

# THE UNNOTICED BEAST, ANALYSIS ON THE AIR POLLUTION CAUSED BY THE PORT CITY PROJECT

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## Introduction

“Oh! Great King, the birds of the air and the beasts have an equal right to live and move about in any part of this land as thou. The land belongs to the peoples and all other beings and thou art only the guardian of it.”

-Arahath Mahinda to King  
Devanampiyatissa, 223BC  
(*The Mahavamsa or the  
Great Chronicle of Ceylon*)

Planet Earth, the only planet capable of harnessing life form in this solar system, consists of an ecosystem suitable for the survival of both humans and other species. Sri Lanka, being an island nation on this blue planet holds many treasures that were given to mankind by nature. The value of these natural resources that we depend on was recognized for its importance not only by Arahath Mahinda but many other previous kings, great warriors and people of ancient Sri Lanka. Yet, with the advancements of industrialization, technology and lifestyles, humans have forgotten the importance of the environment given to them by mother nature and continuous overexploitation have taken place around the world as well as in our nation, and over the past few years, overexploitation and pollution have resulted in the phenomenon called ‘Global Warming’ and with the scientific data as well as day-to-day weather changes, it is

clear that this process of global warming is here to stay. Though efforts are being taken to prevent this mass destruction, it is truly questionable whether we have put a full stop to our catastrophic actions.

In Sri Lanka, since recent times, we see the construction of ‘Port City’ or Colombo International Financial City. This construction involves the building of an artificial land by filling up a sea area with soil and sand brought from within the land. This costly process, which once seemed impossible, was successfully carried out by several nations of the world such as, United Arab Emirates (Palm Islands), Singapore and China. One of the main reasons as to why these artificial islands could be stated to be the lack of land area inherent to the country (e.g., Singapore), nevertheless, building of artificial lands (or islands) by nations such as China is mostly political. Though such construction was impossible for a nation such as Sri Lanka, with an aiding hand such as China it became possible. Thus, the project began in the year 2014 and has been continuing despite the many controversies that surround it. Prior to the initialization of this mass project, environmentalists warned authorities of the environmental damage that it may cause to the coastal lines, coastal areas as well as the world. Despite the continuous cries of patriotic and environment loving citizens along with the

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warnings of environmentalists, the project continues day and night. There are many adverse effects that will be caused by the port city project. The project which will reclaim 660 acres of sea (*Colombo International Financial City*n.d.) and 575 acres of land is assumed to cause complexities such as: usage of excessive power; usage of water for the consumption in the city; sewage disposal and solid waste disposal problems; sand requirements; erosion of beaches; threat of increased landslides; increase in pollution in coastal waters due to the change of sea currents; increase in the rate of sedimentation(Corea2016); the construction process causing vibrations and explosions threatening aquatic life forms; air pollution. Even though each of these issues requires individual attention, for the purpose of this study, only the area of air pollution will be discussed.

## **Air Pollution**

The air we breathe daily has a particular composition that allows it to support sustenance of human life. Air pollution occurs where toxic chemicals or compounds (man-made or those with biological origin) present within air are at levels which “lower the quality of air or cause detrimental changes to the quality of life” (*What Is Air Pollution* n.d.). The main cause of the depletion of the Ozone layer is the release of toxic gases to the atmosphere throughout a long period of time, and which, in turn, caused global warming. Moreover, toxicity of air causes lung complications and other respiratory illnesses to humans and all other living beings, which could become life threatening if ignored. The repercussions due to complications in the respiratory

system further became evident with the large number of deaths caused due to the current pandemic; Covid-19. Therefore, even if the pollution of air appears to be very insignificant as we do not immediately face the impact of it, complications that arise due to it occur long term. It is vital that air pollution is reduced and under control to prevent the process of global warming.

## **Legal Provisions governing Air Pollution in Sri Lanka**

The main legal provision that applies for any environmental matter is the *National Environmental Act, No 47 of 1980 (NEA 1980)*. However, the very first codification of the *NEA 1980* did not cover the ground of air pollution by its provisions. It was only through the *National Environmental (amendment) Act, No. 56 of 1988 (Amendment Act)* that this legal regime was established.

