



International Webinar

'ACHIEVEING SUSTAINABLE AND REGENERATIVE DEVELOPMENT GOALS

UNIVERSITAS DWIJENDRA – DENPASAR, BALI, INDONESIA

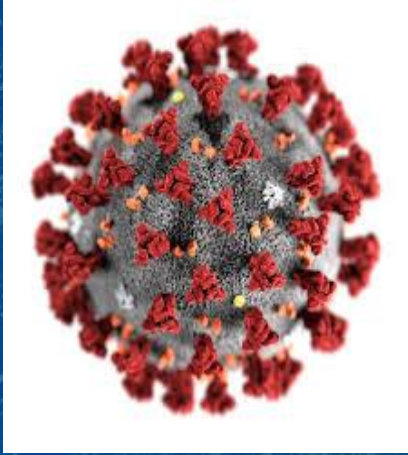
REGENERATIVE SUSTAINABILITY FROM THE COVID-19 PANDEMIC

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CORONAVIRUS-19 PANDEMIC

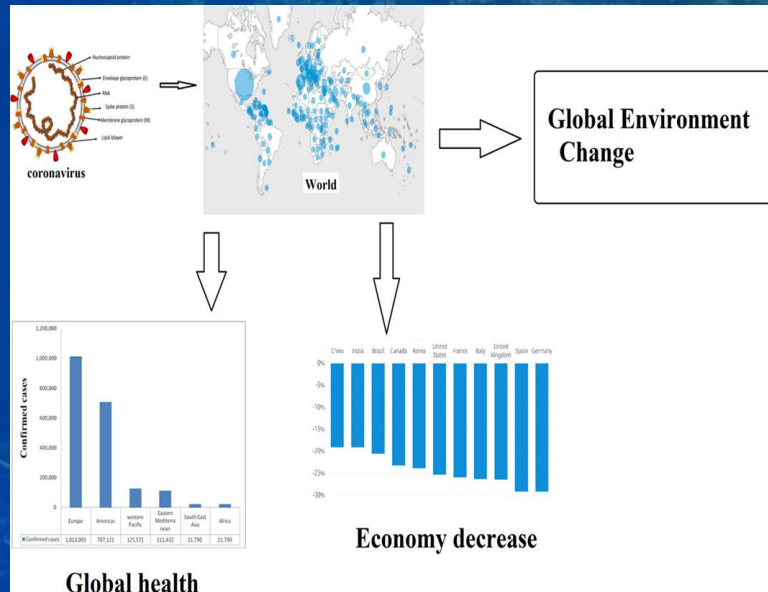


The coronavirus pandemic is a **wake-up call** to stop exceeding the planet's limits.

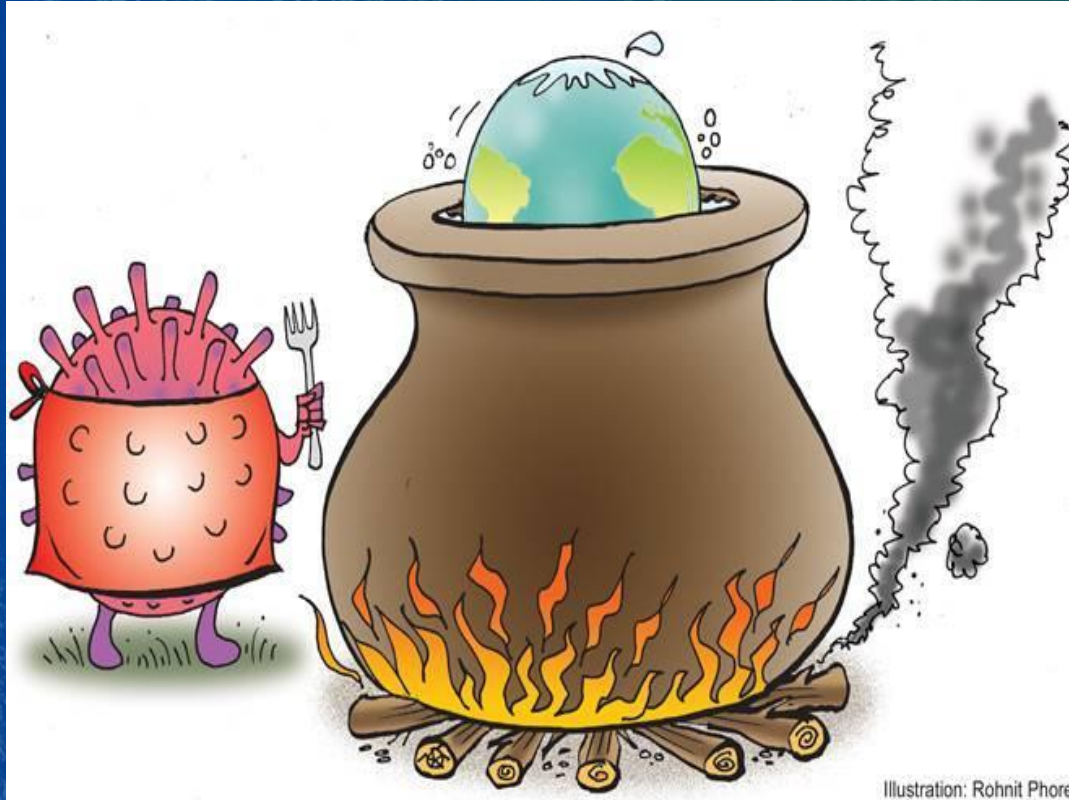
Deforestation, biodiversity loss, and climate change make pandemics more likely.

