confirmed cases	537,591,764
Deaths	6,319,395



COST: Mental Health



Climate Change affects people's physical and mental health: "physical, mental, and community health", interconnected and dependent on vulnerabilities at individual and social level.

Furthermore, the pandemic and the measures taken to contain it have had a general impact on mental health.

COST: Economic Impact

Climate Change	Pandemic
Damage on infrastructure, human health and productivity, and other significant sectors	Loss of income due to premature deaths, workplace absenteeism & global supply chain
Increased demand for energy : less reliable power generation, stressed water supplies	Changed spending behaviors, mainly due to decreased household finances
Disruption on Trade and Supply Chain Management	Increased levels of suffering, anguish, anxiety, insomnia, distortion of reality, and dangerous behaviors

COST: Environmental Degradation

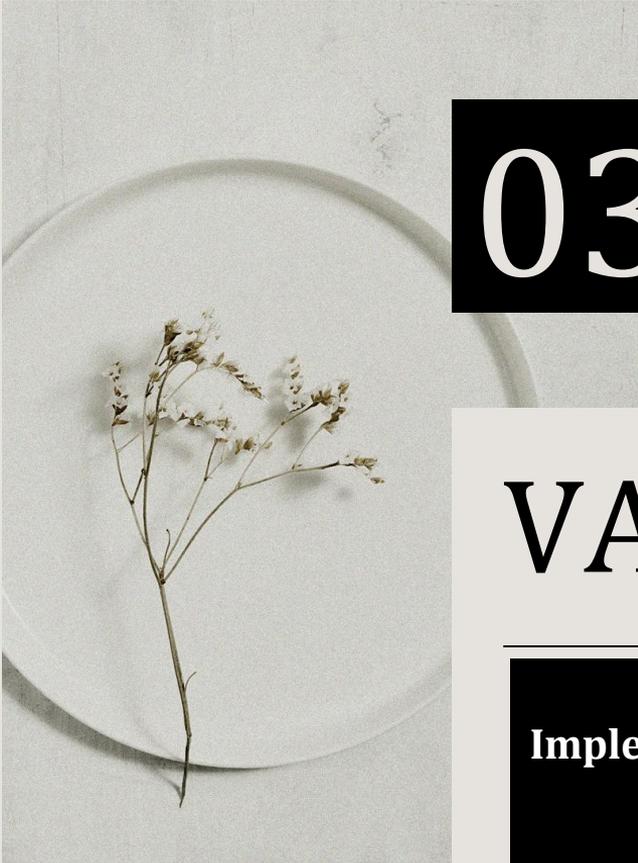


Increased Biomedical
Waste Generation

Solid Waste Generation
and Reduction of Recycling

Extensive Use of Chemicals

Safety Equipment Use and
Haphazard disposal



03

VACCINATION

Implementation and By-Products

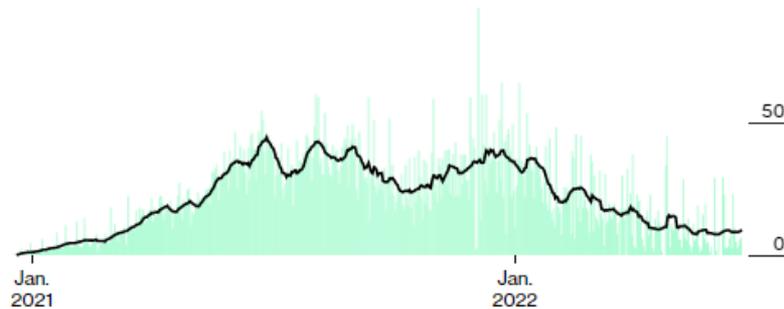
VACCINATION: Implementation & By-Products

The Path to Immunity Around the World

Globally, the latest vaccination rate is **9,497,365 doses** per day, which includes **2,793,525 people** getting their first shot. At this pace, it will take another **8 months** until 75% of the population has received at least one dose.

Global Total (8 months to 75% coverage)

Doses administered: 100M



Note: *Coverage may exceed 100% in some places, as shots may be administered to non-residents. The "daily rate estimate" is a seven-day trailing average; interpolation is used for jurisdictions with infrequent updates. Data are from Bloomberg's Covid-19 Vaccine Tracker.

