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SUSTAINABLE RESPONSE TO CLIMATE CHANGE:REVIEW ON THE LEGAL FRAMEWORK OF SRI LANKA WITH REFERENCE TO ITS ROLE AT INTERNATIONAL AND REGIONAL LEVELS

Abstract:

Climate change is a worldwide environmental issue that Sri Lanka is vulnerable to the increasing of its ill effects. Among the other impacts of climate change, Sri Lanka is highly susceptible to the following environmental problems: Increase the in the frequency and intensity of disasters such as droughts, floods and landslides, increase in temperature, rise the sea level, increase the unpredictability of rainfall patters and sudden whether changes. Since these vulnerabilities cut across many sectors in the economy and threaten to the speedy ongoing poverty reducing process at present while putting the country's developing process at risk, Sri Lanka needs to address climate change adaptation to ensure that its development process can continue without any disruption due to the ill effects of climate change. Also protecting our people and helping them cope with these changing environmental conditions must be one of our priorities. This should be done with international and regional cooperation.

Though Sri Lanka has enacted many environmental legislations which directly an indirectly address the issue of climate change and introduced an adaptation policy and national strategy in this regard, the vulnerability of Sri Lanka to the ill effects of climate change is increased considerably day by day. Therefore, it is important to look at the merits and demerits of the contemporary national regulatory framework including laws, policies and strategies in order to address the climate change issue successfully and also should see the capacity and status of Sri Lanka in negotiating at international level with regard to the issue.

This study analyses the reasons for climate change in Sri Lankan aspect, the main environmental problems in Sri Lanka faces as a result of climate change issue. It also discusses the international/regional (law) interventions in this regard including the country's engagement with climate change internationally and regionally with special reference to the critical analysis the role of Sri Lanka in international negotiations. Then it vigorously reviews the national framework and policy adopted in addressing the issue.

Relevant information from books, journal articles and websites are referred as secondary source and information and statistics gathered by relevant authorities are used as primary sources to complete this research. The international treaties, regional conventions particular reference to SAARC region, domestic statues and judicial dicta in courts are used to support the arguments opinions, and suggestions made by the author in this study.

Keywords:

Climate change, international instruments, regional standards, development, vulnerability, adaptation, Sri Lanka

JEL Classification: K32

1. Introduction

Climate change which is the eventual result of global warming is universally recognized as one of the fundamental challenges of human development and security in the 21st century. Global warming is a result of excessive emissions of greenhouse gases due to natural events and human activities especially huge combustion of fossil fuels. It is true that not only the present generation, but the future generations also will have to live in the threat of climate change. All nations are affected by the impacts of climate change regardless of the identity of culprits and degree of their culpability. However, developing countries are particularly more vulnerable to the impact of climate change than developed countries as the developing countries are lacking the necessary adaptive capacity. Sri Lanka is one of the States in the South Asian region, as a developing country in the above motioned region cannot escape from this situation. Therefore, Sri Lanka needs to find strategies for climate change adaptation to ensure the continuity of country's development process without any disruption occurred due to the effects of climate change. Since the developed countries are more responsible to climate change effects due to their excessive fossil fuel consumption, the question rises, how far it is fair by the developing countries like Sri Lanka to spend huge amount of money from its GDP and/or Government expenditures for conducting adaptation measures which is an additional burden to the economy of the country and security of the people in the country. Therefore, while taking the adaptation measures to face the climate change concerns, Sri Lanka needs to consider strategies to deal with the countries that are more responsible in this issue. In planning such strategies, the reasons for climate change, the level of the responsibility of Sri Lanka in this issue, the challenges that Sri Lanka faces due to climate change, adaptation mechanism including policies and legal measures that have been taken to address this issue should be taken in to consideration.

This study mainly focuses on the challenges and initiatives of climate change with special reference to Sri Lanka. Under the aspect of challenges brought by this phenomenon, the reasons for climate change and the main environmental problems Sri Lanka faces as a result of climate change are discussed. Under the aspect of initiatives

brought by this phenomenon, this study analyses the contemporary legal measures which are available in Sri Lanka including its merits and demerits in first. Then the standards of international and regional instruments with regard to climate change will be discussed with an evaluation of whether Sri Lanka's legal framework aligns with international and regional standards relating to climate change. It further, converses about the role of Sri Lanka in negotiating at an international level with regard to this issue.

2. Climate Change Challenges

Sri Lanka is an island nation in the region of South Asia. As 2008 report Greenpeace noted, countries in the South Asian region including Sri Lanka are victims of the effect of climate change. Perhaps, it may be the biggest humanitarian and economic challenge that the region will have to face in the coming decades. Therefore, it is utmost importance to Sri Lanka, as a speedy developing nation in the region to identify the reasons for climate change with its effects on Sri Lanka and initiate the adaptation measures.