Deforestation drives **wild animals** closer to human populations, increasing the likelihood that **zoonotic viruses** like SARS-CoV-2 will make the cross-species leap.

The Intergovernmental Panel on Climate Change (IPCC) warns that **global warming** accelerate the emergence of new viruses.

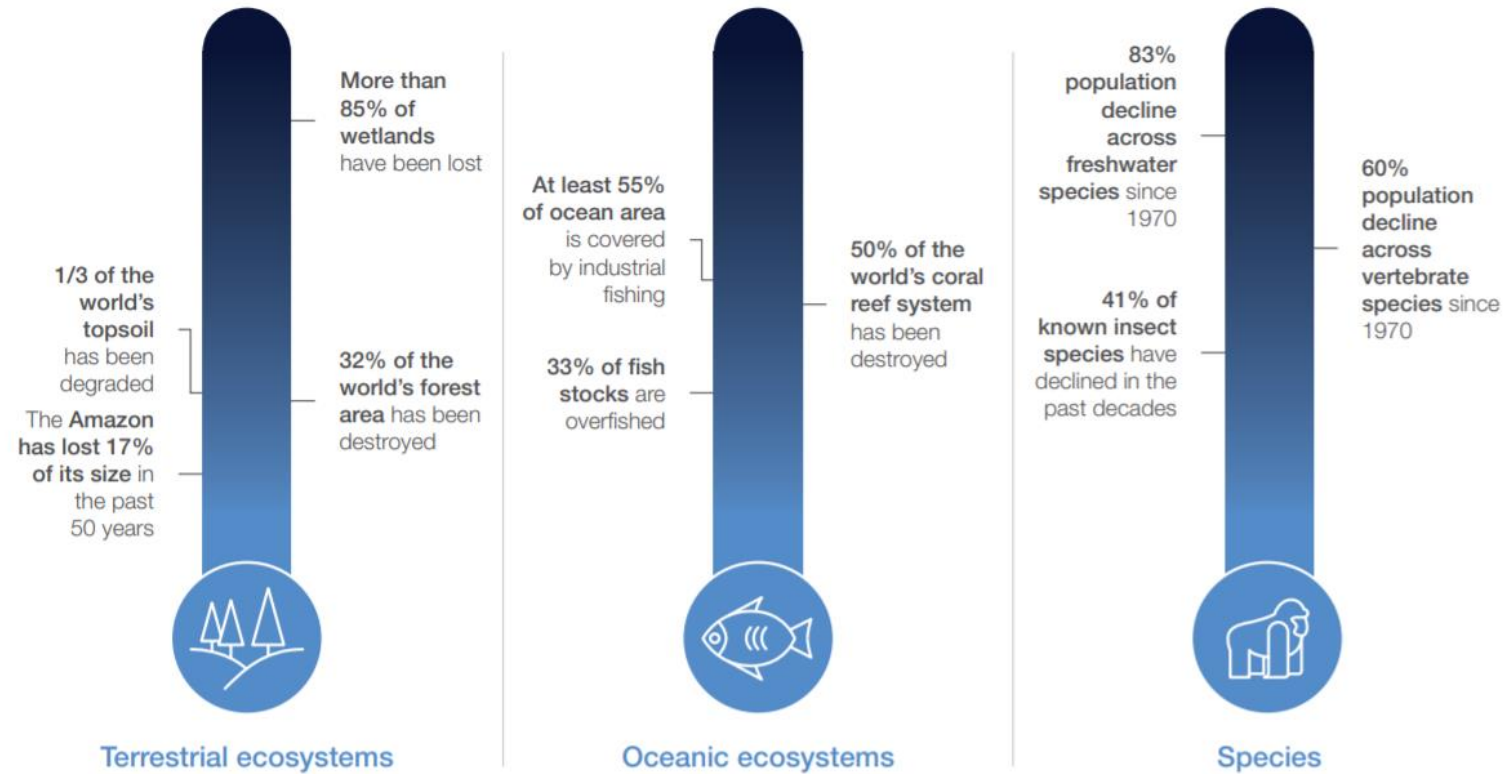


Climate Change and COVID-19

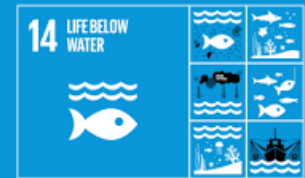


- Rising global temperature expanding the geographical distribution of diseases like dengue and malaria,
- Infectious diseases thrive better in a warmer climate.
- For example, climate change is making winters milder, and shorter. This allows extended breeding periods for disease-carrying vectors such as mosquitoes, and rats.
- Warmer climates also enable them to survive in higher altitudes, and, therefore, bring diseases to new places.
- Global warming is also changing the water cycle, leading to heavy rainfalls, higher humidity, and floods.
- Higher temperature and humidity assist breeding of pathogens, and heavy rain assists the breeding of mosquitoes.