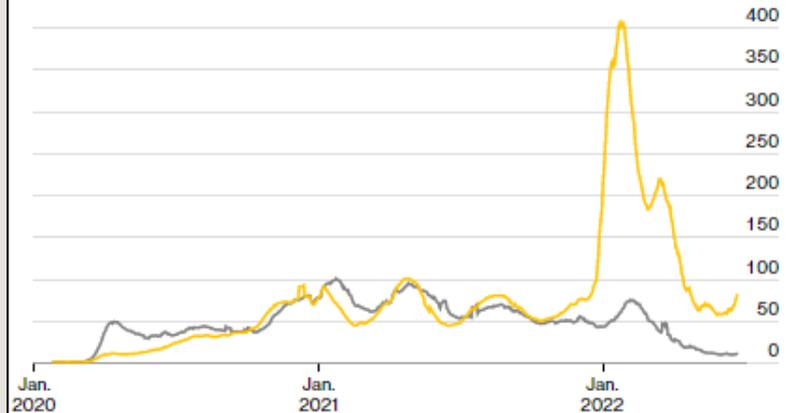
Covid Survival Improves

This chart shows how Covid cases and deaths compare with prior waves in each country. When omicron took off in late 2021, cases soared but were less likely to be fatal.

Global Total (153 doses per 100 people)

Deaths Cases

Relative to prior peak: 450%



Note: Cases and deaths are shown relative to peak rates between July 1, 2020 and July 1, 2021. Locations with peak deaths of less of than 30 a day are excluded. Vaccine data from Bloomberg's Covid-19 Tracker. Cases and deaths data: [Johns Hopkins University](#).

Philippine National Covid-19 Vaccination Dashboard

152,669,814

TOTAL DOSES ADMINISTERED

(234,205 Doses Administered on June 21, 2022)

67,844,171

FIRST DOSE: + 109,682 Doses Administered on June 21, 2022

70,094,708

COMPLETE DOSE: + 83,478 Doses Administered on June 21, 2022

VACCINATION: Implementation & By-Products

The COVID-19 pandemic has led to increased vigilance over the proper disposal of vaccine-related materials, such as vials, needles, syringes, and bandages.



VACCINATION: Implementation & By-Products

1

- More than 140 Million test kits have been shipped worldwide, creating a potential 2,600 tonnes of general rubbish – most of which will be plastic – and 731,000 liters of chemical waste, the report says.

2

- More than 8 Billion vaccine doses have been administered across the globe, producing an additional 144,000 tonnes of waste, including glass vials, needles and safety boxes.

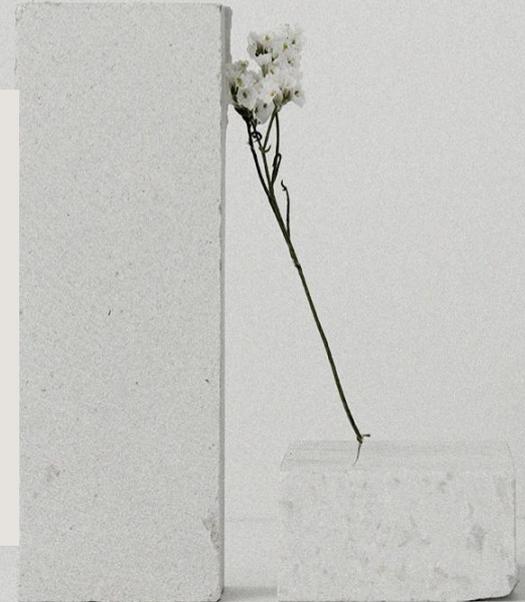
3

- 10 Times Increase of healthcare waste load in facilities; 8 Million tonnes of plastic entering the ocean every year and to the estimated 150 million tonnes already circulating

Proxy Calculation for Vaccination Expense

$$\begin{aligned} \text{TOTAL WASTE'S WEIGHT OF VACCINATION IN KG} \\ = \text{WEIGHT OF VACCINE SET} \times \\ \text{NO. OF VACCINATED PEOPLE} \end{aligned}$$

The Government estimates that it will spend an average composite cost of around PHP 1,300.00 / \$ 25 per person for the vaccination program. This includes vaccine cost (assuming a two-dose requirement) and ancillaries.





04

RECOMMENDATIONS

New Technologies and Other Initiatives

RECOMMENDATIONS:



Strengthen Coordination

Global Health donors, logistics, infection & control, healthcare waste & environment actors



Invest in Safe Waste Management

Broader infection prevention and control and WASH Efforts



Regulate Practices

Update & Implementation of sustainable waste standards



Support Innovative Solutions

Reduction of unnecessary PPE, Reverse Logistics & Centralized Treatment & Local & Regional Production



NASA photo of Tropical Storm Conson and Typhoon Chanthu taken on September 9, 2021



Multiple funeral pyres of victims of Covid-19 burn at a ground that has been converted into a crematorium for mass cremation in New Delhi on April 24. —AP

Public Health

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Thank you!

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