Ethics Air Pollution

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Rationale: Air pollution is a severe ploblem, which become ethical challenges issue. Air pollution is the contamination of hazardous substances in the air by gasses and solids, that is hazard to people, other living, and the natural environment. The Pollutants have found into atmosphere, Which are considered 2 main type. Ambient air pollution or outdoor air pollution is a Key harmful pollutant that major sources such as industry, power generation, vehicles, and agriculture/waste incineration. Outdoor air pollution includes carbon monoxide (CO), sulfur dioxide, nitrogen oxides (NOx), ozone (O3), VOC, black carbon (BC) and particulate matter (PM2.5 and PM10). Household air pollution from the burning of solid fuels such as coal and wood for cooking are a significant source of exposure to particulate matter inside the home.

Every year worldwide Seven million people premature deaths cause by Air pollution, while 92% people of the world are estimated to inhaling air at high levels of pollutants (WHO, 2016). In 2018, WHO present data in less developed countries, 98% of children under 5 year old breathe toxic air, that is the main cause of child death for children under the age of 15 about 600,000 every year (WHO, 2018). In 2015, 9 million people premature deaths caused by air pollution, which is more than three times the number of deaths from AIDS, tuberculosis and malaria put together(Landriga,2017).Air pollution affects mortality, morbidity, and people's quality of life. Many studies present a relationship and cause-effect between exposure to air pollution such as carbon monoxide (CO), sulfur dioxide, nitrogen oxides (NOx), ozone (O3),VOC, black carbon (BC) and particulate matter (PM2.5 and PM10) and negative health impacts, They are generally more dangerous both short term effect and long term effect , It can penetrate tissues and organs, Poisoning and greater risk of systemic health impacts. These can affect to the quality of life and cause many diseases. Pollutant is breath by the throat, nose, lungs and absorbed in to skin. While pollutants enter into body, these can lead to infections; respiratory infection such as colds, Cough, Wheezing, pneumonia, Asthma, bronchitis, Stroke, Cardiovascular disease and Lung cancer .Premature deaths result in air pollution affect to welfare losses worldwide, In financial terms that show Estimate cost $5 trillion (The World Bank, 2016).Consequently, Many country in the world establish policies and investments supporting sustainable development, cleaner energy in industry and transport, energy- efficient housing, power generation and better municipal waste management, in order to effectively reduce key sources of ambient air pollution.

Although air pollution affects many countries, that is not evenly spread across humanity. low-income countries face the more severe impact than high-income countries, maybe due to poverty, insufficient technology for controlling pollution, poor legislation, and awareness of pollution. Urban air pollution levels generally decreased during this period in high-income countries in the Americas and Europe, but increased in the Eastern Mediterranean and South-East Asia regions (Friedrich M.J, 2016). This is the rich people who are using most of the energy that bring about to the emissions air pollution, while the poor will bear most of the costs for air pollution.

Many philosophers thought that air pollution was the concern of people. However, this has been challenged because Air pollution bring up issues of Environmental justice, as negative effect of air pollution not only the current generation but also future generation in global. The objective of this study to explore effect of air pollution, This is focus PM2.5 pollution from industry, Which drawing on environmental ethics by environment justice approach, we hypothesize that PM2.5 air pollution is negative affect to human, Which determine From concept international equity and intergeneration equity, by documentary study.

Objective: The objective of this study explores effect of air pollution, focusing on PM2.5 pollution from industry.

Methodology: This study to explore effect of air pollution, This is focus PM2.5 pollution from industry, Which drawing on environmental ethics by environment justice approach, we hypothesize that PM2.5 air pollution is negative affect to human, Which determine From concept international equity and intergeneration equity, by documentary study.

Results: 1. Air pollution and international equity : Exposures to fine particulate matter pollution or PM2.5 Vary Substantially across Countries and Regions. Data form GBD: Global burdens disease Project, Estimated by population exposures to PM2.5 in the world for the period 1990 to 2017. PM2.5 data show variation both within and between regions in global. In 2017, level of PM2.5 exposures were highest in South Asia, where Nepal, India , Bangladesh, and Pakistan respectively. In the region, Bhutan's exposure level (38 μg/m3) was the lowest but This was over WHO's standards limitation

Regionally Africa, where the second-highest PM2.5 exposures was western sub-Saharan Africa, including Niger, Cameroon, Nigeria, Chad and Mauritania had the highest exposures respectively. Moreover, Countries in North Africa and the Middle East similarly high levels, such as Qatar , Saudi Arabia, Egypt were over 85 μg/m3.Bahrain, Iraq, and Kuwait were over WHO's standards limitation.In East Asia, China was the highest PM2.5 exposures, while North Korea and Taiwan follow respectively.

However, The 10 countries with the lowest PM2.5 exposure were the Maldives, the United States, Norway, Iceland, Canada, Sweden, New Zealand, Estonia, Brunei, and Finland. Population-weighted averaged concentrations of PM2.5 as 8 μg/m3 or less in these countries (Health effect institute,2019).

