

## **Initiative for Climate Action Transparency – ICAT**



### **ROADMAP TO DEVELOP A LEGAL FRAMEWORK FOR DATA SHARING TO MEASURE AND REPORT FOR ACHIEVING NDCS FOR THE TRANSPORT SECTOR IN SRI LANKA**



**Initiative for Climate Action Transparency - ICAT –**

**ROADMAP TO DEVELOP A LEGAL FRAMEWORK FOR DATA SHARING TO MEASURE  
AND REPORT FOR ACHIEVING NDCS FOR THE TRANSPORT SECTOR IN SRI LANKA**

**AUTHORS**

H.M. Buddika Hemashantha,



D.M.Anuradha Lakmini Dissanayake, Nipuna Parakrama Wanigasinghe

Climate Smart Initiatives (Pvt) Ltd

**May 2021**

**DISCLAIMER**

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, photocopying, recording or otherwise, for commercial purposes without prior permission of UNOPS. Otherwise, material in this publication may be used, shared, copied, reproduced, printed and/ or stored, provided that appropriate acknowledgement is given of UNOPS as the source. In all cases the material may not be altered or otherwise modified without the express permission of UNOPS.

This publication has been produced as part of a component of the Initiative for Climate Action Transparency project (ICAT) implemented by UNEP DTU Partnership (UDP). The views expressed in this publication are those of the authors and do not necessarily reflect the views of UDP.



**PUBLISHED BY**

Climate Change Secretariat, Ministry of Environment.

Ministry of Transport.

**PREPARED UNDER**

Initiative for Climate Action Transparency (ICAT) project supported by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the Children's Investment Fund Foundation (CIFF), the Italian Ministry of Ecological Transition (IMET) and ClimateWorks.



The ICAT project is managed by the United Nations Office for Project Services (UNOPS)



## Acknowledgement

According to the Sri Lankan Nationally Determined Contributions (NDCs) submitted by the Government of Sri Lanka to the United Nations Framework Convention on Climate Change (UNFCCC) in 2016, and Sri Lanka's Readiness Plan for Implementation of Intended Nationally Determined Contributions (INDCs) in 2016, establishment of a national MRV(Measuring, Reporting & Verification) system is considered as a national priority. As a response to this Sri Lanka developed its first sectoral MRV system for the transport sector in 2019 including MRV procedure, Protocol, institutional arrangement and data management system.

As the second phase of assisting Sri Lanka to enhance transparency of country's actions in the area of climate change UNEP DTU Partnership awarded an international consultancy Contract to Climate Smart Initiatives (Pvt) Ltd (ClimateSI) to prepare a roadmap to develop a legal framework for data sharing to measure and report for achieving NDCs for the transport sector in Sri Lanka. This report was produced under the direct guidance and supervision of Climate Change Secretariat (CCS) of Ministry of Environment (ME), Ministry of Transport (MT), and UNEP DTU Partnership. The final outcome of this assignment required a lot of guidance and assistance from many organizations and people. First of all, Climate Smart Initiatives (Pvt) Ltd wishes to express its gratitude to UNEP DTU partnership and ICAT for facilitating Sri Lanka to develop this road map.

The assignment was carried at the time of global emergency situation due to COVID 19 and it was difficult to consult all the relevant stakeholders. However the consistent and productive corporation extended from ME and CCS by constant virtual meetings and discussions and also by providing necessary information and documents is highly appreciated. Our appreciation is also extended to Mr. N.B. Monty Ranatunga, secretary of MT, Mr. H.M. Gamini Senevirathna, former secretary of MT, Mr. Thilakarathne Banda (former additional secretary of MT), the heads and the staff of all the institutions under MT. We also express our profound thanks to Dr. Sunimal Jayathunga (Director of CCS)



and his staff for providing their invaluable guidance, comments and suggestions throughout this assignment.

We appreciate the regular guidance, feedback and supervision provided by Fatemeh Bakhtiari (Senior Researcher, UDP) and Dr. Subash Dhar (Senior Economist, UDP) in preparation of this report.

Finally, ClimateSI wishes to thank all those who helped and contributed to make this assignment a success.

Climate Smart Initiatives (Pvt) Ltd,

Sri Lanka.

## Abbreviations

CCS	Climate Change Secretariat
CEA	Central Environment Authority
DCC	Directorate for Climate Change
DEA	Department of Environmental Affairs
DMT	Department of Motor Traffic
EPRTR	European Pollutant Release and Transfer Register
EU ETS	European Union Emission Trading Scheme
GHG	Greenhouse Gas
INDC	Intended Nationally Determined Contributions
ME	Ministry of Environment
MT	Ministry of Transport
NAP	National Adaptation Plan
NC	National Communication
NCCP	National Climate Change Policy
NDCs	Nationally Determined Contributions
NGHGIS	National Greenhouse Gas Inventory System
NGRS	National Green Reporting System

RTI	Right to Information Act
SEA	Sustainable Energy Authority
SINAMECC	National Climate Change Metric System
SINIA	National Environmental Information System
UBA	Federal Environment Agency of Germany
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
VET FUND	Vehicle Emission Testing Fund

## Table of Contents

<b>ACKNOWLEDGEMENT</b> .....	<b>I</b>
<b>ABBREVIATIONS</b> .....	<b>1</b>
<b>EXECUTIVE SUMMARY</b> .....	<b>4</b>
<b>1. INTRODUCTION</b> .....	<b>6</b>
1.1 CONTEXT AND AIMS OF THE STUDY .....	6
1.2 OBJECTIVES.....	8
1.3 METHODOLOGY .....	8
1.2 BACKGROUND TO THE SRI LANKAN LEGAL SYSTEM.....	11
<b>2. OVERVIEW OF LEGAL AND POLICY INSTRUMENTS RELEVANT FOR DATA SHARING</b> .....	<b>14</b>
2.1 THE CONSTITUTION, LEGISLATIONS AND REGULATIONS .....	14
2.1.1 <i>The Constitution of the Democratic Socialist Republic of Sri Lanka</i> .....	14
2.1.2 <i>Right to Information Act</i> .....	15
2.1.3 <i>The National Environment Act</i> .....	17
2.1.4 <i>Sri Lankan Sustainable Development Act</i> .....	18
2.1.5 <i>National Environmental (Air, Fuel and Vehicle Importation Standards) Regulations</i> .....	19
2.1.6 <i>Statistics Ordinance</i> .....	20
2.2 NATIONAL POLICIES AND STRATEGIES RELATED TO GHG RELATED DATA SHARING .....	21
2.2.1 <i>National Climate Change Policy</i> .....	21
2.2.2 <i>National Environment policy and strategies</i> .....	21
2.2.3 <i>National Plan for Haritha Lanka Programme</i> .....	22
2.2.4 <i>National Green Reporting System of Sri Lanka</i> .....	23
2.2.5 <i>Clean Air Action Plan 2025</i> .....	24
<b>3. INTERNATIONAL DIMENSION ON LEGAL FRAMEWORK FOR DATA SHARING</b> .....	<b>25</b>
3.1 RIO DECLARATION.....	25
3.2 AARHUS CONVENTION .....	26
3.3 UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC) .....	27
<b>4. BEST PRACTICES OF CLIMATE CHANGE RELATED DATA SHARING IN THE WORLD.</b> .....	<b>28</b>
4.1 INTRODUCTION .....	28
4.2 STATE OF COSTA RICA .....	31
<b>4.3 GERMANY</b> .....	<b>33</b>
4.4 FINLAND.....	37
4.5 SOUTH AFRICA .....	40
<b>5. KEY CHALLENGES FOR DATA SHARING FOR TRACKING TRANSPORT SECTOR NDCS</b> .....	<b>43</b>
<b>6. RECOMMENDATIONS</b> .....	<b>45</b>
6.1. RECOMMENDED STEPS IN DEVELOPING THE LEGAL FRAMEWORK .....	45
6.2 RECOMMENDATIONS FOR THE SHORT TERM .....	46
6.3 RECOMMENDATIONS FOR THE LONG TERM .....	48
<b>REFERENCES</b> .....	<b>51</b>

## Executive Summary

This report provides a road map to develop a legal framework for data sharing to measure and report for achieving NDCs for the Transport sector in Sri Lanka. The assessment was carried out as an initial step to provide background to the existing legal framework and to identify necessary steps to develop a legal framework for data sharing in the transport sector. Transport sector MRV system has already been developed in Sri Lanka and the country is in the process of implementing the system. Transport sector MRV system comprises of an institutional arrangement to collect all the necessary data to monitor, report and verify the impacts of transport sector NDCs. The system is in the process of transferring into a digitized one. As a sectoral MRV system, which is in a matured status of its development, needs a strong legal support for data collection by the institutions involved.

Compact background to the Sri Lankan legal system in general is provided at the beginning of the report. Assessment of legal and policy instruments starts with exploring the Sri Lankan legislation, which hints on the legal framework on data sharing of achieving NDC's in the Transport sector. The analysis of the Sri Lankan legal framework assures that this novel concept is not explicitly acknowledged and conceptualized in Sri Lanka. Most of the legislations such as Right to Information Act, National Environment Act, and Sustainable Development Act recognise the right of individuals to access information in relation to environment. Some of these legislations also recognise the importance of institutional coordination, which is a prerequisite of effective data sharing. National policies and strategies such as National Climate Change Policy, National transport policy, National Environment Policy, National Plan for Haritha Lanka programme, and Clean Air Action Plan 2025 also acknowledge the importance of institutional coordination but silent on the topic of data sharing.

With this policy and legal analysis, the report continues to analyse the International best practices relating to data sharing. International instruments such as Rio Declaration, Aarhus convention, and UNFCCC articles related to data sharing are assessed. As

advanced systems, which have introduced the legal background for GHG related data collection and sharing, Costa Rica, Germany and South Africa are studied in the light of Sri Lankan system and the possible adaptation are highlighted. In order to collect the necessary GHG related data all three countries opt for agreements between institutions. Costa Rican system has already developed draft agreements between public institutions and public and private institution with necessary clauses to protect confidentiality of the data. Some of the exceptional cases where agreements are not possible have been identified in Costa Rica and alternative solutions such as modifications to existing agreements and MOUs are developed. German system and South African system also shows the importance of institutional coordination and formal legal arrangement for data sharing.

Recommendations and Suggestions to achieve a quick and significant reduction in greenhouse gas emissions, ensuring that the climate targets agreed upon in Paris could be met by Sri Lanka's Transport sector are brainstormed and provided in this analysis under the recommendation part. It is important to follow the bellow steps when developing a legal framework for data sharing.

Step 1: identification of required data and the sources

Step 2: Decide the necessary legal instruments to be entered with different institutions

Step 3: Confirm the legal viability with the legal departments or the legal officers of the relevant institutions.

