

**THE CLIMATE STRUGGLE: A REVIEW OF LAW AND POLICY EFFORTS TO ADDRESS CLIMATE CHANGE IN SRI LANKA, AND ITS FUTURE PROSPECTS**

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Climate change has become an existential threat that has entangled all forms of life on earth in an inescapable danger. Whilst carbon dioxide and other key greenhouse gases have been found to be the primary cause of global temperature rise<sup>1</sup>, there is an abundance of scientific evidence identifying human activities as a significant contributor to global warming.

Although climate change knows no territorial boundaries, South Asia has particularly been one of the most vulnerable regions to climate catastrophes. The geographical placement of the region, presence of large populations living in poverty, and the lack of climate resilient infrastructure, are among the principal

causes behind this vulnerability.<sup>2</sup> Sri Lanka, being a South Asian country has been no exception.

Extreme heat, floods and droughts caused by extreme precipitation and sea level rise, are some of the most common disasters attributed to climate change in Sri Lanka. Statistical data predict that approximately 19 million people in Sri Lanka today live in locations named as “climate change hot spots”, places that would become severely affected due to numerous natural disasters by 2050.<sup>3</sup> Floods and droughts have altogether impacted closer to 14 million people in Sri Lanka between 2010 and 2018.<sup>4</sup>

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<sup>1</sup> Challenge, Global Climate. NASA. n.d. English. 25 09 2019.

<sup>2</sup> Rachel Fleishman, *Takeaways from Sri Lanka Event: Climate Security in South Asia*, THE CENTER FOR CLIMATE AND SECURITY (Sept 20, 2019, 10.04 AM), <https://climateandsecurity.org/2017/12/06/takeaways-from-sri-lanka-event-climate-security-in-south-asia/>

<sup>3</sup> Muthukumara. S. Mani, *Building Sri Lanka's Resilience to Climate Change*, THE WORLD BANK, (Sept 15, 2019, 10.10 AM) <https://www.worldbank.org/en/news/feature/2018/09/21/building-sri-lankas-resilience-to-climate-change>

<sup>4</sup> The World Bank. Sri Lanka strengthens its Climate Resilience. 25 June 2019. English. 02 10 2019.

Yet, Sri Lanka lacks a comprehensive set of binding legislation that directly address climate change.

Even with the policies and laws currently in force, the severity of the damages caused due to climate disasters begs the question whether Sri Lanka has been effective in implementing the protections that it pledged under the international conventions. Accordingly, this article reviews the legislative and policy efforts made by Sri Lanka to address climate change, their effectiveness, the challenges and future prospects.

### **Salient laws and policies**

Sri Lanka's accession to United Nations Framework Convention on Climate Change ("UNFCCC") in early 1990s is the inception of addressing climate change as a nation.<sup>5</sup> Sri Lanka became a signatory to the UNFCCC in 1992 which was ratified in 1993.<sup>6</sup> Post UNFCCC, Sri Lanka acceded to several

international conventions. Accordingly, in 2002 Sri Lanka ratified the Kyoto Protocol and in 2016 the Paris Agreement was signed.

Under the Paris Agreement, Sri Lanka agreed to adopt comprehensive mitigation and adaptation strategies to reduce the impacts of climate change through its Nationally Determined Contributions ("NDCs"). Mitigation plans focused on reducing carbon emissions in five key sectors; energy (electricity generation), industrial sector, transportation, waste and forestry in Sri Lanka. Adaptation plans include, establishing climate resilient and healthy human settlements, increasing food security to minimize the impact from climate impacts, and safeguarding natural resources and biodiversity to ensure minimum impact from climate disasters.<sup>7</sup>

In addition to signing international agreements, as a member state to the UNFCCC, Sri Lanka has developed a number of policies including, the "*National Adaptation Plan*", "*National Climate Change*

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<https://www.worldbank.org/en/news/press-release/2019/06/25/sri-lanka-strengthens-its-climate-resilience>

<sup>5</sup> United Nations Framework Convention on Climate Change 1992

<sup>6</sup> [https://unfccc.int/tools\\_xml/country\\_LK.html](https://unfccc.int/tools_xml/country_LK.html)

<sup>7</sup> Intended Nationally Determined Contributions, MINISTRY OF MAHAWELI DEVELOPMENT AND ENVIRONMENT, SRI LANKA- APRIL 2016, (Sept 16, 2019, 10.35PM, [http://www.climatechange.lk/Publications\\_2016/Readiness%20Plan%20For%20INDCS%20In%20Sri%20Lanka.pdf](http://www.climatechange.lk/Publications_2016/Readiness%20Plan%20For%20INDCS%20In%20Sri%20Lanka.pdf))

*Policy of Sri Lanka”, “National Climate Change Adaptation Strategy for Sri Lanka”.*

In terms of legislation, Sri Lanka has also adopted a number of pieces of legislation that regulates different sectors of climate change, such as environment and forest conservation, sustainable development, and energy generation. Some of the main enactments that directly links with climate change are briefly discussed below.