FIGURE 1:
Human activity is eroding the world's ecological foundations



Source: IPBES, 2019, "Global assessment report on biodiversity and ecosystem services"; Maria-Helena Semedo of the Food and Agriculture Organization (FAO) at World Soil Day 2014; The Economist, 2019, "On the brink – The Amazon is approaching an irreversible tipping point"; WWF, 2018, "Living planet report – 2018: Aiming higher"; F. Sánchez-Bayo and K.A.G. Wyckhuys, 2019, "Worldwide decline of the entomofauna: A review of its drivers", Biological Conservation.



Sweden

OVERALL SDG PERFORMANCE	Global rank	Score or value	Regional average
SDG Index	1 (of 149)	84.5 /100	75.3 /100

AVERAGE PERFORMANCE BY SDG



SDG DASHBOARD



Central African Republic

OVERALL SDG PERFORMANCE	Global rank	Score or value	Regional average
SDG Index	149 (of 149)	26.1 /100	42.5 /100

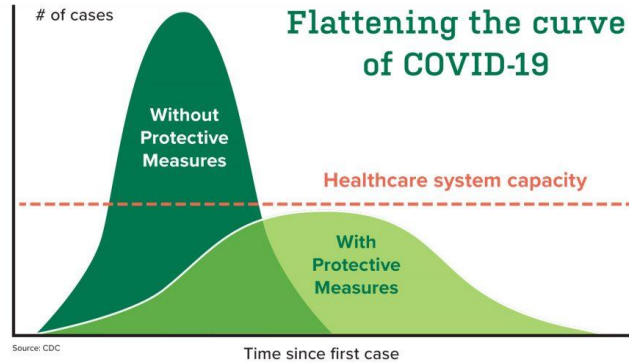
AVERAGE PERFORMANCE BY SDG



SDG DASHBOARD



FLATTENING THE CURVE OF COVID-19 through HUMAN ACTION - A NEW NORMAL

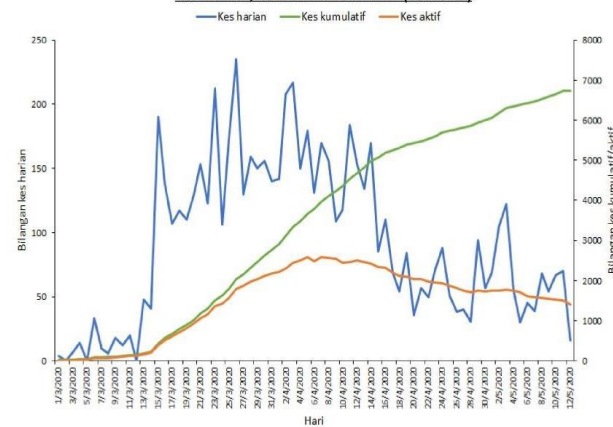


uab.edu/coronavirus

UAB MEDICINE
The University of Alabama at Birmingham



KES HARIAN, KUMULATIF DAN AKTIF (COVID-19)



NIH, Program Penyelidikan & Sokongan Tekn

6

COVID-19: EMBRACING THE NEW NORMAL



The public are advised to:



1

Always adhere to the Movement Control Order (MCO)

2

Stay at home except for those working in the sectors that are allowed to operate



3

Only leave their homes for important matters (e.g. buying essential items, getting medical treatment) which is allowed during the MCO



