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# ETHICAL OUTLOOK ON ENVIRONMENTAL POLLUTION

## 环境污染的伦理观察

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### Background

Air, water and soil pollution, along with waste disposal, is a growing issue of concern in modern societies. Increasingly, voices are emerging to call for incentives to curb the effects of mounting pollution. An estimate of 7.7 billion people was reported to populate the earth as of December 2019 (United Nations, 2019). In mid-July 2020 the world population clock set the world population at 7.8 billion. This population is tipped to increase to 9.7 billion by 2050, with a peak expected at 11 billion by 2100.

Current economic pointers indicate that the world cannot meet the needs of an ever-growing population, in terms of foodstuffs and manufactured goods, in the absence of incentives to harvest resources from the environment at a greater rate. The world should prepare for shortfalls. The scientific community is already warning about the rate of depletion of the world natural resources, and related pollution risks. Green areas are being changed into farming lands, quarries and mining sites; to accommodate the growing population needs (Volante et al., 2012).

The enigma is to how the world's commodities could be developed at a profitable pace to achieve a wealthier and healthier world; and avoid the effects of irreversible environmental tragedy.

#### Accountability and environmental pollution

While pollutants associated with fuels are traced back from transport emissions (Cole, Elliott & Shimamoto, 2005), most trace metallic elements found in the environment escape from factories, smelters and mineral refinery units, active mining sites and mines tailings (Aragon & Rud, 2012), and from waste transfer and waste processing sites (Tarr, 2003). Likewise, phosphate is traced back from the farming industry (Nziguheba & Smolders, 2008), and generally from the breakdown of soils and rocks.

In agriculture soil fertilisers, along with the use of pesticides and heavy trucks powered by diesel fuels, are central to the spread of pollutants in the environment (Savci, 2012, p.73). Leaked into the aquifers, nitrogenous fertilisers degrade underground stocks, while nitrogen oxides escape into atmosphere (Ibid). With time, phosphorous fertilisers contribute to the accumulation of fluoride in soils and pasture forages, increasing the potential for dental fluorosis in grazing animals (Loganathan et al., 2001).

In the environment no buffer barrier exists to prevent pollutants spreading, as wind stream can carry fine and extra-fine particulate matters miles away from the initial point of emission. Due to unregulated discharges, phosphorous fertilisers in water bodies are major contributors to water eutrophication, making the resource unsuitable for potable use; causing reduction in aquatic animal species, and the increase of pest species (Savci, 2012, p.73).

In the late 1960s, the concept of environmental accountability emerged from the United States, as pollution became an unavoidable hot topic. Environmental activists demanded that no segment of the world's

population should be forced to accept an unequal share of the environmental impacts of pollution resulting from actions of industrial and commercial corporations. They called for polluting corporations to take reasonable steps to redress the disproportionate risk burdens through targeted action and resources (Brulle & Pellow, 2006), according to the principle of "*He who creates the problem, pays the cost to fix it*".

The most rewarding action entails that the sanitary burden of communities in the least advantaged socio-economic groups be translated into financial assets, to make polluter corporations accountable to the public. At the global level, a regulatory framework to monitor pollution and maintain the sustainability of the economic activity exists. Unfortunately, the framework lacks support for effective enforcement modalities by countries, especially with regard to greenhouse gas emissions, and carbon pricing (Crowley, 2013). Notwithstanding the failure, noticeable progress exists with waste management, recycling and reuse.

Concerns exist over the fair distribution of sanitary impacts of pollution on the health of the global community, and the willingness of corporations to change their behaviours as they struggle for survival and profit, regardless of the harms inflicted on the public (Martin, 1998). An environmental critic had this to say: "Unfortunately, the further one moves towards putting a price on pollution, the more regressive the burden generally becomes" (Lazarus, 1992, p. 787).

#### Human health burden and environmental pollution

An abundant literature exists on the adverse effects of pollution on public health. Different from hard refuse and coarse visible substances, quantities of fine and extra fine particulate matters exist in profusion within the environment (Walters, 2014). Part of these

substances are trace metallic elements, dusts and hydrocarbons residues, with no beneficial effects in humans (Birmili et al. (2006). Of these trace elements, inorganic arsenic, cadmium compounds and hexavalent chromium are classified Type A human carcinogens, while cobalt metal with tungsten and inorganic lead classified Type B human carcinogens (World Health Organisation, 2020). This United Nations agency indicates that cadmium and cadmium compounds have damaging effects on the kidneys, the respiratory and skeletal systems. Other substances classified Type A human carcinogens include benzene, diesel engine exhaust, outdoor air pollution with particulate matter (PM10 and PM2.5), and phosphate residues. While lead toxicity affects the hematologic, renal and neurologic systems with elevated risks of brain damage and intelligence quotient lowering in children with long term exposure (Sanborn et al. 2002), acute arsenic toxicity creates potential harms to throat contraction and to swallowing problems, severe intestinal pain, vomiting, diarrhoea, cardiac arrhythmias, and change in skin pigmentation.

### Conclusion

There should be no grounds for complacency about air, water and soil pollution. The global community is exposed to the effects of hazardous pollution. None is spared by the scourge. It is unethical that the most disadvantaged socio-economic segment bears the social and sanitary burden of the world's financial elite's poor environmental accountability. The purity of air and water for a better life on earth must be maintained, and a stringent regulation must be in place to make polluter corporations accountable to the public. The New Economic Paradigm must include corrective measures to compensate any loss endured by the victims of heartless corporations, and the money be used to fund the healthcare system of communities in regions affected by the adverse effects of pollution.



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