Step 4: Schedule meetings between MT and the information source agency for negotiations and concluding the legal instrument for data sharing.

The report also provides short term and long term options for developing legal framework for data sharing to MRV transport sector NDCs. Issuing circulars to public institutions and entering into bilateral agreements with private sector are provided as short term options. As long term options development of new legislation on GHG related data sharing, empowering institutions in the field of climate change to collect data are recommended. Importance of institutional coordination and capacity building as well as providing policy foundation to develop legal framework are also highlighted in the report.

# 1. Introduction

## 1.1 Context and aims of the study

According to the United Nations Framework Convention on Climate Change (UNFCCC), 186 parties have submitted their first set of NDCs, and three parties have submitted their second NDCs as at April 2020. A high-level analysis of the NDC documents showed that transport had been recognized as a sector of crucial relevance for climate change.<sup>1</sup> Sustainable transportation with low vehicle emissions, air pollution and noise pollution would improve the health status of the road users who are directly affected, community and the environment in the long run.

With the intensifying concern about the contribution from transport sector for climate change, there is a growing need to find ways to address its causes and reduce its impacts. Collecting data and information from the transport sector to implement an MRV system to measure, report and verify mitigation actions and policies to achieve NDC's will assist country's efforts in achieving the objectives of the Paris Agreement. Data sharing and methodologies for collecting data play a strategic role herein. The data that are collected holds crucial insight. This insight is already shaping the country's responses to climate change and will become critical in future.

By developing a MRV system for the transport sector, Sri Lanka took its initial step of meeting the objectives of the Paris Agreement and now it is the time for implementation. However, successful implementation requires an enabling environment which encompasses strong legal architecture; adequate institutional, human, technical and financial capacities; and regular stakeholder engagement. Among these enabling factors, a well-defined legal architecture is essential as it establishes the obligation to report for the institutions which are required to submit data according to the MRV system. Establishment of a strong legal system for data sharing also provides a basis for the institutional administrative compliance and enforcement arrangements for the

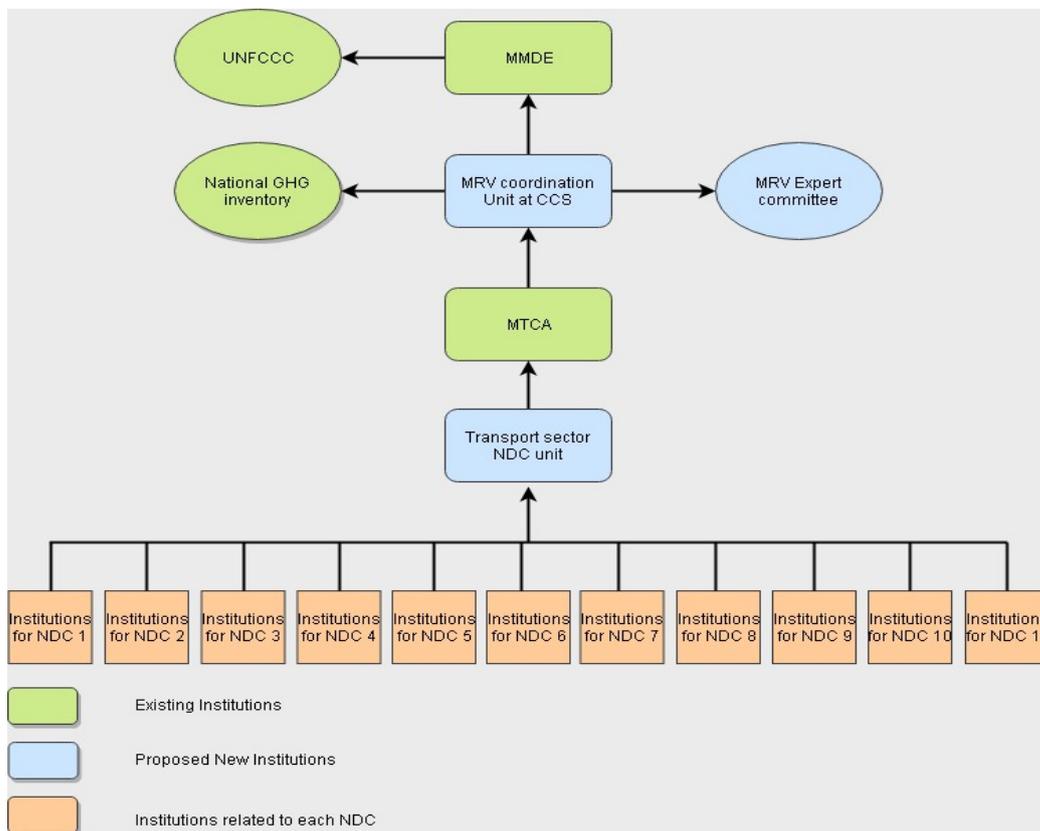
---

<sup>1</sup> [https://www.international-climate-initiative.com/fileadmin/Dokumente/2018/180205\\_GIZ-Ricardo\\_Transport-in-NDCs\\_Synthesis-Report.pdf](https://www.international-climate-initiative.com/fileadmin/Dokumente/2018/180205_GIZ-Ricardo_Transport-in-NDCs_Synthesis-Report.pdf)

system. Thus the gathering of data and information should be mandated through a legal framework.

The transport sector MRV system<sup>2</sup> in Sri Lanka contains a national institutional set up for MRV of GHG effects of the transport sector. The institutional arrangement is developed based on the existing institutions and making the best use of existing data collection mechanisms. As shown in Figure 1 below, few new institutions such as transport sector MRV unit, MRV coordination Unit and MRV expert committee are introduced by the system. The legal framework for data sharing should facilitate these institutions to collect necessary data without any legal impediments.

*Figure 1: Proposed MRV institutional arrangement for transport sector*



Source: *Measuring reporting and verification Framework of Transport sector in Sri Lanka*

(Note: The names of the ministries shows the names that were at the time of preparing the source document. At present MMDE is ME and MTCA is MT)

<sup>2</sup> Measuring reporting and verification Framework of Transport sector in Sri Lanka (May 2019)

## 1.2 Objectives

### **Objective of the Initiative for Climate Action Transparency (ICAT)**

Monitoring, Reporting and Verification to track the progress of NDC implementation is needed to meet the country's international reporting requirements, and "to build mutual trust and confidence and to promote effective implementation" of the Paris Agreement (Article 13.1 of the Paris agreement.)

ICAT project was founded to respond to these critical needs to support improved transparency and capacity building under the Paris Agreement. The primary objectives of ICAT are to:

- ✓ Strengthen institutional and human capacities in countries to develop and implement domestic system to MRV mitigation policies and actions (MPAs); and
- ✓ Develop tools and guidance that can be used for an effective system for MRV MPAs implementation.

### **Objective of this deliverable**

The main objective of this report is to design a roadmap to develop a legal framework for data sharing to measure and report for tracking NDCs for transport sector.

## 1.3 Methodology

This subsection sets out the approach followed in this assignment, reflecting understanding of the objective of this deliverable and the overall context and work.

Design a roadmap to develop a legal framework for transport sector, requires a robust assessment of existing law related to data sharing at first, and look for the need to develop new legal instrument/s. The approach is designed to assess both existing legislation and need for new legal framework to provide concrete guidance and pragmatic recommendations to the Government of Sri Lanka.

**Assessment framework for designing a roadmap to develop a legal framework for data sharing**

**Activity 1:** Stock taking on Sri Lankan existing institutional arrangement for legal framework for data and information transfer, roles and responsibilities, coordinating entities, agreements for relevant sectors

**Activity 1.1:** Stock taking of the existing laws (if any) in relation to data sharing

**Activity 1.2:** Assessment of: the existing institutional arrangement for data and information transfer; and the roles and responsibilities of those institutions, and coordinating entities with special focus on transport sector.

**Activity 1.3:** Assessment on data sharing agreements (if any) between the institutions.

**Activity 1.4:** Assessment of the existing policies and strategies in transport sector which encourage and allow data sharing.

**Activity 2:** Best practices of data and information sharing for climate change and sustainable development-relevant data

This activity took some output from activity 1 on data sharing practices, and identified the best practices of data and information sharing in the context of climate change and sustainable development.

**Activity 3:** Assess how these legal codes have been interpreted by public and private institutions through interviews with key stakeholders in ministries, other public institutions, and private actors in different sectors.

This activity involved interviewing key stakeholders on the application and interpretation of the existing laws by government institutions and private institutions in transport sector. The assessment was limited to the key stake holders.

**Activity 4:** Organized workshop with key stakeholders in ministries, other public institutions, and private actors in different sectors to establish the status quo in data and information transfer of data, taking into account intra- and inter-institutional cases

**Activity 5:** Identification of international best practices for data and information sharing, legal codes and agreements through literature review (four best practice cases relevant to Sri Lanka) as possibilities to fill the gaps.

**Activity 5.1:** Literature review of the best practices of data and information sharing for climate change and sustainable development-relevant data in the world.

**Activity 5.2:** Assessment of the possibility of encompassing the experiences of the other similar jurisdictions in the world to fill the gaps in the Sri Lankan legal system.

**Activity 6:** Design a roadmap to develop a legal framework for data sharing.

**Activity 6.1:** Development of the outline for the final report

**Activity 6.2:** Design a roadmap to develop a legal framework for data sharing which includes activities under activity 1 to 5 and recommendation to the Sri Lankan government to develop a legal framework for data sharing.

**Activity 7:** Validation of the roadmap to develop a legal framework for data sharing with corresponding Sri Lankan authorities and other relevant stakeholders.

## 1.2 Background to the Sri Lankan Legal System

Sri Lanka was invaded by the Portuguese, Dutch and British between 1600-1900. The legacy of the Dutch and British legal systems is still seen today in the country

The Roman-Dutch laws introduced in the 1600s by the Dutch remained largely unchanged throughout British rule from 1815-1948. Roman-Dutch laws have been modified by statutes and by the interpretation of courts and applied when legislation adopted by the Sri Lankan legislature does not regulate an issue in question.

British laws were also introduced in commercial law, civil and criminal procedural law, as well as in the law of evidence and administrative law. Today, English common law applies to commercial contracts and commercial property.