National Environmental Act, No. 47 of 1980 (“NEA”) is the principal enactment that primarily addresses environmental conservation. The Ambient Air Quality standards and other regulations on air emission gazetted under the NEA adds a significant impact on maintaining the air quality. These regulations have set permissible levels of carbon emission from stationary<sup>8</sup> sources (such as thermal power plants, standby generators and boilers) as well as non-stationary sources (such as vehicles).<sup>9</sup>

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<sup>8</sup> Gazette No. 2126/36 on 2019.06.05, National Environmental (Stationary Sources Emission Control) Regulations, No. 01 of 2019

<sup>9</sup> Gazette No. 1562/22 on 2008.08.15, amendment of the National Environmental (Ambient Air Quality) Regulations, 1994, No. 850/4 of December 1994 (as

Breaking the long hiatus in environmental legislation, the Sustainable Development Act, No. 19 of 2017 was enacted. This provides the development and implementation of a National Policy and Strategy on Sustainable Development.<sup>10</sup> Ensuring an ecologically efficient use of natural, social and economic resources, integration and maintaining the equipoise of environmental, economic and social factors in making all government decisions are its’ salient objectives.<sup>11</sup>

While the aforementioned laws and policies, although not an exhaustive list, manages to succinctly convey the lack of binding legislation in Sri Lanka in terms of addressing climate change.

### **The depth of Sri Lanka’s vulnerability to climate change**

The above laws and policies are being implemented in a rapidly changing environment on the ground. Sri Lanka’s vulnerability to climate change brings

amended); Gazette No. 1295/11, on 30.06.2003, National Environmental (Air, Fuel, and vehicle importation standards) Regulation No. 1 of 2003

<sup>10</sup> Sri Lanka Sustainable Development 1 Act, No. 19 of 2017

<sup>11</sup> Ibid, Section 2 (b), (c)

various economic, agricultural and social impacts which are briefly enumerated below.

Agriculture and economy: the impact on agricultural crops due to the changes in the weather patterns is grave and almost inescapable. For instance, rising temperatures, droughts and unpredictable levels of precipitation inhibit the productivity of the crops. This leads to reduction in farmer's revenue and in most cases loss of livelihood. The overall impact on the economy goes further when reduced crop production compels an increase in food imports. On the other hand, reduced crop production also shrinks the export industry as agricultural crops production plunge, which in turn deteriorates the trade balance.

Further, reduced rainfall compels farmers to enhance their dependence on energy intensive methods to pump underground water and to distribute water manually, with the rising evaporation of water ways.<sup>12</sup> Due to Sri Lanka's aquifers being small, they are particularly vulnerable to the rising

pollution of water ways. Further, farmers in the higher reaches usually enjoy the larger portion of the aquifers.<sup>13</sup> These issues require the farmers and the government to unite in search for different methods of harvesting, develop less water consuming crops, and technologically advanced fertilizer, all of which are usually expensive.

Energy crisis: Low precipitation and high temperatures demand more energy. At the same time, reduced water levels decrease hydropower generation. Increased power demand during water crisis and high temperatures add more pressure on the existing power plants; independent hydro power producers then step in with higher prices.

Social and security impacts: Flash floods displace thousands of people and deprive them of basic living conditions. In 2016 and 2017 Sri Lanka demonstrated how climate change can wreak havoc on fragile nations. The death count due to floods reached

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<sup>12</sup> Werrell, C., F, *Implications of Climate Change on Energy and Security in the MENA Region*, MIDDLE EAST INSTITUTE (Apr 03,2019, 10.04AM) <http://www.mei.edu/content/implications-climate-change-energy-and-security-mena-region>