2. i. Reasons for Climate Change

In general, climate change means a change in the statistical properties of the climate system when considered over longer period of time, regardless the cause.¹ According to more scientific definition given in the Oxford Dictionary, climate change means, unusual changes in the earth's weather, including changes in temperature, wind patterns and rainfall, especially the increase in the temperature of the earth's atmosphere (global warming)² that is caused by the increase of particular gases which are known as

¹"Glossary – Climate Change". *Education Center – Arctic Climatology and Meteorology*. NSIDC National Snow and Ice Data Center.; Glossary, in IPCC TAR WG1 2001.

² Further see *Rhode Island Cogeneration Associates v City of East province*, 728 F. Supp, 828 (D.R.I.1990) which discussed the meaning of term 'global warming'.

greenhouse gases.³ These unusual changes in the statistical distribution of weather patterns sometimes last for an extended period of time.⁴

As said earlier climate change is the ultimate result of global warming. Therefore, it is reasonable to state that the increase of the temperature of the globe is the main reason for climate change. Increasing the earth's temperature or in other words global warming is caused by factors⁵ such as biotic processes, variations in solar radiation received by earth, plate tectonics, volcanic eruptions and mainly human activities which release the greenhouse gases to the atmosphere. Many environmentalists claim that the uncontrollable consumption of fossil fuel in human activities and excessive emissions of greenhouse gases cause for global warming. It is true that west world, mainly the developed countries where population density is less than East (mainly the Asia), is more responsible for global warming/climate change, than east world, where our region (South Asian) is belonged to. However, we cannot (totally) deny the fact that the countries in our region also contribute to the increase of temperature of the globe (increase of the greenhouse gases) in their projects conduct in improving the quality of the life of the people.

Many scientists and environmentalists have found that human activities especially in the industrial sector are the main reason (than the natural reasons) which caused to increase the level of the greenhouse gases in the atmosphere. Factors such as dumping wastes by various industries, advanced transportation system, burning of fossil fuels, utilizing new weapons in war, deforestation, increased methane production from farm animals, decaying vegetation and haphazard manner of solid waste management

³Greenhouse gases are Water Vapor, Carbon Dioxide, Methane, Nitrous Oxide, Fluorinated gases (Hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride) and Ozone. These gases trap the heat energy in the atmosphere and cause to increase the heat on the earth.

⁴Saleemul Huq, Atiq Rahman, Mama Konate, Youba Sokona and Hannah Reid, April 2003, *Mainstreaming Adaptation to Climate Change in Least Developed Countries (LDCS)*, available at www.un.org/special-rep/ohrls/ldc/LDCsreport.pdf; See also <http://www.iisd.org/climate/south/>.

⁵Further see, NRC, 2010, *Advancing the Science of Climate Change* . National Research Council, The National Academies Press, Washington, DC, USA.

etc.. led to increased the level of greenhouse gases in the atmosphere which finally leads for climate change.⁶

As mentioned previously, there is a vast deferent between developed or industrialized countries and developing countries in the emissions of greenhouse gases and reasons for the emissions. From the time of industrial revolution to date, industrialized countries are responsible for approximately 80% of the carbon dioxide (one of the greenhouse gases) increase in the atmosphere where there only about 20% of the world's population lives. The rest of the world where 80% of world's population lives is liable only for 20% of carbon dioxide increase. During the period of last decade the annual global industrial carbon dioxide emission originated in the industrialized countries/developed countries was 60% and in developing countries it was 40%. Since 1950 to date the United States emitted 50.7 billion of carbon while China has emitted 15.7 billion tons of carbon which has the population of 4.6 times more than United States and India has emitted 4.2 billion tones of carbon which has the population of 3.5 times more than United States respectively. Although there is a reduction in emissions of greenhouse gases at present, the European Union⁷ also accountable for at least 10% of global emission and 24% of industrialized countries' emission of those greenhouse gases to the atmosphere from their industries where the there is only 3% world's population lives. United Kingdom emits 9.5 tones of carbon dioxide per person per year. 45% of the world's carbon dioxide emissions are produced by the G8 countries alone. According to the above statistics the United States is the world's largest emitter of the greenhouse gases who is responsible for 23% of global emission and 42% of industrialized country emissions consists with only 3% of world population.⁸

⁶See Miller, G. Tyler, 1990, *Living in the Environment: An Introduction to Environmental Science: Belmont, Wadsworth*; website, <http://environment.about.com/od/globalwarming/u/globalwarming.htm> and Miller, G. Charles, 1980, *Air in Danger: Ecological Perspectives of the atmosphere*, New York, Cambridge University Press. In a later sub topic, the paper discuss the factors cause to increase the level of green house gases in Sri Lankan context.

⁷ There are 15 member nations belong to this union.