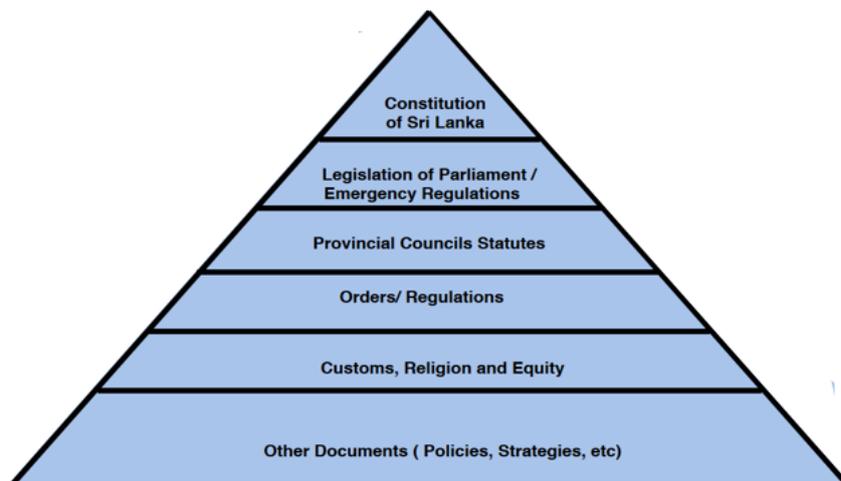
Indigenous customary laws include Muslim, Kandyan and Thesawalamai law. The latter law was codified in 1707. These however only apply to individuals in specific parts of the country or of specific ethnic groups. Kandyan law applies to the Kandyan Sinhalese people and Muslim law to Muslims in specific matters such as marriage and divorce.

The constitution of Sri Lanka, promulgated in 1978 and amended 19 times since, is at the top of the hierarchy of laws in Sri Lanka. Primary law is passed in line with the constitution by the legislature. Secondary laws must be in line with higher-level laws. These can include:

- Ministerial orders and regulations
- Provincial council statutes
- Local laws

These secondary laws usually need a legal basis in a higher-level law (i.e. constitution or laws passed by parliament) in order to be valid. Emergency regulations proclaimed by the presidency can override all other legislation, but must adhere to the constitution. Parliament must also approve the emergency regulation within fourteen days for its adoption to be valid. Furthermore, Judge-made laws (e.g. interpretation of statute, legal principle), which derive from judicial precedence set by decisions of the Supreme Court and Court of Appeal, are another body of law applied in Sri Lanka. They can include interpretation of statutes and legal principles, as well as the court decisions.

*Figure 2: Hierarchy of Sri Lankan laws*



*Source: Authors*

The opinion of jurists is a direct source of law in certain areas which are based on Roman Dutch Law. Moreover, Sri Lankan courts have accepted customs such as the ones adopted by the fishing community as customary law. Religion and equity also constitute sources of law in the country.

## Relationship between different layers of government

The governance structure of Sri Lanka comprises of three layers: national, provincial and local government. Since the thirteenth amendment to the constitution in 1988, some of the legislative powers were decentralized from the national government to the existing nine provincial councils of the country. These are presided by the chief minister, the elected members and the governors appointed by the president.

Local government authorities, which come under the purview of provincial councils, include municipal and urban councils, as well as “Pradeshiya sabhas”. The latter is the third layer of the local government which operates in mostly rural areas outside of the scope of the municipal and urban councils. Divisional and district secretariats function as the central government’s direct representation.

Matters can come under the regulatory authority of provincial councils, the central government or both. Environmental protection for instance falls under the latter category and is therefore regulated by both levels of government. Transport is also regulated by both levels of government. Provincial councils regulate matters such as road passenger, as well as transport of goods by motor vehicles and overall road transportation within a province, provided they are in conformity with the National Policy and Acts of Parliament.<sup>3</sup>

---

<sup>3</sup> Provincial Council Act No. 42 of 1987 and the Provincial Council (Consequential Provisions) Act No. 12 of 1989

## 2. Overview of legal and policy instruments relevant for data sharing

### 2.1 The constitution, Legislations and regulations

Research on Sri Lankan legal context on data sharing reveals that, specific statutory laws which directly refer to data sharing to measure and report the efforts to achieve NDC's are absent in the present context.

However, the country has developed various regulations and policies on open government and open data that have implications for data sharing. It must be noted that these legislations mainly focus on individual access to environment related data rather than data sharing between institutions. Nevertheless, the right to have access to data is recognized in most of these environmental legislations. The constitutional provisions and legislations indirectly related to data sharing are discussed below.

#### 2.1.1 The Constitution of the Democratic Socialist Republic of Sri Lanka

**Article 14 A** of the constitution guarantees the right of access to information as a fundamental right stating that *“every citizen shall have right of access to any information as provided by law, being information that is required for the exercise or protection of a citizen’s rights held by”* the institutions mentioned in the article. Though the section states on citizen’s right of access to information, article 4A (3) expands the word “citizen” to include a body whether incorporated or unincorporated.

## 2.1.2 Right to Information Act

Sri Lanka's Right to information (RTI)<sup>4</sup> which derives from article 14A of the constitution<sup>5</sup>, provides the mechanism for citizens to oversee the decision making and actions of public authorities. The Act, assures that every citizen shall have the right to access to information which is in the possession, custody or control of a public authority, subject to the exceptions provided in section 5 of the Act<sup>6</sup>. According to the RTI Act, same extended definition is given to "citizen" as in Article 4A of the constitution.

Section 5 of the Act, lists the instances where such a request to right to information can be denied. In the instances where the information relates to personal information and the disclosure of which has no relationship to any public activity or interest, where disclosure of such information would undermine the defence of the State or its territorial integrity or national security, would be or is likely to be seriously prejudicial to Sri Lanka's relations with any State, or concerning international agreements or obligations under international law, where such information was given by or obtained in confidence, the disclosure of such information would cause serious prejudice to the economy of Sri Lanka by disclosing decisions prematurely to change or continue government economic or financial policies, information, including commercial confidence, trade secrets or intellectual property.

Section 7 of the RTI Act elaborates the duty of every public Authority to maintain all its records duly catalogued and indexed in such form as is consistent with its operational requirements which would facilitate the right of access to information as provided for in the Act.<sup>7</sup>

Further, Section 24 of the Act lays down the statutory procedure for obtaining information. According to Section 43 of the Act following institutions are considered to be public Authorities.<sup>8</sup>

---

<sup>4</sup> Act No 12 of 2016

<sup>5</sup> See preamble of the RTI Act

<sup>6</sup> Section 3 of Right to information Act

<sup>7</sup> Sec. 07, Right to Information Act no 12 of 2016

<sup>8</sup> Sec. 43, Right to Information Act no 12 of 2016

"Public authority" means –

- (a) a Ministry of the Government;
- (b) anybody or office created or established by or under the Constitution, any written law, other than the Companies Act No. 7 of 2007, except to the extent specified in paragraph (e), or a statute of a Provincial Council;
- (c) a Government Department;
- (d) a public corporation;
- (e) a company incorporated under the Companies Act, No. 7 of 2007, in which the State, or a public corporation of the State and a public corporation together hold twenty-five per centum or more of the shares or otherwise has a controlling interest;
- (f) a local authority;
- (g) a private entity or organisation which is carrying out a statutory or public function or service, under a contract, a partnership, an agreement or a license from the Government or its agencies or a local body, but only to the extent of Activities covered by that statutory or public function or service;
- (h) any department or other Authority or institution established or created by a Provincial Council;
- (i) non-governmental organisations that are substantially funded by the Government or any department or other Authority established or created by a Provincial Council or by a foreign government or international organisation, rendering a service to the public in so far as the information sought relates to the service that is rendered to the public;
- (j) higher educational institutions including private universities and professional institutions which are established, recognised or licensed under any written law

or funded, wholly or partly, by the State or a public corporation or any statutory body established or created by a statute of a Provincial Council;

(k) private educational institutions including institutions offering vocational or technical education which are established, recognised or licensed under any written law or funded, wholly or partly, by the State or a public corporation or any statutory body established or created by a statute of a Provincial Council;

(l) all courts, tribunals and institutions created and established for the administration of justice;"

If any person deliberately obstructs the information or intentionally provides incorrect, incomplete or inaccurate information or destroys, invalidates, alters or do any harm to the information, would be considered as an offence under the Act.

Fundamentally, the Act entails the access of information from public authorities. However, in terms of the provisions of this Act, there is also the possibility to receive information connected to private entities or organisations which carry out a statutory or public function or service, under a contract or agreement. For instance, a citizen has the right to receive information related to sewage management from a private company which functions and renders such service under a contract with a Municipal Council. However, no other information of the said company can be received using the provisions of this Act. Thus, emission information of private authority coming under the above qualification can be requested through the information officers appointed subject to the exceptions provided in the Act.

### 2.1.3 The National Environment Act<sup>9</sup>

The purpose of this Act is to establish a central environmental authority (CEA) to make provision concerning the powers, functions and duties of that authority; and to make provision for the protection and management of the environment and matters connected in addition to that or incidental to it.

---

<sup>9</sup> Act No 47 of 1980

As CEA has the power to undertake surveys, investigations, researches etc. as provided by Section 10 (1) (c), (d), (f) and (g). It can be argued that these processes make indirect access to data relating to the environment and it's a way of collecting data from government bodies and non-governmental bodies. The powers, functions and duties of the authority are listed in section 10(1) of the Act.

Under section 24(1) of the Act CEA can require an occupier to furnish to the authority within 14 days, information as to any manufacturing, industrial, or trade process carried on in such premises or as to any wastes discharged or likely to be discharged from the said premises as is specified in the notice.<sup>10</sup> However, CEA should direct all information strictest secrecy and shall not divulge such information to any person other than a court.

It can be contended that CEA has the power to access information regarding prevention of pollution in the transportation sector. If the information on air emission is accessed by the authority, whether such information can be requested by other institutions or persons through a request made under the RTI under public and environmental interest outweighing the right to privacy of the polluters is a moot point.

According to Section 32 of the Environment Act, in all matters that are specified or necessary to be prescribed by this Act or which regulations are mandatory under this Act, the Minister may establish regulations. Therefore, the Minister is able to make regulations in relation to data collection. However, the downside here is, there's no direct mention on the collection of data related to climate change, or achieving NDC's.<sup>11</sup>

#### 2.1.4 Sri Lankan Sustainable Development Act

Under the Sustainable Development Act<sup>12</sup>, a Sustainable Development Council is established. The council must formulate a National Policy and Strategy on Sustainable Development in consultation and with the concurrence of all relevant parties and nine Provincial Councils and place before the Cabinet of Ministers for approval and review; and update the National Policy and Strategy on Sustainable Development periodically as

---

<sup>10</sup> Sec. 24(1), The Environment Act no 47 of 1980

<sup>11</sup> Sec. 32, The Environment Act no 47 of 1980

<sup>12</sup> Act No 19 of 2017

and when the Cabinet of Ministers so decides. So, in this Sustainable Development Act, there is no explicitly elaborated provision on data sharing to measure or monitor NDC's in Transport Sector, but relating to the above brief, an argument can be made that, there is an institutional consolidation with all relevant parties and nine provincial councils. Therefore, this institutional consolidation may be able to transform or implement as a source of data sharing relating to measuring NDC's in the Transport Sector.