Section 23J of the Amendment Act states that, “**no person shall discharge or emit waste into the atmosphere** except in accordance with such standards or criteria as may be prescribed under this Act.” This provision is indicative that no person (whether a citizen or not, and can be defined to include not only natural persons, but also legal personnel) can emit waste into the atmosphere. This restriction on the pollution of the atmosphere is then further elaborated by Section 23K (1) as it states that:

“**no person shall pollute the atmosphere** or cause or permit the atmosphere to be polluted so that the **physical, chemical or biological condition of the atmosphere is so changed** as to **make or reasonably be expected**

**to make the atmosphere or any part thereof unclean, noxious, poisonous, impure, detrimental to the health, welfare, safety, or property or human beings, poisonous or harmful to animals, birds, wildlife, plant or all other forms of life** or detrimental to any beneficial use of the atmosphere.”

This provision expresses that a person cannot conduct any form of action that may lead to the physical, biological and chemical alteration of the atmospheric conditions. It is applaudable that this section is broad enough to not only consider the wellbeing of humans, but also animals, birds, wildlife, plants and any other form of life. This stipulates the factor that all life forms should be protected from the consequences of air pollution, therefore valuing all life forms as important living beings.

The section 23K, also touches on any other actions that may contravene a person under commission of air pollution by subsection (2): placing or in any such matter releasing any matter, whether liquid, solid, or gaseous, that is prohibited by or under the Act or any other relevant legislation to the atmosphere [section 23K (2) (a)]; causes or permits the discharge of odours which by virtue of their nature, concentration, volume, or extent are obnoxious or unduly offensive to the senses of human beings [section 23K (2) (b)]; burns wastes otherwise than at times of in the manner or place prescribed by the Act [section 23K (2) (c)]; uses an internal combustion engine or fuel burning equipment not equipped with any device required by the regulations to be fitted to such engine for the prevention or reduction of pollution [section 23K (2)

(d)]; uses or burns any fuel which is prohibited by regulations made under this Act [section 23K (2) (e)]. These actions, which have been prohibited by the Amendment Act in discussion, have covered most of the areas by which air pollution can be caused and are very broad as they can be interpreted to suit any question at hand. Also, it can be used to identify what waste and toxic materials can be if elaborated. This Amendment Act further provides for the conviction of any such act prohibited by section 23K (1) as such action amounts to an offence. Nevertheless, the Amendment Act does not set any conviction for the conduct of actions as set by the subsection 23K(2), thus only acting as a complementary section to Section 23K (1). The failure to keep fit and maintain prescribed control devices which may in turn pollute the atmosphere is also an offence under section 23L of the Amendment Act.

It is very important to note that air pollution is defined by the Amendment Act as **“undesirable change in the physical, chemical and biological characteristics of air** which will adversely affect plants, animals, human beings and inanimate objects” (*National Environmental (Amendment) Act, No. 56 of 1988, s12(a)*). This allows any seeker of legal assistance to clearly understand the definition of air pollution and does not need to look beyond our own legislation for the definition.

Apart from the above discussed Act, there have been Regulations gazetted by the government which regulates the air pollution conditions. These Regulations are:

- Gazette Extraordinary, No. 850/4 of December, 1994 [National

Environmental (Ambient Air Quality) Regulations, 1994].

- Regulations published under the Gazette Notification No. 1295/11 dated 30.06.2003.
- Order published under the Gazette Notification No. 1309/20 dated 10.10.2003.
- Order published under the Gazette Notification No. 1557/14 dated 09.07.2008.
- Regulations published under the Gazette Notification No. 1562/22 dated 15.08.2008.
- Amended Regulations published under the Gazette Notification No. 1887/20 dated 05.11.2014 with the corrected Gazette Notification No. 1895/43 dated 02.01.2015.

*Regulations published under the Gazette Notification No. 1295/11* was established to govern the arena of vehicular exhaust emission standards and it illustrates how this factor affects not only the importation of vehicles, but also what fuel standards are for each and every type of combustible fuel. This was later amended by the *Order published under the Gazette Notification No. 1557/14* in the year 2008.