⁸ See Stewart, T. Charles, 1979, *Air Pollution , Human Health and Public policy*, New York, Lexington Books; Breuer George, 1980, *Air in Danger: Ecological Perspectives of the atmosphere*, New York, Cambridge University Press; Miller, G. Tyler, 1990, *Living in the Environment: An Introduction to Environmental Science: Belmont, Wadsworth*; website [http://healthandngergy.com/air_pollution_causes .htm](http://healthandngergy.com/air_pollution_causes.htm)

It is true, in the economic development process, man needs to engage in activities mentioned earlier, to gain a comfortable life for him. The question here is whether anyone has a right to exploit and obliterate/destroy the environment for the comfort (better life/more comfortable life) of a few nations. According some international reports developed countries are the greater emitters⁹ of greenhouse gases. Some countries (developed countries) pollute the atmosphere emitting green house gases at a high level in order to establish their power, achieve a luxury life and associate life styles while the other countries (developing countries) emit greenhouse gases engaging in activities to meet the basic human needs in their countries and eradicate poverty. Therefore, is it is reasonable to consider, how far it is fair by the developing countries to suffer severely from the adverse effect of climate change, carry extra burden in implementing adaptation measures, allocate huge amount of capital (money and other resources) for introducing and implementing the adaptation measures or even share the burden equally of the negative effects of global warming (impact of climate change) occurred as a result of the activities that they are not responsible absolutely or responsible minimally.

Sri Lanka has been engaged in the speedy economic development process and improving the quality of the living condition of the people. Establishing more industries, enhancing investment opportunities, improving transportation systems, developing infrastructure facilities including road development, housing constructions and supplying drinking water and electricity facilities have been recognized as more important projects in this regard. As a result, the levels of fuel emission and deforestation are increased making Sri Lanka also a contributor to global warming and climate change though the amount of contribution is relatively scanty(very little) compared that of with many other countries.

As far as the deforestation is concerned, it was found that deforestation has increased in the last two decades in Sri Lanka due to the development projects such as making way for agriculture, sheltering and basic infrastructure (roads, railways) for the growing

⁹ The report issued by the World Resources Institute (WRI) in 2003.

population in the country.¹⁰ Between 1990 and 2000, Sri Lanka lost an average of 26,800 hectares of forest per year. This amounts to an average annual deforestation rate of 1.14%. Between the year 2000 and 2005, the rate of forest change increased by 25.5% per annum. In total, between the year 1990 and 2005 Sri Lanka lost 17.7% of forest cover around 417,000 hectares. Sri Lanka lost 9,000 hectares of its primary forest cover during that time. According to 5th Sri Lanka's National Report submitted to the Convention on Biological Diversity in 2014, overall, the total natural forest cover in the country has decreased from 31.2 % of the island in 1999 to 29.6% in 2010. The total forest loss is estimated as 48,900 hectares from 1999-2010 which is approximately a loss of 0.23% of forest area, or 4,445 hectares of forest loss, annually.¹¹

With regard to the fuel consumption in Sri Lanka it has increased in the last 10 years with the drastic increase of the vehicle ownership of the people in the country. The vehicle ownership ratio in Sri Lanka was 20:1 in 2000 and it has been increased to 15:1 in 2014. Per capita petrol consumption was 15.9 and diesel consumption was 54.7 liters in 2000 increased to approximately 20 and 70 liter in 2014 respectively. The discharge of greenhouse gases from the industries and electricity power plants have also been increased especially in the last 5 years as a result of the speedy and major economic development process in the country. With the above said statistics and information one may state that the largest anthropogenic source of greenhouse gases especially Carbon monoxide and Carbon dioxide in Sri Lanka is vehicle emissions.

2. ii. Impact of climate change

It is inevitable that the people will suffer from the ill consequences of climate change if uncontrollable emissions of greenhouse gases are continued. Sri Lanka being as a developing island nation, subject to tropical climate/weather patterns, highly vulnerable to the following climate change impacts: namely, extreme weather events, sea-level rise, water shortages, food insecurity, coastal erosion, increased salinity, increased incidence of diseases mainly vector-borne and loss of endemic species.

¹⁰ Jeeva Niriella, 2008, Achieving Development and Conserving the Environment: Sri Lanka's Challenge in the 21st century- Policy and legal Dimensions, in the Conference Book published at the Commonwealth Legal Education Association, , South Asia Regional Conference, held in Colombo, Sri Lanka, in 2008, pp. 115-126.

¹¹ The statistics are brought from the Forest Department in preparing the report.

As far as the extreme weather events are concerned high intensity rainfall followed by flash floods, landslides, and extended dry periods resulting in water shortage are now becoming common occurrences in Sri Lanka. For instance in the first half of the year 2014, many parts of the Island did not get the monsoon rain in time and lasted a severe drought in that period leading to food and water shortages and dwindling natural resources. Also Sri Lanka has affected from landslides killing nearly 400 people who lived in the hill area in October 2014 due to sudden and adverse weather change from drought to heavy rainfall. Again, in the December 2014, people in 22 districts were severely affected from sudden floods and landslides due to heavy rainfall. In the recent past, people in the country were repeatedly affected by the adverse changes in weather patterns in this nature. These volatile climate changes were adversely impact on the socio-economic activities in the country. The extreme weather events affect on human health increase in vector –borne diseases; dengue, malaria etc..