Article 13 of the said Act states that every ministry, department, provincial council, provincial ministry and department and local authority shall cause an environmental and social audit to be done on the new development projects; and ensure the environmental and social security of the new development projects.<sup>13</sup> This indicates that through an environmental and social audit, the data on vehicle exhaust emission associated with the development projects can be revealed indirectly. However, the accessibility of the data to the government bodies even on environmental interest is left unaddressed.

#### 2.1.5 National Environmental (Air, Fuel and Vehicle Importation Standards)<sup>14</sup>Regulations

These regulations deliver permissible vehicular exhaust emission limits for every motor vehicle in Sri Lanka. Further, no owner, user or a person who is in possession of a motor vehicle shall operate or permit the operation of a motor vehicle that discharges exhaust emissions into the atmosphere over the Vehicular Emission Standards. Moreover, every owner or user of a motor vehicle should produce the annual compliance certificate of vehicular exhaust emission standards, issued by a vehicle emission testing centre authorised by the Commissioner of Motor Traffic, upon a request by any officer authorised in that behalf by the Commissioner of Motor Traffic.<sup>15</sup>

---

<sup>13</sup> Sec. 13, Sri Lanka Sustainable Development Act 2017

<sup>14</sup> National Environmental (Air, Fuel and Vehicle Importation Standards) Regulations No 01 of 2003 as amended by Gazette Extraordinary No. 1557/14 dated 09 July 2008 and Gazette notification No. 1895/45 dated 02 January 2015.

<sup>15</sup> National Environmental (Air, Fuel and Vehicle Importation Standards) Regulations No 01 of 2003

Though this regulation does not state on data sharing this is an affirmative regulation where the vehicular exhaust emission limits are regulated, enabling the reduction of air pollution in the transportation sector. Number of important data is collected by the VET programme through this process.

#### 2.1.6 Statistics Ordinance

The statistics ordinance of 1956 and its provisions shall apply to any matter which relates to Sri Lanka's economic conditions<sup>16</sup> but not to matters related to climate change. However, the provisions of this ordinance can be considered in drafting new legislation on climate related data gathering and data sharing.

There is a director of statistics appointed according to section 4 of this ordinance. According to section 5 of the ordinance the director or any officer duly authorised by him subject to the limitations set out in section 5(4) may at any time by notice in writing require any person to supply, substantially in the prescribed form and before a specified date, any information relating to any matter to which this ordinance applies.

Section 6 details the duty of the person providing the information and states that every person is obliged to provide information to the best of his knowledge and belief.

This data transfer also guarantees the confidentiality of the information obtained under the provisions of the ordinance. The emphasis is that the inclusion of provisions on data collection is not adequate and more protections are necessary to guarantee the safety and confidentiality of the data. Sections 7 and 8 are well known for providing this safeguard for the collected information. According to section 7, no information supplied by any person under the provisions of this Ordinance shall be published without the consent in writing. Section 8 sets out the penalties for unlawful disclosure of information. Moreover, under Section 13, for the purposes of enforcing the provisions of this Ordinance, the Minister may make regulations. It also means that the Minister has the authority to regulate the procedures for the collection of data referred to in the ordinance.

---

<sup>16</sup> Section 2 of the ordinance

## 2.2 National policies and strategies related to GHG related data sharing

There are several national policies and strategies related to climate change and transport in Sri Lanka. Though these policies and strategies are silent on data sharing they have recognized the need of institutional coordination as the foundation for any data sharing mechanism to be effective.

### 2.2.1 National Climate Change Policy

The National Climate Change Policy (NCCP) specifically recognizes the need to “develop and strengthen an inter-institutional coordination, collaborating and monitoring mechanism for effective implementation of the activities related to climate change at national, provincial, district and divisional levels”. Further, according to the policy, the performance of national climate change policy should be evaluated through a sound monitoring and reporting system. The policy also encourages good governance practices at all levels to improve mutual understanding and trust between stakeholders in order to ensure accountability for policy implementation. All these provisions of the NCCP which acknowledges the importance of institutional coordination and monitoring and reporting system are essential elements of GHG related data sharing.

### 2.2.2 National Environment policy and strategies<sup>17</sup>

The National Environmental policy aims to ensure sound environmental management within a framework of sustainable development in Sri Lanka. One of the objectives of the policy is to manage the environment by linking together the `activities, interests and perspectives of all groups, including the people, non-governmental organizations and government at both the central and local levels.<sup>18</sup>This objective recognises the

---

<sup>17</sup> <https://www.serendibleisure.com/wp-content/uploads/2019/06/National-Environmental-Policy-2003.pdf>

<sup>18</sup> Objective 2 of the national environmental policy and strategies

importance of collective effort of all the institutions in actions related to environment which is also an essential element of data sharing. The policy also recognises the need of regulating the matters related to environment and climate change by stating that “the institutional framework for sound environmental management will be strengthened through capacity building, legislative instruments and improved inter institutional coordination and linkages.” Though the policy is silent on data sharing, it emphasises the need for the partnership of all the ministries, statutory boards, non-governmental organisations, private sector and the general public in implementing the policy.

### 2.2.3 National Plan for Haritha Lanka Programme

The program is captured in ten mission statements and the proposed strategies and actions which focus on meeting the ten objectives set out in the mission statements. Mission 1 of this National plan is 'Clean air everywhere'. This mission elaborates strategies which can be involved in the process of data collection on NDC's. They are; Development of a system to test the quality of fuel through independent verification, strengthening and extending data collection system of Central Environmental Authority (CEA) and Sustainable Energy Authority (SEA) by introducing an electronic transfer of fuel consumption and emission data every month, establishing an auditing mechanism to validate the accuracy of emission data on a random basis, Summarising collected data quarterly and fill any identified gaps, preparation and maintaining an emission inventory using above data and enacting the legislation to enable CEA and SEA to fulfil their obligations.<sup>19</sup> Some of the aforementioned strategies are not directly involved in data collection mechanisms but implies that there is a link to collect data from stakeholders and governmental or non-governmental bodies. Strategies such as "preparation and maintaining emission inventory", imply the need for a data collection process.

In terms of monitoring and reducing vehicle emissions, the programme also mentions actions such as; establishing the monitoring unit of Department of Motor Traffic (DMT) to implement control/ testing of vehicle emissions, networking the Divisional Secretary offices in order to facilitate information exchange on vehicle emissions, enforcing a

---

<sup>19</sup> National Plan for Haritha Lanka 2009

requirement to obtain a certificate from the principal manufacturer on the date of manufacture of vehicles.<sup>20</sup> 'Establishing the monitoring unit of DMT to implement control/testing of vehicle emission', can be argued that the monitoring process can be considered as an indirect form of data collection. Moreover, the action of 'networking the divisional secretariat divisions in order to facilitate information exchange on vehicle emissions', provides a kind of institutional cooperation, which accommodates data collection through this network.

#### 2.2.4 National Green Reporting System of Sri Lanka<sup>21</sup>

NGRS aims to make it easier for the manufacturing and service sectors to regularly measure and report their sustainability parameters concerning economic, environmental and social aspects to continuously improve their production processes and services, connections with stakeholders and enhancing their identity while contributing to the country's sustainable growth.

According to the Reporting Guidelines, the Governing Council shall be responsible:

1. To play a critical role in setting the scene for the broad changes in directions and approaches to be taken to ensure sustainable green reporting.
2. To facilitate creating a partnership between the Government, the private sector, and the community to contribute to Sustainable Development.
3. To facilitate the setting up of a strategic policy framework for Sustainability Reporting.
4. To facilitate and suggest to the Government any changes in its institutional arrangements in order to ensure that the sustainability principles and objectives are taken into consideration in relevant policy-making processes.<sup>22</sup>

---

<sup>20</sup> National Plan for Haritha Lanka 2009

<sup>21</sup> Reporting Guidelines 2011

<sup>22</sup> National Green Reporting System of Sri Lanka – Reporting Guidelines 2011

This role of the governing council makes provision for an implicit data collection process and the above responsibilities allow institutional consolidation for data collection.

### 2.2.5 Clean Air Action Plan 2025

Chapter 4.3 of the Clean Air Action Plan 2025, elaborates on 'effective management of air emissions from stationary sources'. It mentions that, there is an urgent need to develop capacity according to standards and procedures for measuring and monitoring stationary emissions from sources. It will fix the information discrepancy between sustainable air quality requirements and source pollution standards. This section further recommends the collection of baseline air emission data from stationary sources (initially key industries) and the identification of gaps in baseline data. It can be argued that the Clean Air Action Plan makes some suggestions and measures to collect data from stationary sources, but this cannot directly make a relevance to the transport sector.<sup>23</sup>

### 2.2.6 National transport policy

National transport policy of 2009, addresses most of the areas in relation to transport and pays special attention to deterioration of the quality of the environment caused by transport activities.<sup>24</sup> Though it recognises the need to take steps to minimize the damages to the environment, the policy doesn't talk about the need for data collection to measure the impacts of climate change.

The evaluation of Sri Lankan legal and policy instruments reveals that, they are silent on GHG related data sharing to monitor or measure the achievements of NDC's in the transport sector. However, the policies recognise the need of institutional coordination and drafting new legislations to protect the environment which creates an enabling environment for developing new regulatory framework for data sharing in transport sector.

---

<sup>23</sup> Clean Air Action Plan 2025

<sup>24</sup> Section 3.5.13 on environmental principles

## 3. International dimension on legal framework for data sharing

Although there are multiple international agreements that refer to data sharing, this report will only cover those related to the climate change regime. There are several international conventions and national laws of other jurisdictions which permit environment-related information disclosure and best practices relating to data sharing through which information regarding public and private sector, on environmental values, can be disclosed. The findings on international conventions, and legislations on other jurisdictions on environmental information disclosure are discussed below.

### 3.1 Rio Declaration

Principle 10 of the Rio declaration on environment and development, which Sri Lanka ratified in 1992 June, states that; "Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities; and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided."<sup>25</sup>

Therefore, Principle 10 of the Rio declaration affirms access rights of citizens, on information concerning the environment including the information on hazardous materials and activities in their communities. Accordingly, it can be contended that information on the transportation sector can be revealed based on this. Though access of information by public and private authorities is not expressly provided, duty cast upon states to facilitate and encourage public awareness and participation by making information widely available deduces that measures should be designed to access

---

<sup>25</sup> Principle 10, Rio Declaration 1992

information by public authorities from public and private bodies. Further construing based on the purposive and a contextual interpretation, it can be deduced that developing measures to facilitate data access from public authorities by the citizen, including public and private bodies, are expected.