<sup>13</sup> *Planning Groundwater Use for Sustainable Rural Development*, INTERNATIONAL WATER MANAGEMENT INSTITUTE, (Apr 24, 2019, 8.15 PM) [http://www.iwmi.cgiar.org/Publications/Water\\_Policy\\_Briefs/PDF/wpb14.pdf](http://www.iwmi.cgiar.org/Publications/Water_Policy_Briefs/PDF/wpb14.pdf)

almost 213, displacing more than 3000 families.<sup>14</sup>

Migration: Coastal erosion is a significant factor that induces migration. Coastal areas are one of Sri Lanka's densely populated areas, and its erosion forces coastal communities to move inwards giving rise to property disputes and pressure on limited resources. Experts state that low lying wetlands of the Western and Southern provinces of the island are the most prone to erosion, if the sea level continues to rise.<sup>15</sup> Moreover, the migration of the labour force into urban areas is another consequence of unpredictable weather. The reduction of regular income and profits from agricultural sector induce young labour force to move from villages to urban industrial zones. This often leads to overcrowded cities.

Health issues: Warmer climates often increase the propagation of air-borne infectious diseases. Lack of access to clean water also leads to a number of health issues including diarrhea and sanitation issues.

## **Are the existing laws and policies adequate?**

In view of the above, it is evident that Sri Lanka is in an extremely vulnerable state in the face of environmental changes. Unfortunately, the existing laws and policies have been proven ineffective in the pursuit addressing climate change.<sup>16</sup> The salient issue in this regard is the lack of binding legislation that directly address the issue of climate change. This has created a serious ignorance in the mind-sets of lawmakers about the gravity of climate change. Consequently, such unfamiliarity or absence of knowledge has created a compelling need to invoke climate change in forming national legislation.

In this regard, Sri Lanka can certainly draw examples from other countries such as the United States and the European Union (EU). Although the United States, does not have central legislation to address climate change, various ancillary legislation impose regulatory requirements. For instance, in 1992, to revive the fledging renewable

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<sup>14</sup> Sri Lanka: Floods and Landslides - May 2017, RELIEFWEB, (Feb 10, 2019, 11.05 PM) <https://reliefweb.int/disaster/fl-2017-000057-lka>

<sup>15</sup> Amantha Perera, *Climate change heightens coastal erosion risk in Sri Lanka*, THOMAS REUTERS (Apr 15,

2019) (<http://news.trust.org//item/?map=change-climate-heightens-coastal-erosion-risk-in-sri-lanka>

<sup>16</sup> Ibid.

energy industry in the country, a tax credit system i.e. a tax incentive for investors, was introduced in the Energy Policy Act 1992<sup>17</sup>. This has been critical in their rapid expansion of the wind and solar energy industry.<sup>18</sup> In 2007, U.S. Environmental Protection Agency was empowered to establish a rule requiring public reporting of greenhouse gas emissions from large sources.<sup>19</sup>

Within the EU, there are a number of legislative changes issued to keep greenhouse gas emissions in check. Greenhouse Gas Monitoring and Reporting mechanism enables to monitor and report greenhouse gas emissions and other information at the national and Union level relevant to climate change.<sup>20</sup> Further, Directive 2003/87/EC<sup>21</sup> established a scheme for greenhouse gas emission allowance trading, and imposed emission limits by issuing emission permits.

Whilst it is true that the standards above mentioned are a much higher threshold for Sri Lanka to achieve, the time is ripe for Sri

Lanka to adopt stringent and effective legislation given the gravity of the damages. The requirement of a unified set of legislations that place Sri Lanka in congruence with its' obligations under the Paris Agreement is of vital importance given that Sri Lanka's jurisprudence on environmental justice is yet at its' inception.

The recent judgement on *Chunnakam power plant*<sup>22</sup> is a timely reminder of that need for effective legislation and one that sheds light on environmental justice. In this case, the petitioners sued a company operating a thermal power plant for contaminating the ground waters of the area. The Court recognized access to clean water as a necessity of life as embedded in Article 27 (c) of the Constitution which recognizes citizens' "*right to an adequate standard of living including food., the continuous improvement of living conditions and the full enjoyment of leisure and social and cultural opportunities.*" More importantly, while referencing to Principal 4 of the Rio Declaration, the Court recognized the State's

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<sup>17</sup> Solutions, Center for Climate and Energy. Congress Climate History. n.d. English. 03 10 2019.

<sup>18</sup> *ibid*

<sup>19</sup> *ibid*

<sup>20</sup> Lex, EUR. EU Law on climate change- Regulation (EU) No. 525/2013. 21 May 2013. English.

