

Ethical Outlook on Environmental Pollution
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Background

Survive the pollution scourge or perish is the dilemma. Air and water pollution, along with wastes disposal is a growing matter of concern in modern world. Quantities of fine and extra fine particulate matter are being discharged in the environment (Walters, 2014). These particulate matters are traced back from farming activities, goods and mineral processing, and mining sites. Part of them are toxic metallic trace elements, but also dusts and hydrocarbons residues. In diameter, their sizes vary from few millimeters to less than a micron (Birmili et al. 2006), making them barely invisible from sight. The size of many trace metallic elements like lead, hexavalent chromium (Cr-6), cadmium, mercury, copper, manganese, arsenic, nickel and cobalt is less than $0,08\mu$ in diameter (Birmili et al. 2006). Worldwide, economic indicators show that the world cannot meet the needs of an ever-growing population, in terms of foodstuffs and manufactured goods, in the absence of new incentives to harvest substantial resources from the environment. Since the answer entails the extraction of more resources from the environment at a greater rate, then the humanity must get prepared to face the cost of associated environmental shortfalls.

The environmental sustainability paradigm

Even though timid, efforts are underway to make corporates polluters take reasonable steps to safeguard the general public interest; and maintain the economic activity at profitable pace. In many cases, capitalist firms have focus on the benefits to achieve, and little attention to unwanted environmental burden to be incurred by the public, posing serious problem of accountability, social justice and ethics. One would ask how the world resources could be harvested at a profitable pace to achieve a wealthier and healthier world; and avoid the effects of damaging pollution? This is for the world the puzzle to untangle!

Accountability and environmental pollution

Late in the 1960s, the concept of environmental accountability emerged from the United States of America as pollution became an unavoidable hot topic. In the move, militants voiced-up and denounced that due to policy or economic disadvantage, no segment of the world demographic group should be forced to accept unequal share of the environment impacts of pollution from industrial and commercial corporates activities (Brulle and Pellow, 2006). In virtue to the narrative that “*He who creates the problem, pays the cost to fix it*”, environmental justice is

gaining support, and militants are calling for polluters to take reasonable steps to redress disproportionate risk burdens through targeted action and resources (Brulle and Pellow, 2006).

For the sake of social justice, it is more than a requirement that the community sanitary burden be translated into financial assets, to help assess the liability of polluting corporations toward the general public. Since, a regulatory framework to monitor the pollution and maintain the sustainability of the economic activity exist at global level. Unfortunately, the regulatory framework lacks support in the enforcement mechanisms by many countries, specifically when it comes to greenhouse gas emissions, and to carbon pricing (Crowley, 2013). Genuine fears exist over the *'fair share of sanitary impacts of pollution'* and the health of the global community, and the willingness of polluters to change their polluting behaviours. However, substantial progress exists on wastes management, and on wastes recycling and reuse (Zhang and Xu, 2016). An environmental critic has this to say:

“Unfortunately, the further one moves towards ‘putting a price on pollution, the more regressive the burden generally becomes” (Lazarus, 1992), and “... a reduction in pollution decreases the public health risks associated with exposure to pollution” (Lazarus, 1992)

Currently, there are calls upon policy makers at global level to develop incentives that ensure people in the least advantaged socio-economic group cease to solely bear the sanitary et socio-economic burden of polluting corporations. Good practice would consist that a levy on pollution be enforced on large corporations, and the money raised be used to fund the health care system of people in areas of prevalence of diseases linked to pollution.

Public health burden and environmental pollution

Evidence suggests that fine and extra fine particulate matters found in the environment have hazardous effects to public health. For instance, inorganic arsenic, cadmium compounds, hexavalent chromium (Cr-6), etc., are classified Type A human carcinogens while cobalt metal with tungsten, inorganic lead are classified Type B (World Health Organisation, 2020). Other substances classified Type A human carcinogens include benzene, diesel engine exhaust, outdoor air pollution with particulate matter (PM 10 and PM 2.5), and phosphate residues that escape from agriculture (World Health Organisation, 2020). While lead toxicity affects the hematologic, renal and neurologic systems with elevated risks of brain damage and IQ lowering in children with long term exposure (Sanborn et al. 2002), acute arsenic toxicity can cause the contraction of the throat and result in swallowing difficulty, severe intestinal pain, vomiting, diarrhea, cardiac arrhythmias and change in skin pigmentation (World Health Organization, 2017). Cadmium have damaging effects on the kidneys as well as the respiratory and skeletal systems. The metal is classified human carcinogen by the World Health Organisation (2019).

Conclusion

Like carbon pricing, a stringent regulation should be put in place to make polluting corporations be accountable to the public. This may require that a levy be enforced on polluter

corporations, and the money raised be used to subsidise the healthcare system of communities in regions and countries affected by adverse effects of pollution, for the sake of social justice.

Key words: *accountability, pollution, trace metallic elements, particulate matter, toxicity*

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