### 3.2 Aarhus Convention<sup>26</sup>

Principle 10 of Rio Declaration acquired such relevance in the international context that it had motivated the adaptation of the Aarhus Convention. According to the Convention, Article 1 presents a substantive “right of every person of present and future generations to live in an environment adequate to his or her health or well-being” as justification for its recognition, in environmental matters, of rights to information access, public participation and access to justice.<sup>27</sup>

According to Article 4 (1), each Party to this convention should ensure that public authorities, in response to a request for environmental information, make such information available to the public, within the framework of national legislation.

The right of access extends to any person, without his or her having to prove or state an interest or a reason for requesting the information. Therefore, it can be construed that this 'Any person' right extends to public and private authorities in accessing information from a public authority.

Moreover, according to the Aarhus convention, "Public authority" means:

- (a) Government at national, regional and other level;
- (b) Natural or legal persons performing public administrative functions under national law, including specific duties, activities or services in relation to the environment;

---

<sup>26</sup> Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters 1999. Adopted in 25 June 1998 and entered into force in 30 October 2001.

<sup>27</sup> Article 1, Aarhus Convention 1999

(c) Any other natural or legal persons having public responsibilities or functions, or providing public services, in relation to the environment, under the control of a body or person falling within subparagraphs (a) or (b) above;

(d) The institutions of any regional economic integration organisation referred to in article 17 which is a Party to this convention.

This definition does not include bodies or institutions acting in a judicial or legislative capacity.<sup>28</sup>

Aarhus obligations fall directly on Convention Parties and constituent public authorities, with privately owned entities having Aarhus responsibilities only insofar as they perform public functions deemed to be environment-related.

Countries which adopted these Conventions, are obliged to implement these provisions. Therefore, these general provisions which elaborate data sharing/ collection provisions, provide a legal authority on data sharing to monitor and measure for achieving NDC's in the Transport sector.

### 3.3 United Nations Framework Convention on Climate Change (UNFCCC)

According to the convention, parties are required to promote and facilitate public access to information on Climate change and its effects at the national level in accordance with national regulations and within their respective capacities.<sup>29</sup>

It should also be noted that article 19 of the Universal Declaration of Human Rights and article 19.2 of International Convention on Civil and Political Rights also recognises that everyone has right to receive and impart information.

---

<sup>28</sup> Ec.europa.eu. 2020. Aarhus Convention - Environment - European Commission. [online] Available at: <<https://ec.europa.eu/environment/aarhus/>> [Accessed 18 April 2020].

<sup>29</sup> Article 6(a)

## 4. Best practices of climate change related data sharing in the world.

### 4.1 Introduction

It is worthwhile to obtain an understanding of the existing practices used by different countries in the world for the collection, sharing, and reporting of climate change data. In this regard, it was considered the following factors are more appropriate to be considered in selecting the specific countries before starting in reviewing the relevant legal systems.

1. Compatibility of Legal Systems
2. similarity of Institutional Arrangements for Climate Change
3. Novelty and the Practicability of the System
4. Positive outcomes of the systems
5. Similarity of the developments in GHG data reporting systems and technological interventions

The above factors helped to identify many countries that have developed a robust legal framework for collecting, sharing, and reporting of GHG data for NDC's, and therefore the lessons learned from these systems can be used as benchmarks when developing the Sri Lankan Legal Framework. A comparison of the systems is shown in the table below.

Table 1: Comparison of the Legal Systems

Factor	Costa Rica	Germany	South Africa	Finland	Sri Lanka
			Hybrid legal system with Roman Dutch Law, English Common		Hybrid legal system with Roman Dutch Law, English Common

<b>Compatibility of Legal systems</b>			Law ,Customs and Personal Laws		Law ,Customs and Personal Laws
	Data collection through agreements and ministerial guidelines	No National Legislation on GHG data collection. GHG data collection through agreements with data providers		Government resolution, Climate Change Act and Statics Finland Act are relevant legislation. Further Data collection agreements are available.	No National Legislation on GHG data collection
<b>similarity of Institutional Arrangements for Climate Change</b>	Director CC as national focal point	BMUE as National Focal Point	Department of Environment Affairs as National Focal point	Statistics Finland as national focal point.	CCS as National Focal point
	Advisory committee with representative from DCC and related institutions	National Coordinating Committee to coordinate all the		Advisory Board	Inter-Agency coordinating committee to coordinate

		federal ministries			between ministries
<b>Novelty and the Practicability of the System</b>	Digital platform for data collection and processing(SINAMECC)		Digitized system (NGHGIS)		Digitized system for data collection and processing
<b>Positive outcomes of the systems</b>	Integration of information to SINAMECC from other systems				Possibility of integrating information from other systems
<b>Developments in GHG data reporting systems and technological interventions</b>			Development stages as web base system(NGHGIS) to institutional arrangement and quality management to data collection templates and reporting guidelines	Clear QA/QC procedure	Institutional arrangement and quality management to data collection templates and reporting guidelines to web based system

## 4.2 State of Costa Rica

Costa Rica already has the National Climate Change Metric System (SINAMECC) which is a digital platform with climate change information established to meet national and international transparency and reporting requirements. SINAMECC is a tool to measure, report and verify, as appropriate, the emissions by sources and removals by sinks at the national level, in all sectors of the economy, in line with the Nationally Determined Contributions and others national and international commitments of the country.

SINAMECC is the official communication mechanism and the institutional and sector linkages of the State of Costa Rica to promote the management and dissemination of expertise and information on climate change. SINAMECC operates as a sub-module of the National Environmental Information System (SINIA) and is linked to the National System of Statistics (SEN). Coordination, execution and implementation of SINAMECC is under the responsibility of the Directorate for Climate Change (DCC). The DCC must verify, work on and communicate with the qualified public and private bodies, reporting on the international instruments protected by the declaration, as well as sharing information on climate change before the international instruments, of which it is the Focal Point. Further, this system also has an advisory committee, made up of a DCC representative and other representatives from relative institutions.<sup>30</sup> Moreover, The DCC will generate the guidance required to promote participation of the various actors in the creation of the structure and the description of the fundamental processes and procedures of SINAMECC with a view to ensuring its proper functioning. These Guides will be mandatory for who provide information to SINAMECC and may be accessed on the DCC website.

The establishment and operation of SINAMECC system explicitly recognizes the objective of providing free access to information (its data, processes and results, as well as its source code). Furthermore, in view of the fact that primary data will be created either by public sector entities or provided by the private sector. It also works for widespread and

---

<sup>30</sup> Article 7, SINAMECC

effective inter- and intra-institutional cooperation, open access to information, consistency and sustainability.<sup>31</sup>

Under Article 8, SINAMECC may also integrate information from other systems, be these public or private. As long as they are in accordance with the existing legal framework, this inclusion will also take into account what is implied with potential confidentiality constraints on the sharing of data or for other purposes.

Getting the advantage of the existing digital platform to collect, process and report climate related data and information, Costa Rica went on to develop a legal framework to share data with SINAMECC system. Though not implemented yet, the system developed with the help of UNEP DTU has several important features which are worth exploring and to be guided by when developing a legal framework for data sharing in Sri Lankan transport sector. This study<sup>32</sup> generated several agreements to share data with SINAMECC for energy, transport waste, agriculture, forestry and land use sectors in Costa Rica. For the practical purposes regardless of the ownership of the data, sources of information were classified as

- a) Those that have data which have already been published on their websites
- b) Those that have information in digital or computer systems
- c) Those that have unpublished information but that is accessible or public
- d) Those that have unpublished information and that is handled under confidentiality
- e) Those that do not have information or have partial information

The Costa Rican system identified the need to develop three types of mechanisms to ensure the flow of data to SINAMECC.

- a) Ministerial guideline for the bodies of the Ministry of Environment and Energy
- b) Corporation and collaboration agreements with public sector bodies and institutions

---

<sup>31</sup> Article 6, SINAMECC

<sup>32</sup> Drafts of legal agreements to share data with SINAMECC and initial proposal for a negotiation strategy for the source of information (original version is in Spanish)

c) Simplified confidentiality agreements with the private sector.

Series of strategies and actions were identified in order to achieve the generation of each of the above three documents.

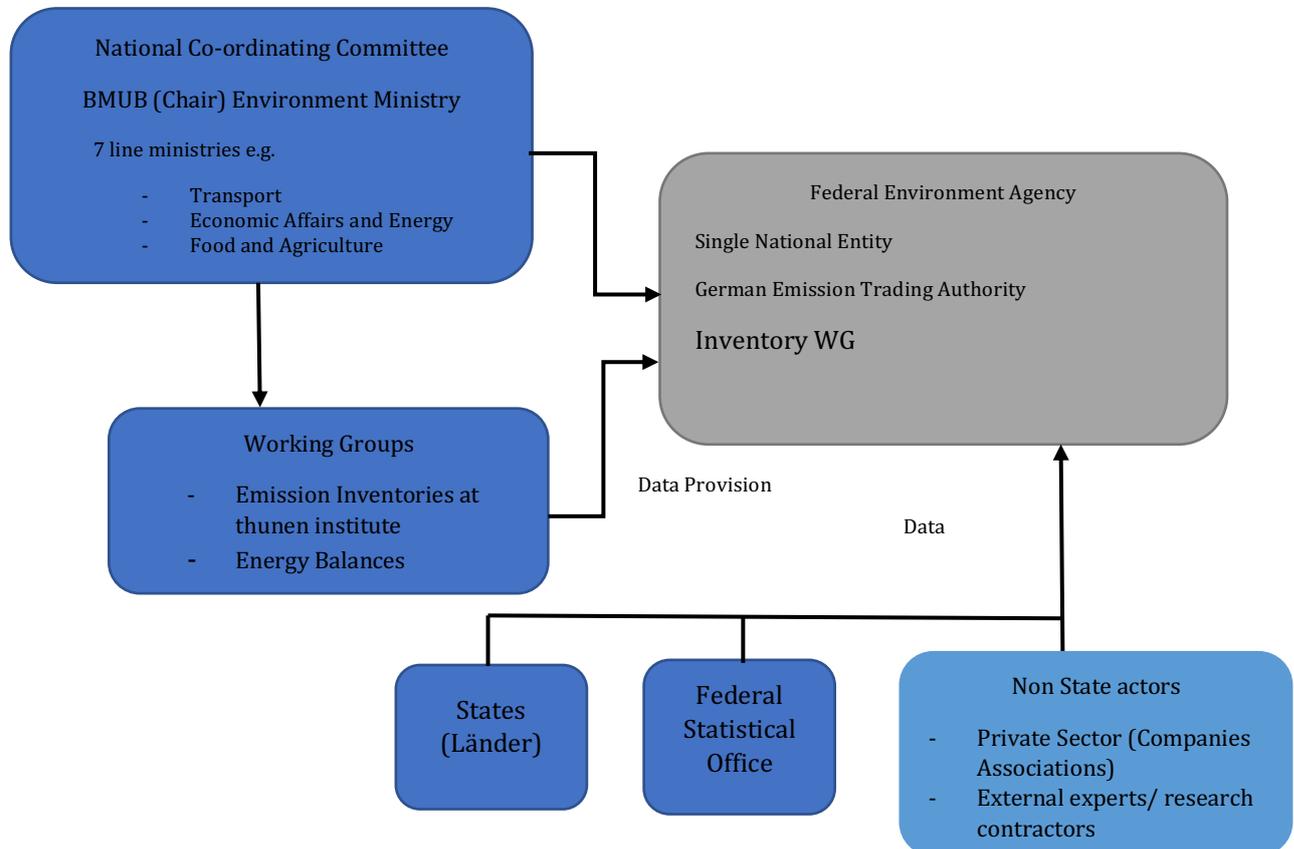
The country drafted inter institutional corporation agreements between Ministry of Environment and Energy( MINAE) and the different public institutions other than which are under the purview of the MINAE for the access, transfer, entry and use of information and data covered in the SINAMECC. The applicable institutions and the process for finalising and signing the agreements were listed out. In relation to private sector institutions, confidentiality agreements between MINAE and different sources of information from the private sector were drafted and the process of entering into the agreements was also listed out. Some exceptional cases which need special consideration than entering into agreement in both private and public sector were separately listed out and possible solutions were recommended. As an example, the cases where some institutions having special formats of agreement like Costa Rica Electricity Institute, signing of letters of Understanding instead of agreements was suggested.