Rise the sea level is one of problems that Sri Lanka suffers today. Like many other islands, Sri Lanka is also threatened with partial or virtually total inundation by further rises in sea level in future. Coastal belt of Sri Lanka is particularly affected by the rise of the sea level of the Indian Ocean by an average of 12.7 mm a decade. As a result, Sri Lanka has to face the adverse consequences such as increased coastal erosion, changes in aquifer volume and water quality with increased salty intrusion and coral reef deterioration. From the interviews conducted with the authorities in Ministry of Environment and Fisheries Department Sri Lanka, it was revealed that 32% of the population in Sri Lanka live in the Coastal Zone and most of them are belonged to fishing community whose livelihoods are based on fisheries industry. Fisheries sector in Sri Lanka provides direct employment to 1.2 million people in the country. The authorities are of the view that sea erosion due to the rise of the sea level would affect the entire coastal belt of the country leading many problems of livelihoods of the fishing community. According a study conducted by the Ministry of Environment revealed that 67% of industrial facilities and 80% of tourist infrastructure located within coastal zone and those facilities also could get affected by sea erosion.

The wildlife species are drastically affected from climate change from last 5 decades. 400 Sri Lankan residential bird varieties including more than 26 endemic bird species and migrant birds are both directly and indirectly affected from droughts.¹² Climate change is a serious threat to the biodiversity of both flora and fauna especially for amphibians and insects as some studies found.

Impact of increased temperature and water shortages on agriculture especially paddy cultivation, vegetation and other commercial/export crops such as tea, rubber, spices adversely affect on the socio-economic activities and developments in the country. Therefore, Sri Lanka should take the necessary measures to cope with climate change consequences including introducing adaptation measures and relevant policies and legislations.

3. Steps Taken by the State of Sri Lanka

3. i. Regulatory framework, policies and adaptation strategies

Sri Lanka has realized that sustainable development is the best strategy which should be adopted in preparation of Sri Lanka for the inevitable impacts of climate change. Although the Supreme Law; the Constitution of Sri Lanka is silent on endorsing the right to clean environment as one of the key components of the sustainable development, the Directive Principles in the State Policy specifically refers to the protection of the environment.¹³ Further, the provincial councils which were established in the nine provinces in the country under the Thirteen Amendment to the Constitution were empowered to pass statutes in respect to the matters relating to the protection of the environment. Along with these specific provisions, there are many significant statutes have been enacted from time to time to protect the environment. Among these legislations, Coast Convention Act No 57 of 1981, Sustainable Energy Authority Act No

¹²Mendelsohn R, Munasinghe M, Niggol Seo S., 2005, Climate change and agriculture in Sri Lanka: a Ricardian valuation, *Journal of Environment and Development Economics*, Vol. 10, pp. 581-596. See further, Wanasundera, N. P., 2002, *Geography In Sri Lanka* New York: Marshall Cavendish, pp. 1-45.

¹³ Chapter VI of the Constitution – Article 27 (14) – “The State shall protect, preserve and improve the environment for the benefit of the community”.

35 of 2007, Environment Conservation Levy Act No 26 of 2008, and Marine Pollution Prevention Act No 35 of 2008 are directly relevant to the climate change issue. Further, the National Environmental Act No 47 of 1980 the most important as well as the first legislation enacted to deal with exclusively with the protection and the management of the environment. This statute focuses on several aspects of the protection of the environment such as environmental planning and development, preventive and corrective measures regarding environmental measures finally aiming at the sustainable development.

Coast Conservation Act

In 1981, Parliament enacted the Coast Conservation Act No 57 of 1981 having the objective of managing and protecting the coast within the coastal zone on the country. There were amendments to the Coast Conservation Act brought in 1988 and 2011 named the Coast Convention (Amendment Act) No 64 of 1988 and Coast Conservation (Amendment Act) No. 49 of 2011 respectively. The main objective of the particular amendments is to protect coastal areas from development activities which cause harm to the coastal area of the country. As a result of the aforementioned statutes, the Director of Coast Conservation should prepare a Coastal Zone Management Plan which deals with the coastal problems, erosion, loss and degradation of natural coastal habitats and loss and degradation of archeological, historical and cultural monuments and sites and recreational and scenic areas including the nature, scope, severity and causes associated with each of this problems. The plan should also describe policies for the management of each problem identified along with specific management techniques. However, the Act is silent with regard to the time frame of the plan and the interval between two such plans. None of the statute includes a single provision to provide directions in relation to follow up mechanism/s of the policies for the management and management techniques describe in the plan.