*Order published under the Gazette Notification No. 1309/20*, elaborates the Section 23W of the Amendment Act which prohibits the use of any material in an industry that may cause harm to the environment. The Order involves a list of substances (such as Trichlorofluoromethane, Dichlorodifluoromethane, Bromotrifluoromethane and etc.) which have been identified Ozone depleting substances and thereby prohibits the use of these substances in any new

process, trade or industry, which would upon usage endanger the environment.

*National Environmental (Ambient Air Quality) Regulations of 1994* set forth a permissible ambient air quality standard which expressed the amount of pollutants that could be present in the air as a percentage under different categories of them. This Regulation was then amended by the *Order published under the Gazette Notification No. 1557/14*. Therefore, under this regulation, the permissible amounts of different pollutants are as follows:

Pollutant	Averaging Time	Maximum Permissible Level		+ Method of measurement
		µgm-3	ppm	
Particulate Matter - is less than 10 µm in size (PM 10)	Annual	50	-	Hi-volume sampling and Aerodynamic diameter Gravimetric or Beta Attenuation
	24 hr	100	-	
Particulate Matter - is less than 2.5 µm in size (PM 2.5)	Annual	25	-	Hi-volume sampling and Aerodynamic diameter Gravimetric or Beta Attenuation
	24 hr	50	-	
Nitrogen Dioxide (NO <sub>2</sub> )	24 hr	100	0.05	Colorimetric using saltzman Method or equivalent Gas phase chemiluminescence
	8 hr	150	0.08	
	1hr	250	0.13	
Sulphur Dioxide (SO <sub>2</sub> )	24 hr	80	0.03	Pararosaniline Method or equivalent Pulse Fluorescent
	8 hr	120	0.05	
	1hr	200	0.08	
Ozone (O <sub>3</sub> )	1 hr	200	0.10	Chemiluminescence Method or Equivalent Ultraviolet photometric
Carbon Monoxide (CO)	8 hr	10,000	09.00	Non-Dispersive Infrared Spectroscopy
	1hr	30,000	26.00	
	Any time	58,000	50.00	

These are legislations by which the platform of air pollution is regulated and controlled within Sri Lanka.

Apart from this, it is vital to remember that, at the initiation of any industrial action or construction which may threaten the environment even in the slightest form, to obtain an Environmental Assessment Report as required by the section 23BB of the *National Environmental (Amendment) Act, No. 56 of 1988* and several provisions of it was amended by the *National Environmental (Amendment) Act, No. 53 of 2000*. Section 23BB(1) requires all projects approving agencies to require from any Government Department, Corporation, Statutory Board, Local Authority, Company, Firm or individual who wishes to submit any prescribed project for its approval, to submit within a specified time an initial environmental examination report or an environmental impact assessment report. This is considered as a duty of such project approving agencies.

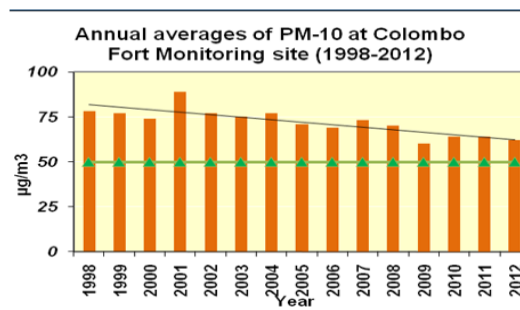
### **Port City and Air Pollution; What can the Existing Legislations do?**

Since Air Pollution involves the emission of toxic materials to the atmosphere that damages it and reduces the air quality, it is important to identify the air pollution that is caused or will be caused in due time by the port city.

Air pollution caused by the port city is anthropogenic (*What Is Air Pollution* n.d.) in nature, meaning that it is caused by the actions and influence of human beings. Anthropogenic air pollution includes

mining and smelting, foundry activities, industrial processes, transportation, construction and demolition, coal power plants, landfill disposal activities, smoking and etc. (*Air Pollution Causes* n.d.). Port city therefore falls under the anthropogenic category of construction and demolition. Construction activities pollute the air with the materials that they may use in the construction process and these may be Volatile Organic Compounds (VOC), other chemicals which may particulate matter and even gaseous forms that may be sent upon exhuming materials such as carbon monoxide, carbon dioxide or nitrogen oxides (*Construction Sites Pollution* n.d.). Further any air which is contaminated by pollutants tends to spread around faster by wind, thereby transferring these pollutant air inwards the country or any state (*Construction Sites Pollution* n.d.). Under this context, it is very clear that the construction that is happening at the port city results in accumulation of debris in the atmosphere, thereby reducing the air quality of Colombo.