<sup>21</sup> Directive 2003/87/EC of the European Parliament and of the Council

<sup>22</sup> Ravindra Gunawardena Kariyawasam v Central Environmental Authority and others, SC FR Application No. 141/2015

obligation to ensure a sustainable development and the protection of nature for future generations to come.<sup>23</sup>

Although this judgement strengthens the enforcement of environmental rights in Sri Lanka, it is doubtful whether Sri Lanka can continue to rely on judicial interpretation to address the overarching issues of climate change, even on the grounds of sustainable development, absent express legislative intent.

In this regard, an industry which is in dire need of such legislation directly addressing climate change is the power and energy sector. Firstly, it should be noted that Sri Lanka's NDCs submitted under the Paris Agreement in respect of the energy sector are primarily focused on emission reduction by decreasing the reliance on coal power plants and promoting the renewable energy sector.<sup>24</sup> However, regardless of the NDCs, implementation has proven quite the contrary.

One example is the rift between Public Utilities Commission of Sri Lanka (PUCSL)

and the Ceylon Electricity Board (CEB). Whilst PUCSL, as the primary regulator of the sector, appears to be pursuing generation of low cost clean energy, CEB is reported to have made decisions purely based on the financial costs involved. In other words, approving projects regardless of their negative externalities such as environmental or health costs.

To add more fuel to the fire, the Minister in charge of the power sector has reportedly put forth several proposals that are alarmingly detrimental to the environment.<sup>25</sup> These include, setting up four coal power plants in the Trincomalee district and reduction of PUCSL's powers.<sup>26</sup>

Among many other negative externalities, the environmental and health costs of these coal plants would reach far with the amount of human and animal lives at stake in the area. For instance, the existing Lakvijaya coal power plant in Norochcholai which commenced in 2006 reportedly captures only a small amount of dust while the balance is released to the air (which can

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<sup>23</sup> Ravindra Gunawardena Kariyawasam v Central Environmental Authority and others, SC FR Application No. 141/2015, pg. 51

<sup>24</sup> Authority, Ministry of Mahaweli Development. "Nationally Determined Contributions." 2016. English.

<sup>25</sup> DailyFT, July 9, 2019, Wijenayake, Tudor, "Will CEB and Ravi K direct country towards pollution?"

<sup>26</sup> *ibid*

create numerous health problems) , and the bottom ash is reportedly stockpiled at the site left to be caught by the wind.<sup>27</sup> To make the situation worse, in late September 2019, the Cabinet of Ministers has approved the establishment of 300MW unit as an extension to the existing coal plant in Norochcholai.<sup>28</sup>

Moreover, it is also reported that proposals have been made to strip PUCSL of its powers as the principal regulator to oversee projects.<sup>29</sup> While this can thwart any positive endeavour to reduce GHG emissions, Sri Lanka's continuous efforts to embrace a coal culture can no doubt smear any efforts to bolster the renewable energy sector. From a technological perspective as well, experts have predicted that deep investments in fossil fuel have the potential of making them stranded assets over time. Therefore, Sri Lanka should carefully revisit their investment decisions on coal from a financial as well as environmental standpoint.

Taken together, the climate impacts already seen and predicted, Sri Lanka's

commitments, and lacking regulatory framework are all compelling reasons to call for robust and unified legislation formulated in line with the NDCs. Unlike policy decisions, binding legislation can thwart any attempts to veer the laws back and forth with the change of governments. As such, this would discourage any attempts of legislators to defy the fundamental commitments under the Paris Agreement.

### **Recommendations**

Whilst it is clear that Sri Lanka require comprehensive legislation to address climate change, there are several aspects such legislation should cover.

Introducing policies and legislative amendments directed at incentivizing the following areas are essential to overcome the challenges:-

Renewable energy: Sri Lanka pledged to achieve a complete transition to renewable

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<sup>27</sup> Ibid.

<sup>28</sup> Decisions, Cabinet. 24 09 2019. English. 04 10 2019.

<sup>29</sup> DailyFT, July 9,2019, Wijenayake, Tudor, "Will CEB and Ravi K direct country towards pollution?"



energy by 2050<sup>30</sup> in 2017 Sri Lanka's use of renewable energy as a source of generating power was only 7%.<sup>31</sup> The economic burden of fostering a fossil fuel-based power generation is the enormous import costs involved. As Sri Lanka does not have an abundant supply of indigenous fossil fuel, a large chunk of the energy is imported. Hence, the immediate advantage of relying on renewable energy is the reduced economic burden. As such, it is reported that a 100% renewable energy-based economy can potentially save US\$18-19 billion spent on importing coal.<sup>32</sup>

The primary challenge, although, in terms of transition to renewable energy is energy security, or the reliability of renewable energy as a primary source of power. These challenges are compounded by high generation costs, technological difficulties to transfer power supply from fossil fuel to renewable energy, and power storage difficulties.<sup>33</sup> Nevertheless, these can be surmounted by introducing policies to fund research and development to create

innovative ways of developing local capacity. Legislative support is also required to find sufficient investments to develop necessary infrastructure.