According to the Principle Act, permission should be obtained from the Coastal Resources Development and Planning Division of the Coast Conservation Department established under the Principle Act for all development activities that are likely to alter

the physical nature of the coast zone.¹⁴ Further, an Environmental Impact Assessment (EIA) is essentially required in the case of the development activities that are considered to have significant impacts on the coastal environment. However, fishing, cultivation of crops, planting of trees and other vegetation, and construction and maintenance of coastal protection works conducted by the Coast Conservation Department are excluded from this requirement. No permission is granted (or in other words the development activities /projects are totally prohibited), if the corals are being removed or sand is being mined within the area of costal zone defined under the Act, as a result of the activity or if the development project is done within 200m of identified archeological sites under the Act or if the particular development activity caused to degrade the quality of the costal zone significantly. The above said good purpose would be deteriorated, due to the exceptions acknowledged by the Act and the power given to the Coast Conservation Advisory Council in the process of granting permissions. They may recommend even the prohibited activities under certain circumstances. Accordingly a permission could be grated by the Director if the proposed activity serves compelling public purpose which provides benefits to the whole as opposed to the public as individuals or private interests and if the Council determines that there are compelling reasons such as public interest and benefit, for recommending such activity. From 1983 to 1994 permissions were granted for nearly 2600 activities including building houses, commercial establishments, sand mining and constructing hotels. It is interesting to note here, no data could be found from 1994 to date in relation to the permission granted for the activities under the Act. Further, Matthala Airport, Hambantotata Port and Proposed Colombo Port City are major economic development activities initiated by the Government of Sri Lanka which created some issues under the Act.

Sustainable Energy Authority Act

Repealing the Energy Conservation Fund Act, No. 2 of 1985, the Parliament passed the Sustainable Energy Authority Act No 35 of 2007 with the objective of developing and

¹⁴Section 5 as amended by 2011, a permit could be granted by the Divisional Secretaries under the terms of Public Administration Council No 21/92 dated 21st May 1992 or the prescribed officer with regard to the minor activities as removal of 2 cubes sand from specified areas of the Costal Zone, and building of small houses and commercial establishments with floor areas not exceeding 1,000 sq feet outside set-back areas defined in the Costal Zone Management Plan.

promoting indigenous renewable energy resources as an alternative to fossil fuel generated power (introducing and developing new level of sustainability in energy generation and usage, through increasing indigenous energy and improving energy efficiency within the country) and enhancing energy security. This statute further intends to declare energy development areas; develop energy efficiency measures and conservation programmes; promote energy security, reliability and cost effectiveness in energy delivery.

Sri Lanka Sustainable Energy Authority was established under this Act to identify, assess and develop renewable energy resources to declare energy development areas, to implement energy efficiency measure and conservation programmes and to promote energy security and reliability and cost-effectiveness of energy delivery to the country, by policy development and analysis and related information management.¹⁵ Among the powers of the Board, formulating notional policy energy and preparing maintaining and updating of an inventory of all renewable energy technologies and developing guidelines on renewable energy projects and disseminating them among prospective investors are the most important, in relation to the reduction of non- renewable energy consumption. The Sri Lanka Sustainable Energy Authority can issue permissions for on-grid and off-grid renewable energy projects for the generation and supply of power. A developer of on-grid or off-grid renewable energy projects is liable to pay annually royalties on renewable energy resources.

According the Act The Director-General should submit a Renewable Energy Resource Development Plan to the Board within the three year of his/her appointment based on the renewable energy resource map and inventory (Data and information relating to the renewable energy resource) prepared by him within the six months of his/her appointment with the support of relevant agencies on this subject.¹⁶ This plan should be reviewed by the board once in every three years. However, the political nature of this appointment may lead to create some issues in completing of such plan. The Act further makes provision for the following matters: acquisition and leasing of immovable property

¹⁵ Section 4

¹⁶ Sections 8 and 7

for projects; energy efficiency and conservation programmes; capital and funds of the Authority, and establishment of the Sri Lanka Sustainable Energy Fund etc..

As a result of the implementation of the Act, seven national wind power stations were established in high potential wind areas for wind power development in 2010 under the wind resource assessment project. Under this Act several small hydro power plants were established using river water through river basin approach. Further, the projects were introduced to supply the electricity energy power using biomass resources and solar energy as an alternative to fossil fuel. Sri Lanka was able to introduced concepts (solar energy park and appointing energy managers and auditors for management of the energy efficiency in commercial and industrial sectors) and programmes (awareness campaign to increase the knowledge and understand on energy efficiency) in controlling non renewable energy consumption. The high cost/expenditure that the State has to bear in investigating new concepts and initiating new programmes is an additional burden to Sri Lanka as a developing country.

Environment Conservation Levy Act

Environment Conservation Levy Act No 26 of 2008 has been enacted for the imposition of an Environment protection tax and matters relating thereto, on goods and services possible to have a harmful impact on the environment. The persons on whom the levy maybe imposed include consumers, importers, domestic manufacturers, service providers or any person specified by the Minister in the form of a Gazette notification published in time to time, who deal with such goods or provide such services. Imposing a heavy tariff the State attempts to minimize manufacturing, importing and using goods which have harmful impact on environment. One of the examples of the practical application of this statute can be seen in the levy imposed on mobile telecommunication devices. Environment Conservation tax collected under this statute is remitted to the Consolidated Fund. A penalty is imposed on the defaulter who is failed to pay the Environment Conservation tax which is primarily liable under this statute. However, a minimal monetary penalty mentioned in statute, against the defaulters does not help to achieve the objective of the Act.