4

Continue practising good personal hygiene habits at all times



5

Continue practising safe social distancing



Source: Ministry of Health, Malaysia

Published: 29/4/2020

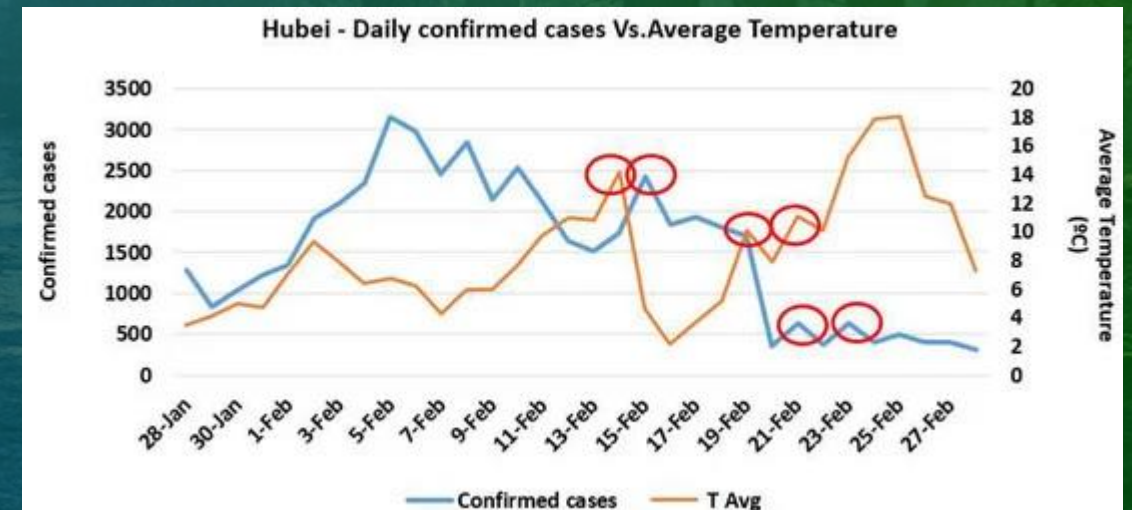
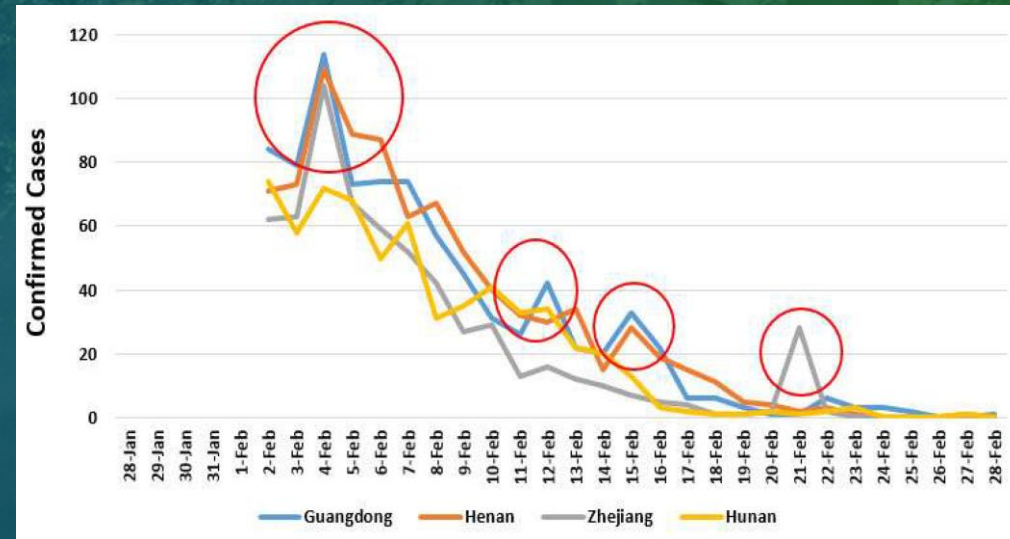
Bernama Infographics