### 4.3 Germany

Institutional arrangement related to Climate Change in Germany is mostly similar to the institutional arrangement in Sri Lanka. The Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) is the national focal point to the UNFCCC. Like the CCS in Sri Lanka, the Federal Environment Agency (UBA) in Germany functions as the national coordinating agency with other special institutions and organizations in the country for emission reporting. There is a working group on emission inventories within UBA in order to coordinate the relevant work within UBA. Similar to the Inter Agency coordinating Committee in Sri Lanka, Germany also has a National Coordinating Committee, including representatives of all the federal ministries participating in emissions reporting under the “agreement of the state secretaries”. The committee has the task of promoting the emissions reporting process and of clarifying the issues relating to the national system. The Committee consults on data gaps and

resolves issues with regard to assigned responsibilities.<sup>33</sup> The institutions involved and the data flow from these institutions is shown in the figure bellow.

Figure 3: stakeholders for National GHG inventory system in Germany



Source: Responsibilities, procedures and regulations for GHG inventory development in Germany; Elena Scherer; June 2017

With the above mentioned institutional arrangement and as an Annex I party to UNFCCC and Kyoto protocol, which had obligation to report the status of the country's emission, Germany has been improving its reporting system and implementing process in order to assess how the country is progressing towards its own mitigation goals and the global effort to combat climate change. Germany's experience of data collection process for National communications and Biennial Reports, has several important elements which can be considered as best practices of data collection and data sharing. The German

<sup>33</sup> AGEB (AG Energiebilanzen) (2010): Preface to the energy balances for the Federal Republic of Germany

system could be useful in Sri Lanka's effort to implement the transport sector MRV system as a robust and self-sustaining scheme.

In Germany the legal basis for data collection and reporting is not a law passed by the legislature but an agreement. National system principle paper on emission reporting in Germany was established by an agreement in 2017 between state secretaries of the seven relevant ministries, namely the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB); Federal Ministry of the Interior (BMI); Federal Ministry of Defence (BMVg); Federal Ministry of Finance (BMF), Federal Ministry for Economic Affairs and Energy (BMWi); Federal Ministry of Transport, Building and Urban Affairs (BMVBS) and Federal Ministry of Food and Agriculture (BMEL). This "agreement of the state secretaries" sets out the roles, resources and responsibilities for complying with UNFCCC national reporting obligations and also states the required data for reporting.

As mentioned above, since there is no national legislation regulating GHG related data collection, the process is carried out either through official cooperation agreements or by voluntary commitments. The process involves public and private sector actors of the country.

### **Public sector**

The National System Principles Paper on Emissions Reporting sets out the responsibilities of the various participating federal ministries in GHG related data sharing. It provides that the participating federal ministries are to undertake appropriate activities to close the data gaps that fall within their areas of responsibility. Where data flows are incomplete, responsible ministries are obliged to close existing data gaps. Responsible third parties may provide the requested data in some cases. For some of the data streams from other federal institutions, special agreements have been concluded between the relevant institutions.

An example is the Administrative Cooperation Agreement between the Federal Environment Agency (UBA) and the Federal Statistical Office (Destatis), which entered into force in 2010. It is mainly intended to allow the provision of confidential data and to specify the delivery of data for emission reporting purposes (GHG inventory cycle

during the year). It institutionalised the process of close direct exchanges between the UBA as a single national entity and the Destatis and transferred the responsibility for statistical confidentiality to the UBA.<sup>34</sup>

### **Private sector**

Involvement of the private actors is achieved primarily via certain departments of the UBA. The UBA supports the departments in the discussion of reporting requirements and the determination of requirements for data-sharing by associations. At the initial stage of GHG data collection in the country, private sector data provision was carried out voluntarily. However, these voluntary commitments were later transferred into formal agreements which set out the details on the corporation, data provision, QA/QC and important clauses related to confidential data. Data flows are continually reviewed by the UBA and, where necessary, are ensured by suitable agreements between the UBA and associations/business enterprises.

A sample agreement for the inclusion of non-governmental agencies in the National System was prepared in 2008. The sample agreement is adapted to the various data suppliers' requirements and needs as is necessary, and provided a reliable long-term framework for data provision and improve data quality. Data is always handed in together with a checklist for quality assurance and control. This agreement is used to involve stakeholder in the preparation of inventories under binding terms.

These agreements with private sector are sensitive to the most crucial issue of confidential data. Therefore, special procedures were included when necessary to protect the confidentiality of data at every stage of data handling. Confidentiality of data, if requested, is also ensured by aggregation and/or restriction of the number of users capable of handling data.<sup>35</sup>

---

<sup>34</sup> Responsibilities, procedures and regulations for GHG inventory development in Germany; Elena Scherer; June 2017

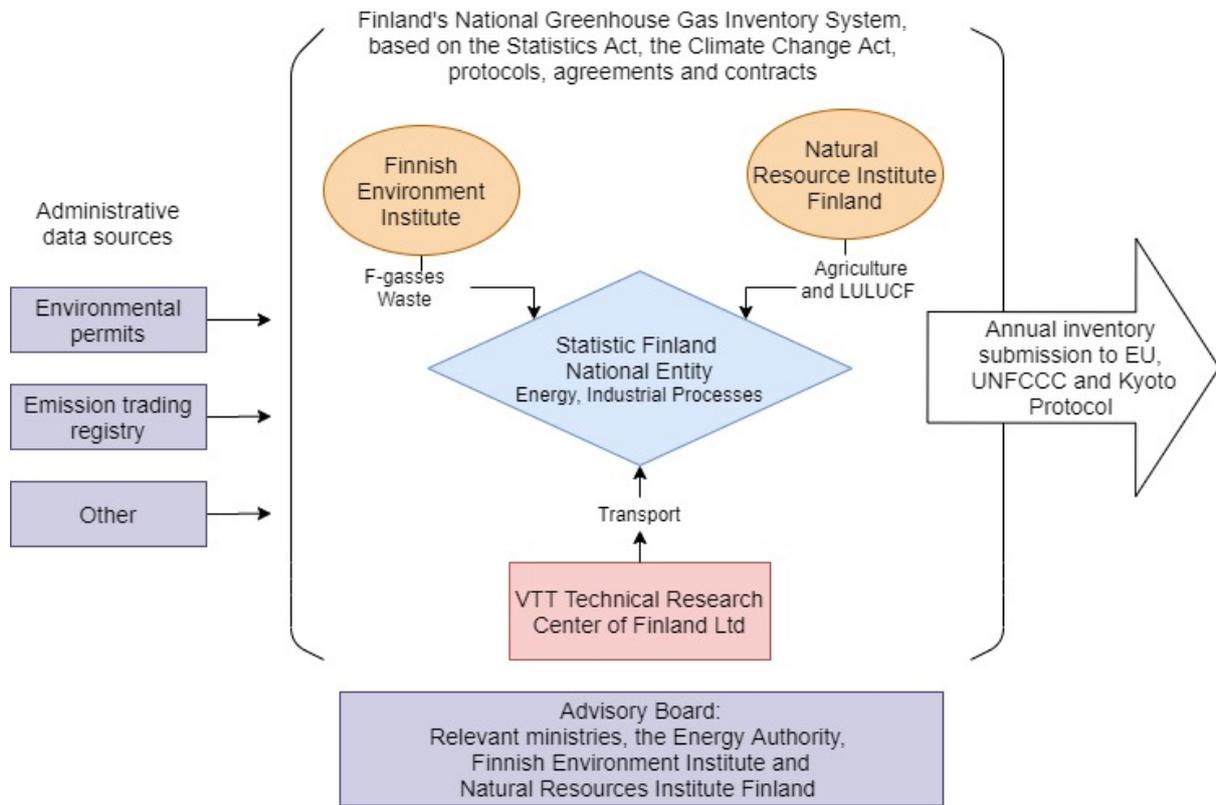
<sup>35</sup> AGEB (AG Energiebilanzen) (2010): Preface to the energy balances for the Federal Republic of Germany

## 4.4 Finland

Another useful jurisdiction which shares some common features of German and Sri Lankan system is Finland. According to the Government resolution of 30 January 2003 on the organisation of climate policy activities of Government authorities, Statistics Finland is of the national entity for Finland's greenhouse gas inventory. This role of Statistics Finland was later enforced by the Climate Change Act of 2015. The entity is also governed by the Statistics Finland Act and its amendments. Statistics Finland has access to data collected for administrative purposes. Hence by law, Statistics Finland has access to data collected under the European Union Emission Trading Scheme (EU ETS), regulation on fluorinated gases, the European Pollutant Release and Transfer Register (EPRT) registry and energy statistics regulation. Access to EU ETS data is also ensured through the agreement between Statistics Finland and the Energy Authority

Apart from these laws, similar to Germany, GHG data collection is enforced by agreements between the inventory unit and expert organisations on the production of emission and removal estimates, as well as related documentation. These agreements define the division of responsibilities and tasks related to uncertainty and key category analysis, QA/QC and reviews. Statistics Finland has also agreements on cooperation and support to the expert organisations participating in Finland's national system with relevant ministries.. The national system for the greenhouse gas inventory in Finland is presented in Figure 4.