The Marine Pollution Prevention Act

The Marine Pollution Prevention Act No 35 of 2008¹⁷ was enacted with the objective of prevention, control and reduction of pollution in the territorial waters of Sri Lanka or any other Maritime Zone, its fore-shore and the coastal zone of Sri Lanka. Under the Act, Marine Environment Protection Authority was established empowering the Authority to prevent control and manage the pollution of the country's maritime environment. Under this authority number of activities was projected to reduce, control and manage marine pollution due to land based, ship based and sea based activities. The Act imposed the criminal liability on a person who committed any prohibited act under the statute. The criminal liability is possibly imposed on the offender who has a lesser status of guilty mind other than criminal intention. Therefore, if any one commits any prohibited act with negligence or wrongful knowledge is punished under this statute. Fine is the recognized mode of punishment under this Act and the possible fine rang is from LKR.4,000,000.00 to LKR.15,000,000.00.

Environment Protection Authority Act

Environment Protection Authority Act No. 47 of 1980 was passed by the Parliament to establish the Central Environmental Authority (CEA)¹⁸ and the Environmental Council¹⁹ to make provisions with respect to the protection and management of the environment and for matters concerned regarding the environment. This principle Act was amended twice in 1988²⁰ and 2000²¹ respectively in order to confer wider regulatory powers to the CEA. Accordingly, the activities and industries which are listed in Gazette Notification No. 1533/16 (the latest Gazette dated 25.01.2008) should obtain the Environmental Protection License (EPL) from the CEA after completion of the Environmental Impact Assessment (EIA). Industries and activities are classified under 3 lists namely List 'A' 'B' and 'C' depending on their pollution potential. List 'A' includes significantly high polluting

¹⁷This Statute was repealed in 1981 and enacted the Marine Pollution Prevention Act No.59 of 1981.

¹⁸ Section 2 - Environment Protection Authority Act No. 47 of 1980.

¹⁹ Section 7 - Environment Protection Authority Act No. 47 of 1980.

²⁰ National Environment (Amendment) Act No. 56 of 1988.

²¹ National Environment (Amendment) Act No:53 of 2000.

industrial activities, list 'B' contains medium level polluting activities and list 'C' consist of low polluting industrial activities. EPLs for industrial activities listed in 'A' and 'B' have to be obtained from the relevant Provincial Officers or District Officers of the CEA. The powers related in issuing of EPLs have been delegated to the Local Government Authorities, namely Municipal Councils, Urban Councils and Pradeshiya Sabhas with regard the industrial activities come under the list 'C'. Therefore, EPL for the industrial activities in List 'C' has to be obtained from the respective Local Authorities. By issuing the licenses the CEA attempts to achieve the objectives such as prevent and/or minimize the release of discharges and emissions into the environment from industrial activities in compliance with national discharge and emission standards, develop an approach to pollution control that considers discharges from industrial processes to air, water, land in the context of the effect on the environment, contain the burden on industry, in particular by providing guidance on pollution control for polluting processes and to ensure that the system responds flexibly both to changing pollution abatement technology and to new knowledge such as cleaner production, waste minimization etc. It is significant to note here that obtaining EPL after completion of EIA has become a mandatory requirement for establishment of development projects in Sri Lanka under the National Environmental Act. It is also important to note here that the industrial activities which are not listed in the Act (or in other words not subjected to EIA) should obtain recommendation from the CEA for the proposed industrial activities. Therefore, it is correct to state that all industrial activities are now subjected to environmental assessments at least to some extend. By employing a process this nature Sri Lanka has shown her interest in taking relevant regulatory measures to control/minimize, releasing the greenhouse gases to the atmosphere which is caused to increase global warming resulting climate change.

Sri Lanka has realized that only controlling measures are not adequate to successfully address the climate change issue. Sri Lanka has understood the important of community adaptation to live in such situations. Therefore, our country has introduced the National Climate Change Adaptation Strategy for Sri Lanka (NCCAS) in 2009. Perhaps this may be the most significant effort which was taken by the Sri Lankan government in relation to mitigate and adapt climate change and related issues. This

strategic plan lays out a prioritized framework for action and investment for the period of 2011- 2016 aiming at systematic moving of Sri Lanka and its people towards a climate change resilient future.