ZEN 2020

IMPACT OF QUARANTINE TO DECREASING POSITIVE CASE OF COVID-19 SLIDE

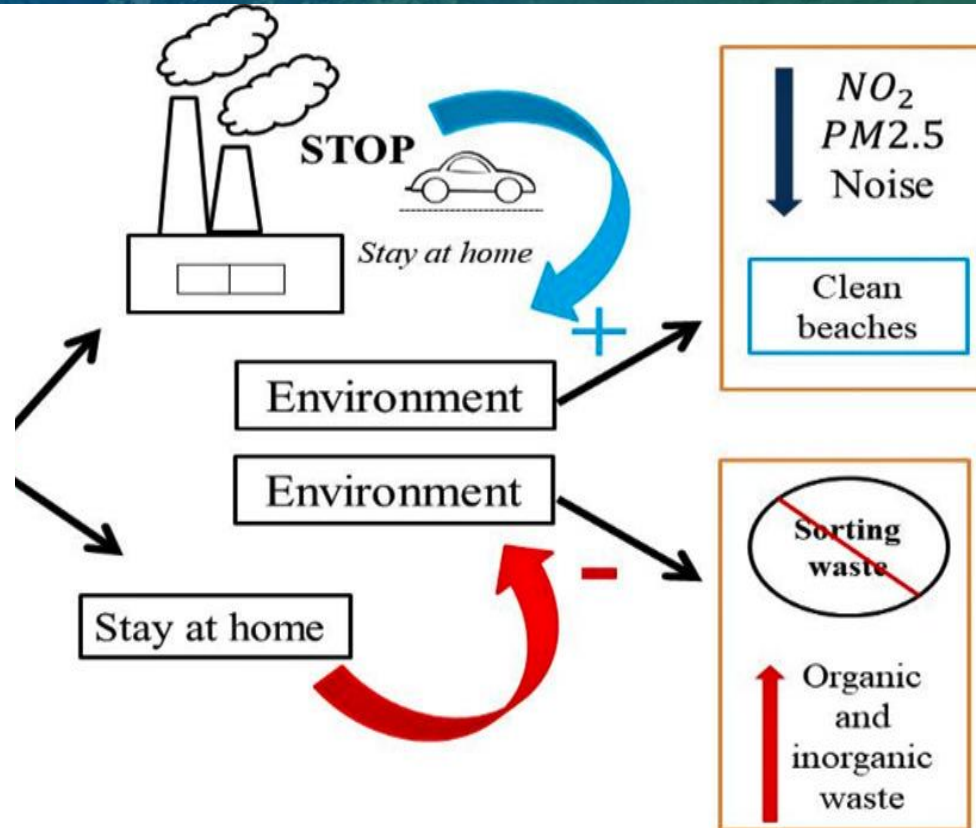
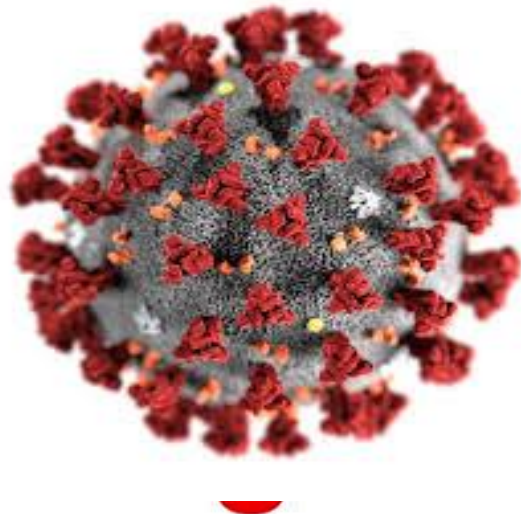
The positive impact of quarantine in decreasing the number of confirmed cases, which was effective after about 14 days, alongside the impact of environmental factors.

The impact of environmental parameters on epidemic diseases, such as the quicker spread of flu virus in cold and dry conditions by Lowen et al., 2007 and Price et al., 2019 or the faster increase of MERS-CoV in warm temperature, low wind speed, low relative humidity, and high ultraviolet index by Altamimi and Ahmed, 2019.



Effect of Pandemic to the Environment

COVID-19



Non Vaccine action.

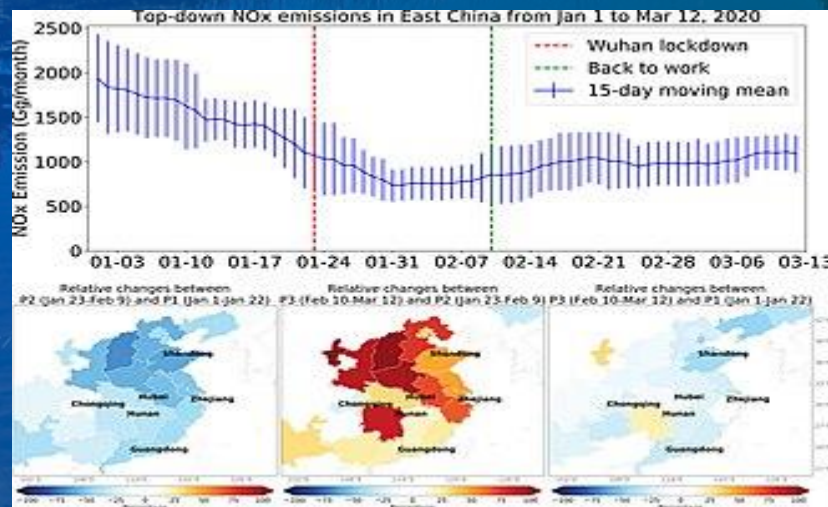
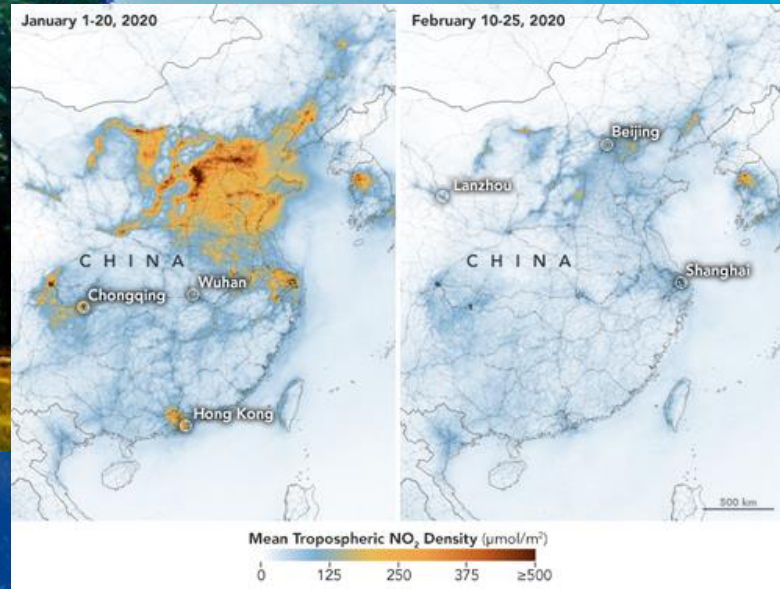
Epidemiology - public health/
collective action.