Similarly trend in 2019 Southeast Asia, the Western Asia and South Asia remain the highest level of PM2.5. Overall Cities in these regions also rank highly at the top of world city ranking. The world's top most polluted cities during 2019 , are located in greater Asia, 21 cities in India, 27 cities in South Asia. Using population weighted average concentrations, Bangladesh as the most country, Where releases air pollution for PM2.5. While Pakistan, Mongolia, Afghanistan and India releases PM2.5 pollution follow respectively. In Europe, Bosnia and Herzegovina is the highest ranking country for PM2.5 pollution (Health effect institute,2019).

What the reason behind high level PM2.5 exposure for country in South Asia and Africa? Fine particulate matter air pollution comes from industrial emissions, power plants ,vehicle emissions, coal-burning ,many other human-made and natural sources. However, The sources of PM2.5 pollution difference between place and countries. In the Middle East and North Africa, Dust from the Sahara Desert lead to the high level PM2.5.On the other hand, several study found that major sources of PM2.5 in India be made up from household burning of solid fuels, dust from construction, vehicle and transportation emissions and other activities from industrial and power plant burning of coal. While, in China was quite different, The importance sources of PM2.5 from a separate study ,Which clarifying the major sources as industrial and power plant burning of coal following other fuels such as transportation, household burning of biomass, open burning of agricultural fields and household burning of coal for cooking and heating (Health effect institute,2019).

The result from air pollution data show inequity in each place or country. Currently, many developed country including by persons, corporation and country in the world are violating the principle of international equity, for instance many developed country offered low income countries in Africa and South Asia to promote industry. In order to low income countries are production base for goods and productivity for people in developed country. Off course that major source of PM2.5 pollution for low income country in South Asia and Africa, Where insufficient technology for controlling pollution, poor legislation, and awareness for air pollution effect. So these country try to put aggressive policy including technology for controlling, law and regulation and building capacity people to awareness in air pollution effect, A lot of cost for control air pollution and this country pay more for welfare and medical expenses for labor or people, While high income country are less affected. Air pollution ethic problem was raises, The principles of equal protection and the right to livable in good environment are required for all persons, Especially for country in which they live. No one wishing to see low income country persons were killed by air pollution from other country. The rights of all persons by united nation;

Essentially every person in every society and every generation is entitled to resources needed to sustain a minimum standard of living and well-being. Moreover, the persons in countries with more resources,or those that have used a greater share of the resource ,have obligation to grant equal access to remaining resource to other countries and to other generation. So,High income countries also have a responsibility through complicity because they get profit from unsafe condition of other countries and they get lower air pollution standard. However, someone argued that persons in low income countries have the right to resist imported industries, which lead to air pollution. The main reason why consent. Another dimension, Although industries lead to air pollution but their contribute to employment for people in low income country. The challenge way to balance for ethics and benefit from developed industries that major source of air pollution was considered. The sustainable business for green environment was alternative for achieve them.

2. Air pollution and Intergeneration equity: Intergeneration equity recognizes rights of each generation as well as future generation, Who have opportunities to live in good environment is equal to current generation.

Both current and future air pollution emission will not only affect the health of individual person and communities today but impact on qualities of life and well-being of future people or next generation. Air pollution trend show level of PM2.5 increase in developing country from 1990-2019.Offcourse that affect to many people, Starting from pregnant women show low birth weight in children. The previous study in India was shown quantitative effects estimates for PM2.5 exposures and birth weight in India ,The results Indicate to the need for considering maternal PM2.5 exposures alongside other risk factors for low birth weight in India because they found important evidence for this association between high exposure PM2.5 air pollution and low birth weight, Which similarly to results from several study (Thanasekaraan V.,2018). Effects from air pollution also raise in young, adult and aging people , which cause about seven million premature deaths every year, largely as a result of increased mortality from stroke, lung cancer, acute respiratory infections, chronic obstructive pulmonary disease and heart disease. Thus, toxics from air pollution not only short term effect but also long term effect, that subsequently submit to next generation. Moreover, air pollution level are not reduce in each year for each countries more likely lead to severe health in the future generation. However, there are argument between recognizing the rights of current generation and future generations. Protecting the rights of next generation to the goods of the environments is a necessary condition for protect the welfare of present generation. Especially in case of air pollution, the poor bear most of risks from air pollution. Like this protecting the rights of future generation is also an excellent way of protecting the rights of present generation too.

Suggestions: This article observe that obviously negative affect from air pollution, In difference way to considered by international equity and intergeneration equity. This data show low income countries have more impact than high income countries, by industrial source release PM2.5 pollution. However, industry have benefit for employment many people in low income countries. Thus, This is depend on they decided economic or concern ethics about air pollution is consist to concept for environmental justice, in order to reduce impact from the fair treatment and meaningful involvement of all people regardless of place, communities, countries or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. However, Both high and low income countries should share the benefits and burdens of air pollution equitably. No one community or country bear effect and responsibility for reduce air pollution lonely.

Expected Benefits: This article show the effects from air pollution impact to people in current generation and next generation, From data show trend of air pollution was not decrease, especially in low income countries. Intergeneration equity was incurs to considered, Next generations get impact from long term effect of air pollution. They do not directly get the benefits from the current consumption that causes of air pollution, but they will extend to air pollution effects. This is issue concern of air pollution ethics, that challenge to improve good environment and well being for justice

Keywords: Environment, Ethics, Air-pollution, Environmental justice, International equity, Intergeneration equity