**Figure 1: Annual averages of PM-10 at**



### **Colombo Fort ambient air quality monitoring Station (1998-2012)**

From the years 1998-2012, the level of PM10 annual average ambient level has

remained within the safer levels of 60 to 82  $\mu\text{g}/\text{m}^3$  in Colombo Fort monitoring site (*Annual averages of PM-10 at Colombo Fort ambient air quality monitoring Station (1998-2012)* 2012). When considering the World Health Organization's (WHO) as of 2005, the guidelines for air quality requires it to be:

- PM<sub>2.5</sub>: 10  $\mu\text{g}/\text{m}^3$  annual mean  
25  $\mu\text{g}/\text{m}^3$  24-hour mean
- PM<sub>10</sub>: 20  $\mu\text{g}/\text{m}^3$  annual mean  
50  $\mu\text{g}/\text{m}^3$  24-hour mean  
(World Health Organization 2005)

Therefore, it is evident that though the air quality standard of Colombo falls within the standards of Sri Lankan legislation, they do not fall under the WHO's expectations. These levels can now increase due to the excessive emission of constructive pollutants by the events of the port city.

Ecologist DrRanilSenanayake, at a seminar held by the 'Peoples Movement Against Port City' highlighted that the level of air pollution has increased within Colombo due to the construction process occurring at the port city. He elaborated that "currently, PM<sub>2.5</sub> fine particles in the City of Colombo are at levels three times more than what is safe for humans. Once the Port City is built, it would have a large number of high-rise buildings which would lead to the amount of PM 2.5 particles increasing to 25-30 times what is considered safe for humans" (Gunasekara2018). This expresses the severity of the situation we have at hand. It is important that this amount of air pollution must be reduced and maintained if we do not want the citizens as well as the animals of our country to face respiratory complications in the near future.

So how can we apply the existing laws to the current situation of air pollution resulting from the activities of the port city. As previously mentioned, prior to initiation of any industrialized or construction project, those who aim to carry out such conduct must obtain an evaluation report named the Environmental Impact Assessment (EIA). There also is a subcategory of EIA, which is the Initial Environmental Examination (IEE) which is issued for projects with less environmental complications. This assessment, which is only mandatory for large scale projects or to those which are conducted in environmental sensitive areas. EIA is implemented by the Project Approving Agencies (PAA) and is led by the Central Environmental Authority which also approves or rejects the project at discussion. The procedure of EIA initially involves screening if the necessity of such a report for the project at hand which is to be carried out within six days, and then the scope of the study will be determined by 14 days for IEE and 30 days for EIA. Then the preparation of the time report occurs after which the EIA/IEE is open to the public and expertise for their review within 30 days of a review period. Then the EIA/IEE could be either approved or rejected depending on their impacts on the environment. Finally, when such a project initiates, the authority monitors their activities to maintain the established trustworthiness to not pollute the environment (*Environmental Impact Assessment (EIA) Procedure in Sri Lankan.d.*).

The port city project too has EIA reports which are established adamantly, yet the contents in them are assumed to be manipulated by the majority as the CHEC Colombo Port City (Pvt) Ltd, seem to slip

through the accusation by providing the assurance that the EIA report levels them at a safer limit. One such example was from 2017 when they provided answers for an internet article through the statements such as “while ambient air quality measurements were done in the years 2014, 2015 and 2017 for six locations in the port city area, the concentrations of PM10 and PM2.5 always remained much less than the respective maximum permissible level” (Fernando 2017). Despite their positive remarks, the public are doubtful of the accuracy behind these data, and it has been noticed that the EIA itself suggests further analysis on the situation. There exists a suspicion amid the citizens that the report has only covered 300 acres of the entire project whereas the actual project expands over 550 acres (Wijenayake 2015). Even within the last year, an EIA has been reported based on the port city, yet its transparency is questionable as it too allows for the continuation of the port city construction.