The NCCAS supports Sri Lanka's national development strategy aiming at ensuring its success and sustainability. Accordingly, key findings of sector-based analysis were synthesized into an integrated framework, and structured into the following five Strategic Thrusts namely: Mainstream Climate Change Adaptation into National Planning and Development, Enable Climate Resilient and Healthy Human Settlements, Minimize Climate Change Impacts on Food Security, Improve Climate Resilience of Key Economic Drivers and Safeguard Natural Resources and Biodiversity from Climate Change Impacts.²² Under each of the Strategic Thrusts, key Thematic Areas for action, along with propriety Adaptation Measures have been identified.²³ However, the implementation of this plan has slow progress due to financial constrains.²⁴

In addition to the above said legislative enactments, institutions and initiatives, there are some other institutions were established under various legislative enactments to address the issue directly. For instance, Center for Climate Change Studies, 2001 (attached to the Department of Meteorology) and National Advisory conduct research on climate change and related impacts; The Committee on Climate Change, 2008 which was appointed by Ministry of Environment and Climate Change Secretariat to conduct research on climate change related impacts. The function of many tasks were interrupted due to heavy financial costs involve in those projects

3.ii Sri Lanka's obligation at international level

As far as the involvement of the international community in this matter is concerned, the first World Climate Conference (WCC) which took place in 1979 could be considered as

²²In that plan Adaptation refers to adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change. Also observation, assessment, planning, implementation, monitoring and evaluation of effect of this issue and new migratory strategies.

²³ NCCAS at pp. 25-28

²⁴When the NCCAS was introduced in 2009 it was estimated that 47.7 billion will be required (incremental additional financing) beyond current (at that time) and then on going expenditure relating environmental protection programmes only under the Environment Protection Authority Act.

the first step taken by the international community to address the climate change issue. In that conference it was discussed what the international community could do to limit the increase of the average global temperature which resulting climate change, and to cope with the inevitable impacts of climate change. Thereafter, some responses made by the international community to the issue of climate change until 1992. They were the Intergovernmental Panel on Climate Change (IPCC) which was set up in 1988, the release of the IPCC's first assessment report in 1990 and the First meeting of the Intergovernmental Negotiating Committee (INC) which took place in 1991. In the year 1992, the INC adopted UN Framework Convention on Climate Change (UNFCCC) at the Earth Summit in Rio de Janeiro as the most significant step taken by the international community to address the issue in an extensive manner.

The treaty itself did not set any binding limits on greenhouse gas emissions for countries in an individual manner. It also did not contain any enforcement mechanism. Therefore, it may say that the treaty is considered legally non-binding international document. UNFCCC aimed only at stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous human interference with the climate system.²⁵ However, the treaty provides a framework for negotiating specific international treaties which are called protocols that may set binding limits on greenhouse gases for individual countries as a group –Annex I countries /developed countries. Sri Lanka is a member State to the UNFCCC. Sri Lanka belonged to the category of non-Annex I countries. Therefore, it may say that Sri Lanka should not be much concerned about its responsibilities of reduction of green house gas emissions. On the other hand it may be argued that since Sri Lanka also suffers from the adverse effects of climate change, she should have the right to participate actively in the negotiation and decision making process. However, to comply with the common responsibility of the State party to the UNFCCC, Sri Lanka submitted its first national communication in 2000 and second communication in 2012.²⁶

²⁵ See the Article 2

²⁶ Infra p. 20.

Sri Lanka has ratified Kyoto Protocol adopted in 1997 which aims to reduce greenhouse gas emission 5% compared to 1990 levels over the five-year period from 2008 to 2012 which is known as the first commitment period. Since the Kyoto Protocol legally bound developed countries (Annex I countries) to emission reduction targets based on 'common but differentiated responsibility principle',²⁷ Sri Lanka did not have any emission reduction obligations under the Protocol during that period. The Doha Amendment to the Kyoto Protocol was adopted in 2012 and launched the second commitment period starting in January 2013 and will operate until the year 2020. According to the Doha amendment, parties to the protocol committed to reduce greenhouse gas emissions by at least 18 percent below 1990 levels in the eight-year period from 2013 to 2020, posing a question as to whether countries like Sri Lanka should also be bound by emission reduction obligations.

State parties to the Convention have agreed to further commitments including the Bali Action Plan (2007), the Copenhagen Accord (2009), the Cancun Agreements (2010), and the Durban Platform for Enhanced Action (2012) which imposed some kind of emission reduction obligation on developing countries too.

As far as the Bali Action Plan is concerned the developing State parties also should take appropriate mitigation action at national level (nationally appropriate mitigation actions –NAMAs -) in the context of sustainable development. Further, they should report to their mitigation targets to the UNFCCC secretariat. This situation pushes the country like Sri Lanka also to take actions for emission mitigations regardless the circumstances as to demonstrate their commitment. Due to the Bali Action Plan the developing countries also should have to adopt binding obligations during the 2nd commitment period, 2013 -2020.²⁸

Sri Lanka has not yet signed the Copenhagen Accord which targets that global warming should be limited to below 2.0 °C (3.6 °F) relative to the pre-industrial level. However, as part of the Cancun agreements, both developed and developing countries should

²⁷ Further see, 'What is the UNFCCC and the COP', *Climate Leaders*, Lead India, 2009.

²⁸ Supra p. 19.

submit their mitigation plans to the UNFCCC. Those plans should be compiled with those made as part of the Bali Action. Therefore, it is clear that the binding obligation of the developing countries is high due to the adoption of the Cancun agreements.

