THE HOUSE OF REPRESENTATIVES
OF THE REPUBLIC OF INDONESIA

RAISING AWARENESS TOWARDS POLLUTION AND ITS IMPACT TO HUMAN HEALTH

His Excellency Ambassador Kurt Kunz from Switzerland
Honorable Harry Duynhoven, Secretary AirQualityAsia from New Zealand
Honorable Mathew J. Noal, Treasure, AQA from Ireland
Honorable Mercy Barends, MP, Indonesian Board Member AQA
Ms. ShaziaRafi, President and Convenor, Sustainable World Inc-AirQualityAsia
Mr. Barlev Nico Marhehe from UN Environment Programme
Ms. Budi Susilirini, Country Director, Pure Earth
Distinguished speakers, moderator and guests
A very good morning to all of you.

Thank you for the opportunity given to me to participate and share my though in this strategic webinar host by AirQualityAsia, World Bank and the Government of Switzerland.

In this beautiful morning from Jakarta, Indonesia, allow me to present my short paper with the title: RAISING AWARENESS TOWARDS POLLUTION AND ITS IMPACT TO HUMAN HEALTH.

A. QUALITY OF AIR, QUALITY OF LIFE

It has been proven that air quality affects human health. Living in a **pollution-free environment** signifies a better quality of life, but **do we really know how air pollution affects us** and which parts of our bodies are damaged by each kind of polluting particle?
Air pollution causes around seven million deaths a year worldwide. Growth and concentration of the population in cities, as well as the way in which we consume energy in urban areas through transport or heating and air conditioning systems, among others, result in the emission of huge quantities of gases that are harmful to our health.

How does air pollution affect our health?
Our physical and psychological wellbeing is affected differently by the kind of air pollution we are exposed to. There are many organs and bodily functions that can be harmed, the consequences including: Respiratory diseases, Cardiovascular damage, Fatigue, headaches and anxiety, Irritation of the eyes, nose and throat, Damage to reproductive organs, Harm to the liver, spleen and blood, Nervous system damage.
Urban populations are more exposed to suffer the effects of air pollution and, in this context, people who are already ill are particularly vulnerable, as are children and the elderly.

B. MAIN CAUSES OF AIR POLLUTION

Emissions from **different transport modes, the burning of fossil fuels, industrial production, forest fires**, aerosol use and radiation fare some of the main causes of air pollution.

Such sources of emissions **liberate gases and substances that are toxic for human beings, the most harmful of which are**: tropospheric ozone (O_3), sulphur dioxide (SO_2), nitrogen dioxide (NO_2), benzo(a)pyrene (BaP) and suspended particulate matter (PM)

C. HEALTH IMPACT OF POLLUTION

Findings from the Lancet Commission's main finding on health was that all forms of pollution combined were responsible in 2015 for an estimated 9 million premature deaths — 16% of all deaths worldwide — as well as for 268 million disability-adjusted life-ears (DALYs) (Forouzanfar, 2016a)

The number of deaths due to pollution was three times greater than the number due to AIDS, tuberculosis, and malaria combined and 15 times more than the number resulting from all wars and other forms of violence (Forouzanfar, 2016b).
In the most severely affected countries, PRD is responsible for more than one death in four. Air pollution was responsible for 6.4 million deaths – 2.8 million from household air pollution and 4.2 million from ambient air pollution. Water pollution caused 1.75 million deaths. Occupational pollutants caused 0.85 million deaths. Soil pollution, heavy metals and toxic chemicals caused 0.5 million deaths. In many parts of the world, the burden of disease and death due to pollution is increasing.

D. CORONAVIRUS DISEASE-19 or KNOWN AS COVID-19

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness.

D.1. GLOBAL COVID-19 CASES AND CASUALTIES

In the world, As of 23 September 2020, there are 31.863.209 confirmed cases and 976.784 people had died from this deadly virus and 23.460.950 people are able to recovered in entire world.

D.2. COVID-19 IN INDONESIA

As of 23 September 2020, Indonesia has 257.388 confirmed cases and 9.977 people had died from this deadly virus.

E. SCIENTISTS PROBE LINK BETWEEN COVID-19 AND DEADLY AIR POLLUTION.

Air pollution may be putting people further at risk during a global pandemic. The link is spurring calls to improve air quality as part of the post-Covid recovery.

In the early weeks of the global Covid-19 pandemic, people desperate for good news received a thin silver lining: the Himalayas were visible again, spanning the northern Indian horizon for what may have been the first time in 30 years. As cities around the world ground to a halt in March and April to slow the rapidly spreading virus, many urban residents got a breather from air pollution. Kenyans reported seeing the jagged peaks of Mount Kenya from behind Nairobi's skyscrapers and NASA satellite data showed a drop in pollution over the highways spanning the United States' northeast corridor.

"This is a stark confirmation of the contribution of our everyday activities to sources of emissions of the air pollutants that we breathe and the greenhouse gases that drive global warming," wrote the Scientific Advisory Panel of the Climate and Clean Air Coalition (CCAC)

These vulnerabilities already include around 7 million people who die prematurely every year from air pollution. As scientists around the world scramble to understand the coronavirus that is ravaging the globe, research shows that there may be one more way that air pollution is putting people at risk..