Figure 4: National system for GHG inventory in Finland



Source: Finland's fourth biennial report under the UNFCCC.

There is an advisory board of the greenhouse gas inventory set up by Statistics Finland to ensure collaboration and information exchange in issues related to the reporting of greenhouse gas emissions under the UN-FCCC, the Kyoto Protocol and the EU. The board is composed of representatives from the expert organisations and the responsible Government ministries. As in the Sri Lankan MRV system there is a The national system is designed and operated to ensure the transparency, the quality requirements of the system are fulfilled by implementing the inventory quality management procedures.

### Data Sharing Agreements (DSAs)

DSAs share many aspects of SLAs, for instance, descriptions of the parties to the agreements, availability constraints, and temporal constraints like agreement life-times [3]. They also inherit from the general notion of Data Sharing Agreements (DSAs)

DSAs share many aspects of SLAs, for instance, descriptions of the parties to the agreements, availability

constraints, and temporal constraints like agreement lifetimes [3]. They also inherit from the general notion of cash, to refrain from certain activities (e.g., non-compete agreements), or even to supply the consumer's own information to competitors. However, the primary purpose of DSAs is to capture data sharing clauses including descriptions of the data being shared, and obligations that constrain both the providers and consumers of the data and the data flows among them. The data may be described using standard techniques such as relational schema, XML schemas or DTDs, or object classes and we do not elaborate on the data model here.

Obligations on data providers can concern both the need to send certain data (which the provider must then produce or acquire) and the quality of what is sent. They include recency constraints (data will reflect real world events, or data updates will be forwarded, with specified promptness or periodicity); visibility constraints (access will be provided to specified data views); and quality constraints (shared data will be of specified freshness, accuracy, precision, etc.).

Obligations on data consumers include usage controls that enforce data provider protection policies (e.g., data will not be copied, data will be deleted after 3 days, etc.); dissemination controls that enforce data provider sharing policies (e.g., original source will be credited, subsequent research products based on the data will be shared back with the data providers; providers will be notified of who has accessed the data); and security constraints (e.g., providers will be notified of security breaches in consumer networks). Note that parties may be data consumers in one DSA, and providers (e.g., of derived products) in another. Parties may even be both data consumers and providers in the same DSA (e.g., providers of logistical data and consumers of end-user audit data).

All obligations may be conditional on events (e.g., receipt of a data object, detection of attack or compromise, etc.) and state predicates (e.g., declaration of local emergency, system failures, relationship among data values).

Further, data sharing agreements may include obligations whose fulfillment depends on other DSAs or SLAs. For instance, suppose that B is obliged to ensure that C receives fresh and accurate data at regular intervals. In order to meet this obligation, B might rely on DSAs with data suppliers and SLAs with network providers. Finally, parties to a DSA may agree to inherit obligations from other DSAs.

A DSA's obligations impose global constraints on access control policies of various parties, even in future states. The exact nature depends on how the parties meet the obligations. For instance, suppose that a data recipient B is obligated to share data updates back with the provider A. Then either A must be given access rights to the data, or B must allow release and create a process that pushes the update notifications to A.

#### 4.5 South Africa

South Africa and Sri Lanka being colonies of Dutch and British, share the same mixed legal system, a hybrid of Roman Dutch Civil Law, English Common Law, customary laws and personal laws.

In South Africa the National Greenhouse Gas Inventory System (NGHGIS) was developed in four main phases;

Phase 1: Web-based GHG inventory process management tool

Phase 2: Design and formalising institutional arrangements and data flows

Phase 3: Development of a GHG quality management system

Phase 4: Development of data collection templates and technical reporting guidelines.<sup>36</sup>

Therefore, according to phase 1, a web-based tool was developed on Share-Point. Users can log in to the NGHGIS and view all GHG inventory related documents, calculation files, and activity data. It used a comprehensive method of data collection with the

---

<sup>36</sup> GHG National Inventory Report South Africa 2000-2015

collaboration of modern technology. Government bodies/ institutions as Users, are able to refer the GHG inventory-related information, data relating to NDC's etc., by logging in to the web-based tool.

Rendering to Phase 2: 'design and formalise institutional arrangements and data flows' relevant data holders were established as part of this process, and a contact database was built on the NGHGIS tool. It also defined the essence of the data and added to the NGHGIS tool a list of input datasets. The legal aspects were also an essential component of this phase. The NGHGIS requires that Department of Environment Affairs (DEA) create additional legal instruments to control the Department's engagement with other institutions on formalising institutional and procedural arrangements; aligning government procurement processes and establishing dispute resolution mechanisms and safeguarding sensitive data and information.

Further, the legal instruments developed by the Department of Environmental Affairs (DEA) must accordingly regulate:

- a) Processes and activities in the Department (e.g. in relation to confidentiality and ethical conduct);
- b) the relationship between the DEA and other line functionaries (e.g. the Department of Energy), municipalities and other organs of State (e.g. the National Energy Regulator (NERSA)); as well as
- c) the Department's interaction with private institutions.

Three documents were also provided from phase 2. These are background documents on the law and policy basis of the NGHGIS; an intergovernmental template MoU between DEA and other government departments which includes reporting, confidentiality, non-disclosure and dispute resolution arrangements; and an industry and other non-state institution template MoU between DEA and other data providers which also includes details of reporting, confidentiality, non-disclosure and dispute resolution arrangements. Therefore, from this phase 2 of the institutional arrangement, the necessity of the causal

connection of the institutional framework for a data collection process of a GHG Inventory system is proven.<sup>37</sup>

From the 4th phase of the NGHGIS, the Development of data collection templates and technical reporting guidelines were enhanced. This phase involved: Development of country-specific data collection templates for each sector not reporting to the National Atmospheric Emissions Inventory System (NAEIS) system; and Development of a data collection plan with timelines for each sector and Stakeholder workshop to discuss and review the reporting templates and data collection plan. Consequently, these can be considered as best practices in a data collection system for NDC's. These performances raise the productivity level of the data collection to a higher position.

---

<sup>37</sup> GHG National Inventory Report South Africa 2000-2015

## **5. Key challenges for data sharing for tracking transport sector NDCs**

### **5.1 Introduction**

To obtain an in-depth understanding of the challenges that need to be addressed when formulating the legal framework for data sharing for tracking NDC's for the transport sector in Sri Lanka, the relevant literature such as well accepted case studies in the countries which are more or less similar to Sri Lankan context or have been implemented such systems effectively were reviewed comprehensively and as a result, some of the key challenges identified are described below.

#### **5.1.1 Legal Provisions**

Research on Sri Lankan legal framework on data sharing indicates that there are no specific laws and regulations that specifically require data sharing to measure and report achievements of NDCs in the transport sector. There are only unspecific provisions which can be indirectly related to this matter. Data-sharing laws are crucial to assist the smooth functioning of the transport sector MRV system which will soon be digitalised with support from ICAT PHASE II.

#### **5.1.2 Policies and Strategies**

Above assessment on policies also reveals that Sri Lanka is lacking the policy basis for GHG data collection. The transport policy is outdated and that was introduced in a time when there was not much emphasis and discussion in the country on the need to reduce GHG emissions from transport sector in order to combat climate change. Even the national climate change policy, though it talks about the importance of institutional coordination, has not put special attention to the need of data collection and data sharing, and the need for a legal foundation for data sharing.

### 5.1.3 Data Collection System

Though there is no MRV system for any sector which is functioning at the moment, Sri Lanka has experience on data collection for the national GHG inventory for National communications. The country has already submitted two National Communications and the third one is under preparation. Data collection process for national GHG inventory is normally carried out by consultants with the help of CCS. There is no system for routine data collection and the activity is carried out only when it is necessary to prepare the GHG inventory. Publicly unavailable data are normally collected by sending a formal letter from CCS to the relevant data bearing institution with a list of required data. The process imposes an extra burden on CCS and the data collection process normally requires several reminders and follow ups and even visits to the relevant institutions by the consultant. Therefore, a formal procedure for periodic data collection, which will be backed by necessary legal arrangements is essential for a robust MRV system. This need is more emphasised by the transport sector MRV system which requires several new data and new institutions which were not required for the NCs.

## 6. Recommendations

### 6.1. Recommended steps in developing the legal framework

#### **Step 1: identification of required data and the sources**

Sri Lanka transport sector MRV system for tracking NDCs is already prepared and submitted to the MT and CCS under Phase 1 of the ICAT Sri Lanka transport Sector MRV development project by UNEP ICAT. In the MRV protocol, all the necessary data for ex-ante and ex-post calculations according to selected methodologies and the institutions that hold those data are listed. Therefore, this step is not required for the selected six sub NDCs which falls under four main NDCs. However, if the country wishes to MRV the impacts of policies and actions taken under other transport sector NDCs, all the required data and the data sources must be identified after selecting an appropriate methodology. Further, Sri Lanka is now in the process of revising its NDCs. If the new NDCs are different from the existing ones, this step should be followed in the first place to develop a legal framework for data sharing. This step is also necessary to decide which data are publicly available, which data need to be collected through agreements/circulars or MOUs and which data are confidential.

#### **Step 2: Decide the necessary legal instruments to be entered with different institutions**

It is necessary to identify the correct legal instruments to be entered with the institutions that possess the required data. This is mainly a decision on the type of instrument to be used with public sector institutions and private sector institutions. (Please see section 6.2 below for the recommended legal instruments) This can include circulars, confidential or non-confidential agreements or amendments to the existing agreements or memorandums of understanding in situations where agreements are not possible like in the Costa Rican electricity sector. These instruments should be decided and developed by

the ME in consultation with its legal department and if necessary with the advice of the Attorney General.

**Step 3: Confirm the legal viability with the legal departments or the legal officers of the relevant institutions.**

After deciding on the suitable legal instrument for each institution (most probably an agreement) that should be discussed with the legal department or the legal officers of the institution. This can be done by way of stakeholder consultation meetings. It is recommended to conduct an initial stakeholder consultation meeting to decide on the suitable instruments and validate and approve the draft documents at a subsequent consultation meeting.

**Step 4: Schedule meetings between MT and the information source agency for negotiations and concluding the legal instrument for data sharing.**

This step of individual discussions will be essential with the private sector which has concerns on confidentiality of the information. Special provisions might need to be incorporated into the agreements for the protection of confidential data. This step might not be needed for the institutions which fall under the preview of MT which are bound by the circulars and directions provided by the secretary of the MT. It should be noted that special concerns might arise from the institutions other than those under the MT and therefore this step of individual discussion will be helpful to solve the specific concerns of the institutions.