Social Distancing implement
to break the chain of the virus
spreading.

Stay At Home/ Work From
Home/ Lockdown.

Positive impact to the
environment, i.e. reduce air
and noise pollution.

Evidence from COVID19 shows that force behavioural changes IMPROVE ENVIRONMENTAL QUALITY



The COVID-19 pandemic is threatening lives and economies around the world.

But it has also demonstrated that human societies are capable of transforming themselves more or less overnight.

Its the time to usher in **systemic economic change**.

The COVID-19 crisis shows us that it is **possible to make transformational changes** overnight. We have suddenly entered a different world with a different economy.

THE CORONAVIRUS PANDEMIC'S IMPACT ON THE ENVIRONMENT



As the coronavirus pandemic unfolds across the globe, threatening lives and upending the world economy, an unexpected side effect has been a decrease in greenhouse gas emissions. In this infographic, we'll look at the full environmental impact of the COVID-19 crisis, from the rise of medical waste to the decline of air pollutants.

Zen 2020



CARBON EMISSIONS

UNITED STATES

40%
LESS DOMESTIC
AIR TRAFFIC



New York:
50%
DECREASE
IN CARBON
MONOXIDE



Seattle:
41%
DECREASE IN
PEAK TRAFFIC
CONGESTION



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



13 CLIMATE
ACTION



TARGET 15+1



CONSERVE AND
RESTORE TERRESTRIAL
AND FRESHWATER
ECOSYSTEMS





WASTE

UNITED STATES

Surge in solid medical waste puts
467K
WASTE COLLECTION WORKERS AT RISK

REUSABLE BAGS ARE BANNED IN SEVERAL STATES



1B TREES PER YEAR

are needed to package shipped goods.



ITALY



111%
INCREASE IN
CONSUMER SPEND
ON PACKAGED
MANDARINS

CHINA



MEDICAL WASTE
QUADRUPLD TO
200
TONS PER DAY

While China grapples with medical-waste facilities at near or full capacities, the rest of the world braces for a huge increase in infectious waste. It remains to be seen if a dip in office waste balances out the increase in food and shipping packaging.



ENERGY

UNITED STATES

1.5% 
OF THE TOTAL
POWER IN THE U.S.
IS CONSUMED BY DATA
CENTERS ANNUALLY

EUROPE

40% INCREASE IN
BROADBAND DEMAND 

**9.1 TERABITS
PER SECOND**

A new world record
for data throughput at
the Internet Exchange
in Frankfurt, Germany.

WORLDWIDE

63M STREAMS OF
STRANGER THINGS S3*
Comparable to driving
420 miles +
189 million
kg of CO2.



*Between Oct. 2018 to Sept. 2019

SOUTH KOREA



30%
INCREASE IN
ONLINE GAMING
ACTIVITY

Broadband demand has risen dramatically thanks to online conferencing, schooling and streaming videos, but not all experts agree it's energy intensive. Some experts argue that big data, like the kind that picks what products to show you on a website, requires more energy.



ENERGY STATISTICAL SOURCES:

- SaveOnEnergy
- The Channel Company, CBN
- Forbes
- CNN News
- DE-CIX





WILDLIFE & HABITAT

UNITED STATES

FAKE NEWS!

False reports claimed that **wild turkeys** were now in Oakland, CA, but they've already been roaming the city for years.



ITALY

FAKE NEWS!

Dolphins and swans did not return to Venice's canals. The dolphins were elsewhere and swans are already local regulars.



JAPAN



SIKA DEER WANDERED THE STREETS AND SUBWAY STATIONS OF NARA

CHILE



A PUMA SHOWED UP IN THE CENTER OF SANTIAGO

INDIA



A STAG RAN AROUND THE STATE CAPITAL OF DEHRADUN

Viral social media posts showing wildlife returning to urban areas? Largely fake news, sadly. Most of these animals were already regular visitors, or the location was misrepresented. The popularity of these posts shows the need for people to find meaning in this pandemic.



WILDLIFE & HABITAT STATISTICAL SOURCES:

- Salon
- National Geographic
- The Guardian

VIRAL FAKE NEWS SOURCE:

- The Japan Times



On one planet, all species, countries, and geopolitical issues are ultimately interconnected. We are witnessing how the outbreak of a novel coronavirus in China can wreak havoc on the entire world.

Like COVID-19, climate change, biodiversity loss, and financial collapses do not observe national or even physical borders.