Moving on from the EIA, pollution which is caused by the port city is undoubtedly a violation of the right to a healthy and clean environment of citizens of this country. This right which has not been duly recognized in the fundamental chapter of *The Constitution of the Democratic Socialist Republic of Sri Lanka, 1978*, yet applicable under the constitutional provision of Article 27 (14) which indicates that “the State shall protect, preserve, and improve the environment for the benefit of the community.” Also under Article 28(f), which promotes that it is the “duty of every person in Sri Lanka to protect its nature and conserve its riches”. Yet, it is a well-known factor that the breach of the fundamental duties and directive principles of State policy do not impose any legal right or

obligation *The Constitution of the Democratic Socialist Republic of Sri Lanka, 1978*, s29). Nevertheless, personnel can invoke public trust doctrine and public interest litigation along with violation of fundamental rights against the actions of the port city. Unfortunately, all the actions that have been legally taken under this arena have been proved to be unfruitful.

As per the Section 23J of the Amendment Act, the air pollution that is committed by the port city constructors is an offence and can be punishable by Section 23K. Nonetheless, it is doubtful whether any application of this law against this large organization will be successful.

It is evident that despite the legal system lacking a constitutional right to protect the environment, the National Environmental Act along with the judiciaries support, the existing legal provisions are enough to tackle the issue of air pollution by the port city for now. But upon its completion, the port city will be governed by a new legislation as our constitution has no power to control matters of artificial land that are built by the nation and therefore, by that time, it will be too late for any action to be taken against the pollution of air. Therefore, by then, unless the newly codified legal document allows for litigation against factors such as air pollution, the future seems very dark for Sri Lanka.

## **Conclusion & Recommendation**

The best recommendation for the prevention of further occurrence of this air pollution arising from the port city would be to halt its actions and completely shut down the process. But the authorities involved have been fighting very hard to

prevent the closure of the port city project from happening for a few years, and therefore this may be difficult to achieve. Another recommendation would be to reclaim the land constructed and transform it into a natural park. This is a feasible action and has been considered by the CHEC Port City Colombo (Pvt) Ltd as they have expressed their view to create a natural part within the city complex. But, it is unpredictable what the future will hold in store. A new legislation for the governance of environmental hazards that may be caused by artificial islands or reclaiming of sea into land can be proposed as a recommendation, whereby provisions which can cover the air pollution caused by these programs can be monitored and evaluated. Furthermore, in any event of failure of attempts to carry out the above actions, it will be best to institute a transparent organization which could be composed of both Sri Lankan and international experts in the field of Law, Environmental Protection and Engineering. Such an organization can then monitor each step and action of the port city and control the pollution caused by the project.

The environment we have today is a gift of mother nature. Considering the damage, we as humans have caused to it throughout time, it is truly questionable whether we deserve this heavenly Earth which is the only planet we know of and have the capacity to live in. Despite the many attempts by the minority of environmental enthusiasts and scholars, the majority of humankind has continued to pollute and exploit its resources in ways humanly unimaginable. The current trend of exploitation will result in the extinction of species, increase the severity of global warming, and increase the available water

levels, disappearance of small island countries due to the rise in water levels and many more natural disasters. Further, the lockdown of humans within their residence due to the global pandemic has proven that the environment is also capable of healing on its own, as long as human interventions are minute.

In order to protect the world from our own beastly selves, even a small effort would make the life of Earth last one second longer. Therefore, though projects such as the port city are economically beneficial, we must understand that they may cause even greater environmental harm which we would not be able to weigh with the units of currency. Thus, it is important to remember the principle of intergenerational equity where we protect the environment for the future generations as well. Moreover, authorities who govern nations such as ours must remember that:

**“The land belongs to the peoples and all other beings and thou art only the guardian of it.”**

-ArahathMahinda to King Devanampiyatissa, 223BC (*The Mahavamsa or the Great Chronicle of Ceylon*)

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