### Building resilient infrastructure

Infrastructure needs are at the center of economic development. Power and energy, transportation, water, communication related infrastructure development have an astounding connection to raising the standard of living. As such, investments in building climate resilient infrastructure that can forbear and mitigate the damages are essential.

In this regard, it is important that Sri Lanka adopts legislation that promotes a risk management approach in developing infrastructure. Designing infrastructure for disaster risk reduction, i.e. taking the location, design, construction and operation into consideration in planning the infrastructure are some of the recommended approaches in this regard.<sup>34</sup>

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<sup>30</sup> Climate Vulnerability Forum in COP 22nd in Morocco

<sup>31</sup> Ministry of Power and Renewable Energy, Performance 2017 and Programmes for 2018,

<sup>32</sup> *100% Electricity Generation Through Renewable Energy by 2050, Assessment of Sri Lanka's Power Sector,*

Co-publication of the Asian Development Bank and the United Nations Development Programme Empowered.

<sup>33</sup> Ibid.

<sup>34</sup> Lu, Xianfu. "Climate Finance- Building Resilient Infrastructure for the Future: Background paper for the G20 Climate Sustainability Working Group." 31 07 2019. Asian Development Bank. English

It is however commendable that Sri Lanka has developed a National Adaptation Plan for Climate Change (NAP)<sup>35</sup>, which has considered a number of sectors connected to the NDCs adaptation efforts, such as food security, water, irrigation, coastal and marine, urban city planning. Although NAP has been prepared as a guideline in various government agencies, it has a very little binding effect and falls short of delivering a precise implementation road map. Hence, regulatory obligations should be imposed across all stakeholders including, private sector, civil societies and local community based organizations to comply with the suggestions made by the NAP. This will also ensure NAP suggestions flow across all levels of the stakeholder structures in the society.

Green finance: In relation to financing, Sri Lanka should develop policies and regulations incentivizing private investors to make cheap financing methods available. This would enable private capital to crowd in, such as credit enhancements and bond markets, paving the way to various infrastructural investments. Since the

government has to carefully ration its limited funds, it is time that they broaden the policies and regulations to incentivize the private sector to fund small and medium enterprises which are in dire need of funds to deploy renewable energy.

#### Legislative body

The establishment of a central institution with sufficient authority to overlook issues relating to climate change and suggest necessary legislation and policies relating to climate change is essential. This entity should also be empowered to oversee energy and other development projects for their compliance with NDCs.

#### **Conclusion**

Sri Lanka, as a country already grappling with economic development and weak governance, it is unfortunate that climate change has posed a challenge that seems insurmountable. This economic battle is unwise to be overlooked in the pursuit of a sustainable future, as it's too challenging for

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<sup>35</sup> Lanka, Climate Change Secretariat Sri. "National Adaptation Plan." n.d. Mahaweli Development Authority. English. 24 09 2019.

developing countries to fight both development and climate change simultaneously. It is too important of a battle for developing countries to be asked to play fair, as factually, fossil fuel is still the cheapest and the most reliable resource available. However, given that Sri Lanka is now a part of the global efforts to address climate change, they can certainly benefit from new technologies and funding sourced from wealthier countries to afford a smooth energy transition and resilient infrastructure.

That said, a comprehensive set of legislation is essential in the implementation of the commitments under NDCs. In respect of regulatory reforms, existing regulations will have to be revisited in order to bolster the renewable energy sector. At a time where the world is witnessing a wave of

retirements in the coal power investments across the United States, Asia and Europe, Sri Lanka's attempts to increase investments in coal power seem rather a folly than futuristic.

Nevertheless, the writer believes that Sri Lanka has made commendable efforts to comply with the international commitments in the past. That said, Sri Lanka has a long way ahead in their pursuit to a sustainable future. The time is ripe for legislators to comprehend the importance of making rational amendments to current legislation. Absent such meaningful legislative efforts to constrain emissions and build resilient infrastructure, the damage caused by climate change will be pervasive and catastrophic over time.