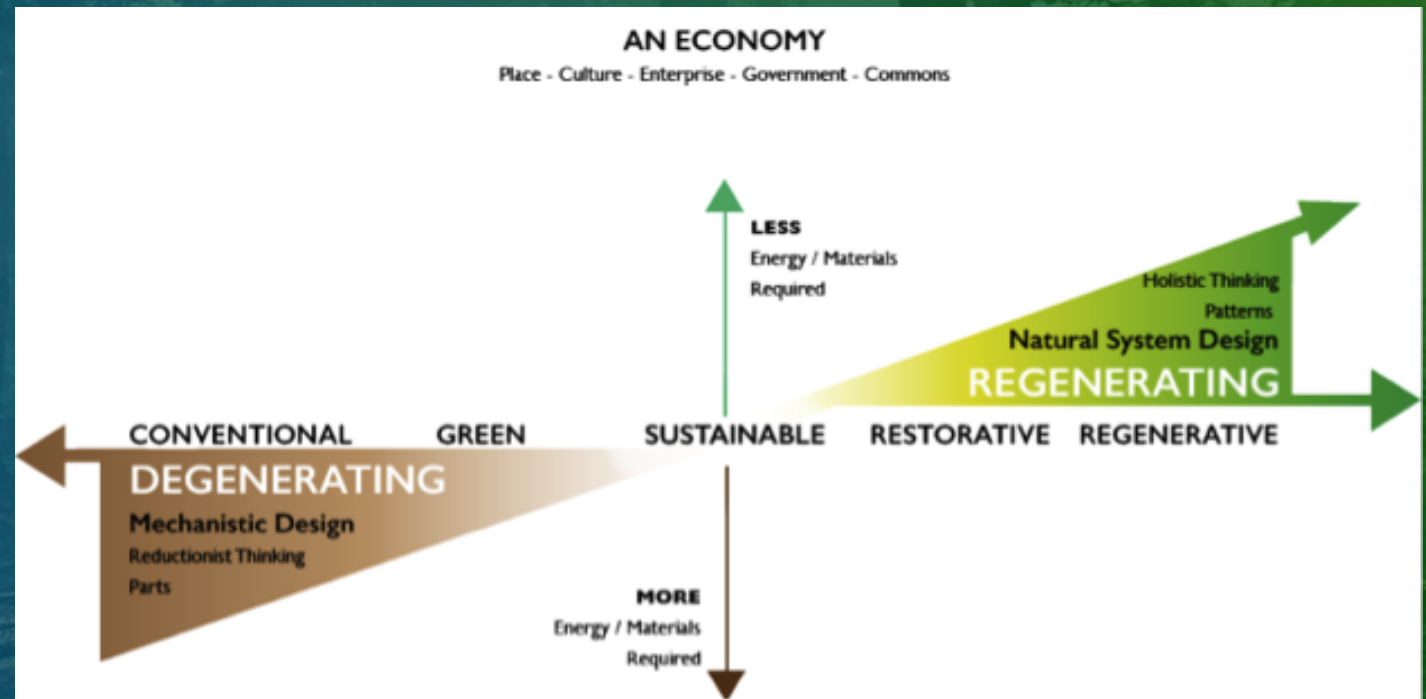
These problems can be managed only through **collective action** that starts long before they become full-blown crises.

- How to sustain the 'best' environmental quality during COVID19 pandemic?
- How to balance between the three pillar of sustainability?



Regenerative Sustainability

- Transition from a 'mechanistic' to an 'ecological' or living systems worldview.
- Develop comprehensive rules for an environmentally enhancing, **restorative relationship** between humanity and the ecosystems from which we draw **resources** for our sustenance.
- Re-conceptualize relationships among humans' technological, ecological, economic, social and political systems.



LESSON FROM COVID-19 : Its Proven!