In one study that has yet to be peer reviewed, researchers at the Harvard University T.H. Chan School of Public Health **found that higher levels of fine particulate matter, or PM2.5, are associated with higher death rates from Covid-19.**

The poorest suffer
Scientists are racing to better understand what exactly this could mean for the pandemic.
There is a strong link between poor communities and high levels of air pollution. Given that poor people are less likely to have access to preventative medicine and more likely to have chronic diseases, they may be otherwise predisposed to developing severe Covid-19 infections

F. THE WAY FORWARD (TO RAISE AWARENESS)

F.1. The Changing of Our Way of Life

What can change
While we'll unfortunately witness the toll on our healthcare workers and face reduced trust, other changes could take place depending on countries, duration of lockdowns and even personal experiences. Here are three changes we could see emerge as a result:

1. Brand-new habits or changing clean and healthy life
Experts firmly believe that vaccines will be effective in arming the people to better fight the coronavirus that causes the COVID-19 disease, and thus help to contain the pandemic sooner, as they have done with many other diseases. However, vaccine it is not the final solution for addressing COVID-19 crises.

Changing to a more clean and healthy habits definitely will help us to keep healthy and safe. Awareness for personal and public hygiene measures saw a surge thanks to the contagion. Health authorities are advocating for regular handwashing with soap for at least 20 seconds. Social distancing measures are in place. People are getting used to wearing facemasks for every activities outside the household. The changing life style will also cut or stop the COVID-19 transmission.

2. Get your new travel document: the immunity passport
Such a passport will function in a similar way to how passports and visas work. If you are certified to be immune to the virus, you will get a pass to resume your daily routine, and if not, you will have to stay indoors. The U.K. government is already considering it and other countries might follow suit.
It might even become a requirement to travel to a country. As a matter of fact, it's already happening. In mid-April, Emirates Airline conducted rapid COVID-19 blood tests on passengers travelling to Tunisia from Dubai.

3. Surveillance as an ongoing public health measure
No one wants to be surveilled, but what if it's for greater good? That's what certain governments had to resort to in order to facilitate contact tracing. Countries from Germany through Israel to Singapore are using phone tracking data to locate and alert those who might be infected. South Korea went the extra mile by using CCTV footage and bank transactions in addition to phone use in its tracing process.

Wearables and COVID19

This could lead to certain governments, in particular totalitarian ones, to erase a layer of privacy from citizens' life. It brings a whole new dimension to privacy and ethics issues like we've seen in South Korea. But under the guise of another major public health crisis, such measures could become the norm.

F.2. HOW TO TACKLE AIR POLLUTION?

To alleviate the negative effects of atmospheric pollution on health, **the World Health Organization (WHO) and the Climate and Clean Air Coalition (CCAC) – made up of the United Nations Environment Programme (UNEP)** and 54 nations, among other agencies – launched the **BreatheLife initiative.**

This is a program that aims to "aims to mobilize cities and individuals to protect our health and our planet from the effects of air pollution" and which has **fixed the objective of cutting by half the number of deaths linked to air pollution** before 2030.

Actions will be local and **focused on improving transport (providing more public transport, better services, clean environment for user), waste management, indoor air quality, energy supply, industry, food and agriculture**.

F.3. HOW TO TACKLE COVID-19 AND AIR POLLUTION?

Public sentiment supports making improvements in air quality part of post-Covid recovery plans. A YouGov poll showed that at least two-thirds of citizens in Bulgaria, Great Britain, India, Nigeria and Poland support stricter laws and enforcement to tackle air pollution following the Covid-19 crisis. In Nigeria and India more than 90 percent of those surveyed wanted to see air quality improved in their area.

former UN Secretary General, Ban Ki-moon said governments will never have a better chance to address these issues. "Governments must seize these opportunities to put clean air and climate justice at the heart of recovery plans, in line with the 2015 Paris climate agreement," Ki-moon said. "This will not be easy, but it can and must be done. The pandemic has taken a heavy toll, but it could just be a taste of things to come. We owe it to ourselves and future generations to build back better."

Helena Molin Valdés, Head of the Climate and Clean Air Coalition Secretariat, said: "Any stimulus packages should be green and efforts to rebuild economies should include climate change and air pollution mitigation.

Let's have no doubt about it, this will come to an end. We will have a vaccine and new, approved treatments based on millions of patients' data. We will have new public health protocols too for how to prevent another calamity of this deadly virus. Certainly, our mankind will prevail. We will more grateful to the life we lived in the past, living now and in the future. **These are for sure.**

This is the end of my presentation. I am looking forward to inclusive questions, suggestions and inputs. So we will have a same framework, goals and programs to ensure we respond collaboratively again air pollution. Thank you.

Founder-AirQualityAsia-Indonesia
Former, Chairwoman-Indonesia, 2017

Hon. Dr. Dewi Aryani, M.Si, MP