According to the Durban Platform for Enhanced Action adopted in 2011 at the 17th COP, parties agreed to develop a protocol which applicable to all Parties. The new protocol is due to be adopted at the 21st COP which is scheduled to be held in 2015, and implemented in 2020. Therefore, one may state that the original objective of the UNFCCC has been gradually changed as to increase the binding obligation of the developing countries. This situation creates a question of the applicability of 'common but differentiated responsibility principle' in just and fair manner especially with regard to the developing countries.

As said earlier COP is the supreme decision-making body of the Convention (UNFCCC). All States that are Parties (including Sri Lanka) to the Convention represent at the COP, at where they review the implementation of the Convention and any other legal instruments that the COP can adopt. Further, they take appropriate and required decisions which are necessary to assess the progress in dealing with the effective implementation of the Convention, including institutional and administrative arrangements. So far there were 20 meeting were held and last COP meeting /the 20th COP took place in Peru in 2014. As said previously, Sri Lanka represents Non Annex I countries/developing countries and a region (SAARC) which represents a few countries. Since the negotiations for the decision making are governed by the agreement of the countries due to the above reasons the voice of the countries like Sri Lanka often get second position compared with that of developing countries who are responsible for huge emissions of green house gases. Further, some huge emitters of green house gases have either never been ratified the legally bound protocols or withdrew from the main Convention, it is also difficult to countries like Sri Lanka to involve in productive negotiations where the real responsible parties are not legally bound to participate.

However, as said earlier Sri Lanka is vulnerable to the increase of frequent hydro-meteorological disasters, extreme climatic variations and related increase in incidences

of human and animal diseases and pandemics as a result of adverse effect of climate change. Moreover, our food security precariously rests on agrarian economics and rain water farming, the climate change effects are seriously hit to the economic stability of the country. The limited capacity of coping with the situation, make Sri Lanka more susceptible for these adverse effects. Since this situation is common to all the countries in the SAARC region and our region represents the countries which have the one fifth of the global population with a sizeable number of people below the poverty line, with the other SAARC countries Sri Lanka could be able to actively and reasonably take part in ongoing negotiations for enhanced implementation of the UNFCCC.

Several strategies have been adopted and several studies have been commissioned on the issue of climate change at regional level too. South Asia Association for Regional Cooperation (SAARC) at their meetings the SAARC Head of the States and Environment Ministers adopted action plans²⁹, established and constituted an important framework of ASSARC institutions which address diverse aspects of environment, climate change and natural disasters.

These are: SAARC Metrological Research Centre established in 1995,³⁰ SAARC Coastal Zone Management Centre established in 2004,³¹ SAARC Disaster Management Centre established in 2006,³² SAARC Forestry Centre established in 2007,³³ Dhaka Declaration and SAARC Action Plan on Climate Change in 2008, as the most recent effort has been taken by the SAARC to address the issues relating to climate change identified seven thematic areas of cooperation including adaptation; mitigation; technology transfer; finance and investment; education and awareness; management of impacts and risks; and capacity building for international negotiations.

²⁹ The "SAARC Environment Action Plan" Third Meeting of the SAARC Environment Ministers (Male, 15-16 October 1997) ; Disaster Management Action Plan for South Asia (Male Declaration)-adopted in 2006; Dhaka Declaration and SAARC Action Plan on Climate Change – adopted in 2008

³⁰ This centre was established to carry out research on weather prediction and better understanding of monsoon.

³¹This centre was established to promote cooperation in planning, management and sustainable development of coastal zones, including research, training and awareness.

³² This centre was established to provide policy advice and facilitate capacity building including strategic learning, research, training, system development, expertise promotion and exchange of information for effective disaster risk reduction and management – the mandate of the Centre was expanded to include the development of a Natural Disaster Rapid Response Mechanism

³³ This institution was for the protection, conservation and prudent use of forest resources by adopting sustainable forest management practices through research, education and coordination among Member States.

However, all these action plans and the functions of the centers could not completely achieve their objectives due to financial constraints.

Conclusion

According to the aforementioned discussion it is clear that Sri Lanka is more vulnerable to the adverse effects of climate change. Sri Lanka as a member State to the UNFCCC has taken several steps to address the issue. However, developing countries like Sri Lanka cannot reach the destination without the support of developed countries who are more responsible to the issue. Therefore, Sri Lanka should raise her voice in the ongoing negotiations for enhanced implementation of the UNFCCC and strengthening its Kyoto Protocol. Member States of SAARC also may reiterate and highlight the importance of the principles of equity, and common but differentiated responsibilities and respective capabilities in the global negotiations on climate change. It is equally important to ensure that such negotiations are conducted in an open, transparent and comprehensive manner, allowing the outcome of such negotiations may support the nations particularly those who are most affected by climate change. Therefore, Sri Lanka with other SAARC, members may request in the COP negotiations to apply the principles of equity and common but differentiated responsibilities in a new manner enabling the countries like Sri Lanka to successfully face the adverse effects of climate change.

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