Human's activity could improve environmental quality

LINEAR ECONOMY

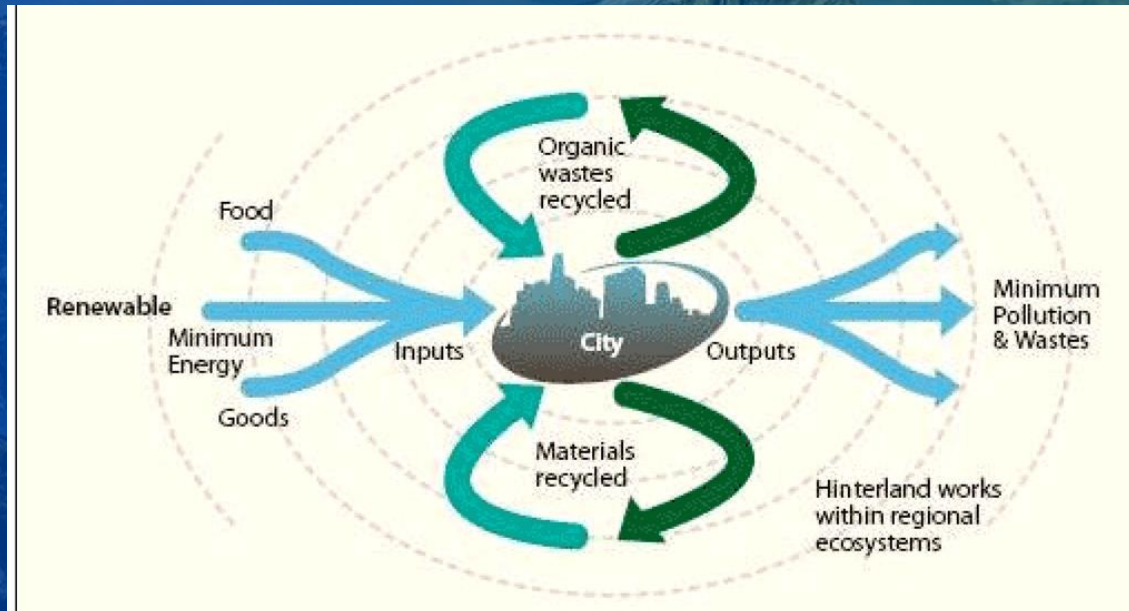
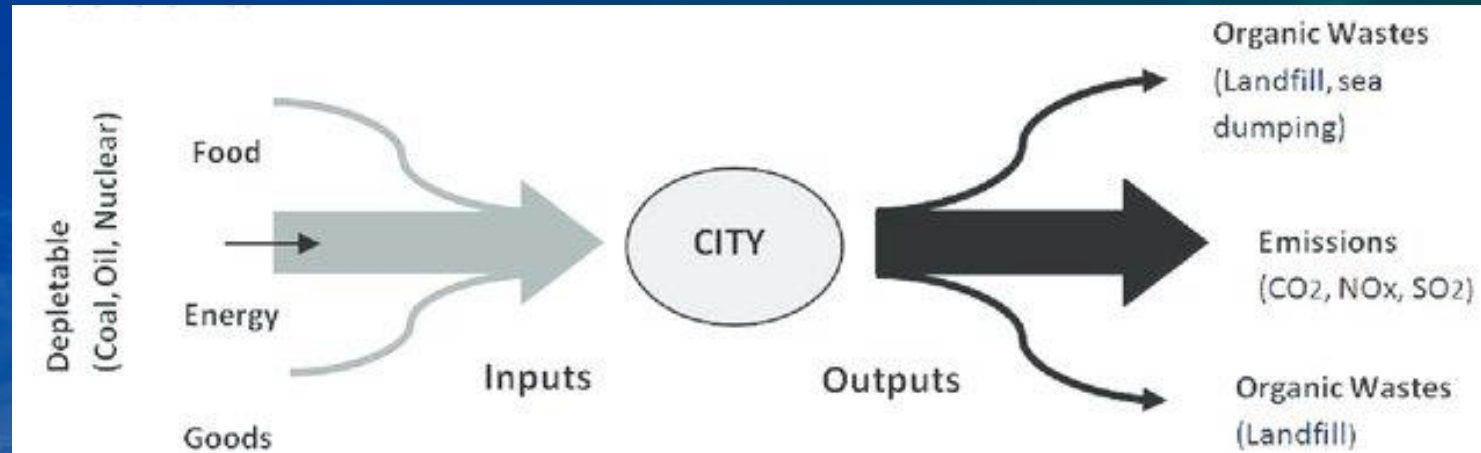


CIRCULAR ECONOMY



Economies that are more circular and resource-efficient will see long-term reduced greenhouse gas emissions along value chains; from logistics and manufacturing, to the mines where raw materials are sourced. Less deforestation and resources needed for raw material.

URBAN METABOLISM : From Linear to Circular



'Doughnut Economy'

- to mainstream economic thinking that formulates conditions for a sustainable economy.
- 'the doughnut' as an economic model that balances essential human needs and planetary boundaries.
- Instead of focusing on the growth of the economy, a model focus to ensure everyone on earth has access to their basic needs, such as adequate food and education, while not limiting opportunities for future generations by protecting our ecosystem.

04-30-20 | WORLD CHANGING IDEAS

Amsterdam is now using the 'doughnut' model of economics: What does that mean?

It's a simple way to illustrate an economic system where the city doesn't let anyone fall into poverty, while also living within a sustainable environmental footprint.



What does the strategy involve?

As the City of Amsterdam, we are focusing on 3 value chains:

Food and organic waste streams

Ambition 1: Short food chains provide a robust sustainable food system

Ambition 2: Healthy and sustainable food for the people of Amsterdam

Ambition 3: High-quality processing of organic waste streams

Consumer goods

Ambition 1: The City sets the right example by reducing its consumption

Ambition 2: Using what we have more sparingly

Ambition 3: Amsterdam makes the most of discarded products

Built environment

Ambition 1: The transition to circular development requires a joint effort

Ambition 2: The City sets the right example by formulating circular criteria

Ambition 3: A circular approach to the existing city

SUSTAINABLE
FOOD
AWARDS
2021





THANK YOU!

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