## 6.2 Recommendations for the short term

### **6.2.1 Develop an action plan for data sharing**

Necessary measures have to be taken to implement an action plan, including data sharing to measure and report for achieving NDCs in the Transport sector. In Sri Lanka, there are various action plans, strategies etc. which do not specifically mention data sharing

concepts. The data sharing policies or strategies need to complement the national action plan. Otherwise, it will not provide any legal capacity to implement the data sharing or collection mechanisms. As an example, Sri Lanka Megapolis Transport Master Plan, National Adaptation Plan etc. do not mention clear implementation of data sharing to achieve NDCs in the Transport sector. Therefore, these action plans need to be revisited or propose a new action plan, which directly recognizes the data sharing on NDCs. As the major GHG emissions occur in the transport sector, these proposed action plan including data sharing mechanism, need to be developed in the transport sector.

### **6.2.2 Develop circulars on data sharing for public sector institutions**

Transport sector MRV system is at an advanced stage of development including digitization of the system. The system will soon reach its implementation stage. Therefore, it is essential to arrange the legal background for its implementation to avoid stagnation. Legal solutions such as introduction of new legislations on GHG data sharing take years. This was experienced by the county when there was an effort to introduce a new Climate Change Act, which still did not come into force. Circular is a good short term option. Circulars are distributed on behalf of ministers by government departments; setting out procedures, guidelines and strategies for exercising ministerial powers delegated to public officials. Data collection from the institutions under MT will easily be achieved by circular instructions. It is also possible for the secretary of the MT to issue circulars to other ministries and to the institutions under those ministries through the respective secretaries. Individual institutional access to the digitalized MRV system can later be shared by an email to the head of the institution. As most of the data are required annually this process will speed up the implementation of the transport sector MRV system. The downside of this is that circulars are considered to be instructions for administration and have a less legal impact because a circular is an official letter or communication that is sent to a large number of institutions at the same time having no mandatory compliance. However, it will be a good short-term option because it reminds the relevant institution authorities the necessity of supplying GHG data at the appropriate time to implement the MRV system effectively .

## **Enter into agreements with the private sector institutions.**

When dealing with data owned by private sector; a robust, accurate and reliable system is essential. According to the six sub NDCs for which all the necessary data providers are identified, shows that compared to the public sector the private sector involvement is less. However, for other NDCs and the new NDCs which might come after revision of the existing NDCs, there can be situations where MRV implementation requires data owned by the private sector. As Sri Lanka has no laws related to GHG related data sharing between private and public sector, best option is to enter into an agreement between MT and the private data provider. As there can be financially sensitive and confidential data, it is necessary to include provisions for confidentiality of such data. Agreement is a good option as it doesn't take time to enter into a bilateral agreement, as opposed to drafting laws on data sharing. This also allows the clauses to be more specific and also clearly documents what data are being shared and how the data can be used. One of the other benefits is that the agreement protects the data provider, ensuring that the data will not be misused. These agreements can include the process MT uses to ensure confidentiality of data and also describe the methods to maintain data security. As discussed above sharing Costa Rican and German experiences in relation to data sharing agreements is recommended.

## 6.3 Recommendations for the long term

### **6.3.1 Introduce new legislation on data sharing**

The above assessment on legal system shows that there is no legal basis for data sharing in the area of climate change. Introducing new legislation which empowers the relevant institutions to gather necessary data for the MRV of the impacts of policies and actions which aimed to mitigate the adverse effects of climate change, is a good long term solution for the challenges faced in data collection by the institutions related to climate change. This should not necessarily be limited to data sharing in the transport sector. The legislation could cover the wider area of climate change and enfold all the necessary legal provisions including provisions for data sharing to enhance the country's march against

climate change. There has been an effort to introduce a new Climate Change Act in the county which is not realised yet. It is therefore important to restart the effort of bringing the Climate Change Act with the inclusion of provisions for GHG related data collection and data sharing.

### **6.3.2 Establish a new institution or empower CCS to collect necessary data for international reporting**

Currently the CCS is not legally empowered to collect all the necessary data which it needs to collect in fulfilling its international reporting obligations. Sri Lanka has been trying to establish a new Climate Change Commission with more powers. However, this is still under discussion. If this commission can be formed and empowered to collect data from private and public entities; the process of data collection can be carried out easily, systematically and periodically.

### **6.3.3 Institutional coordination and capacity building**

One of the important elements of data sharing is the strong institutional coordination between public and private institutions. One of the options mentioned above for data collection is by way of issuing circulars to public institutions, and entering into agreements with the private sector. If these are to be effective, all the related organisations should work closely ensuring that requested data are provided completely, accurately and timely. The government institutions must win the confidence of private sector data providers to ensure that the data would not be misused. This confidence is also very important in the first instance of entering into agreements. All the related data providers should be educated on the importance of a collective effort to meet the international obligations and the global effort to combat climate change.

As we elaborated, German Institutional arrangement for the National GHG Inventory can be considered as a best practice which can be implemented in our jurisdiction. The German GHG inventory system is considered to be great practice, as it is an instance of an effective and robust national GHG reporting system based on broad cooperation among

a large number of different stakeholders. (Elena Schere, 2017). Cooperation between government and private sector in particular is exemplary and has resulted in substantial benefits, both in terms of high quality, reliable data outputs and enhanced trust and transparency. The German, national GHG inventory program and related cooperation agreements provide a clear example of successful institutional collaboration. Further, the collaboration supports the implementation of a comprehensive GHG reporting framework, focused on reliable sector-specific details. The reporting processes are very efficient through coordination between the various actors, thereby minimizing the need for additional resources, especially at the governmental level.

#### **6.3.4 Supportive policies**

Proper policy background is essential for developing new laws on data sharing to track NDCs. The above policy assessment shows that, although most of the policies are sensitive on institutional coordination which is a prerequisite for data sharing; they are silent on GHG related data sharing. It is therefore recommended to revisit the relevant policies in the area of climate change, specially the climate change policy, and create a policy background to develop legal instruments for data sharing. Sri Lanka is now at the final stage of introducing a new transport policy. Therefore, this is the appropriate time to incorporate wider provisions to the policy to address the GHG emissions from the sector including institutional coordination and data sharing.

# References

## National Legislations

- Clean Air Action Plan 2025, Sri Lanka
- Environment Act Amendment 1988, Sri Lanka
- National Environmental (Air, Fuel and Vehicle Importation Standards) Regulations No 01 2003, Sri Lanka
- National Green Reporting System of Sri Lanka – Reporting Guidelines 2011
- National Plan for Haritha Lanka 2009, Sri Lanka
- Right to Information Act No 12 of 2016, Sri Lanka
- The Environment Act no 47 of 1980, Sri Lanka
- The National Climate Change Policy of Sri Lanka 2012
- The Sustainable Development Act No 19 of 2017, Sri Lanka

## International Legislations

- Aarhus Convention 1999
- Aarhus Regulation 1367/2006
- AGEB (AG Energiebilanzen) (2010): Preface to the energy balances for the Federal Republic of Germany
- AGEB (AG Energiebilanzen) (2010): Preface to the energy balances for the Federal Republic of Germany
- Climate Action Plan 2050- Germany’s long-term emission development strategy
- Constitution of 1949, Costa Rica
- Environment Protection Law 2014, Costa Rica
- Federal Environment Agency (German: Umweltbundesamt; UBA) (2016b)
- Gazette No. 91 of May 13, 2015, Costa Rica
- GHG National Inventory Report South Africa 2000-2015
- La Gaceta No.43 of March 1, 2017, scope No.46, Costa Rica
- Report of National Environmental Information Network, Costa Rica
- Report of the united nations conference on environment and development 1992
- Rio Declaration 1992

- The Promotion of Global Warming Countermeasures Act No. 117 of 1998

## Other

- <[https://www.international-climate-initiative.com/fileadmin/Dokumente/2018/180205\\_GIZ-Ricardo\\_Transport-in-NDCs\\_Synthesis-Report.pdf](https://www.international-climate-initiative.com/fileadmin/Dokumente/2018/180205_GIZ-Ricardo_Transport-in-NDCs_Synthesis-Report.pdf)>
- Climate Protection in Transport: Need for Action in the Wake of the Paris Climate Agreement
- Concept note to inform the terms of reference: “Design and testing of a cross-sector Measurement, Reporting, Verification and Registry framework for Costa Rica's National Climate Change Metrics System” July 2017
- Data Economy. 2020. *Data Will Lead the Fight against Climate Change | Data Economy*. [online] Available at: <<https://data-economy.com/data-will-lead-the-fight-against-climate-change/>> [Accessed 14 April 2020].
- Data.worldbank.org. 2020. *Climate Change | Data*. [online] Available at: <<https://data.worldbank.org/topic/climate-change>> [Accessed 20 April 2020].
- Diagnosis of the legal and institutional framework with regard to data open and access to information and implications for the SINAMECC operation (2018)
- Ec.europa.eu. 2020. *Aarhus Convention - Environment - European Commission*. [online] Available at: <<https://ec.europa.eu/environment/aarhus/>> [Accessed 18 April 2020].
- Elena Scherer, ‘Responsibilities, procedures and regulations for GHG inventory development in Germany’ (2017)
- Gobierno de Colombia. (2015). Colombia iNDC.
- Lalanath de Silva, ‘climate change challenges and solutions for Sri Lankan businesses’
- Michael T. Hatch, ‘The Europeanization of German Climate Change Policy’ (2007)
- National Report on Joint and Open Programmes, Germany (2011)
- Paniagua, A., 2020. *Digital Platform on Climate Change: SINAMECC - La Ruta Del Clima*. [online] La Ruta Del Clima. Available at:

<<https://larutadelclima.org/2019/03/18/digital-platform-on-climate-change-sinamecc/>> [Accessed 25 May 2020].

- Peña, Mario, Right of access to public climate information, Faculty of Law of the University of Costa Rica, October 2018
- Report as part of the project, 'Klimaschutzbeitrag des Verkehrs 2050' (Climate Change Mitigation in Transport until 2050)
- Sinamecc.go.cr. 2020. *SINAMECC*. [online] Available at:  
<<http://www.sinamecc.go.cr/>> [Accessed 212 May 2020].
- Who.int. 2020. *WHO | Climate And Health Observatory Innovations In Data Sharing, Communications, And Partnership Building In Brazil*. [online] Available at:  
<[https://www.who.int/globalchange/resources/vulnerability\\_adaptation/case\\_studies/brazil\\_box9/en/](https://www.who.int/globalchange/resources/vulnerability_adaptation/case_studies/brazil_box9/en/)> [Accessed 25 May 2020].
- Green House Gas Emissions In Finland 1990-2016, National Inventory Report under the UNFCCC and Kyoto Protocol, submission to the EU, 15<sup>th</sup> March 2018
- Finland's Fourth Biennial Report Under the UNFCCC, 20<sup>th</sup> December 2019.