



Sri Lanka

## POLICY BRIEF (Input Paper): Prevention of Marine Litter in Sri Lanka

Ms. Johanna Doeringhaus, Mr. Amarnath Munnolimath and Ms. Jana Hack – *adelphi*, Germany  
Mr. Samantha Kumarasena and Ms. Nisansala Ranundeniya – *National Cleaner Production Centre (NCPC)*, Sri Lanka

June 2021

### 1. Introduction

This document is produced as a part of the project '**Prevention of Marine Litter in the Lakshadweep Sea (PROMISE)**'. The project activities target tourism clusters located along the Lakshadweep shorelines in the Maldives, Sri Lanka and India. The project aims at prevention and leakage of wastes from land-based sources into the Lakshadweep Sea in line with Sustainable Consumption and Production (SCP) approach. This input paper outlines the preliminary findings about the current waste management related policy ecosystem specifically addressing marine litter in Sri Lanka and provides initial recommendations based on desk research. Following engagements with stakeholders such as local authorities managing waste, micro, small and medium enterprises (MSMEs) in the tourism sector, business associations, policy makers etc., this document will be updated incorporating the learnings from these engagements.

### 2. Background

Being based in the Indian Ocean and sharing a coastline with the Lakshadweep sea, the 65,610 sq. km big island of Sri Lanka has a coastline of about 1,620 km<sup>1,2</sup>. On top of that, the Exclusive Economic Zone (EEZ), which is the part of the ocean that falls under Sri Lankan jurisdictions, is more than 8 times larger than the land of the island<sup>2</sup>. This highlights the importance of coastal ecosystems for Sri Lanka. Coral reefs, sea grass beds, mangroves, sand dunes and coastal wetlands are home to various fish species and protect the island against natural forces like storms and waves. Five of Sri Lanka's nine provinces have a coastline, among them are the Southern and Western province with 40% of the Sri Lankan population living there and 60% of Sri Lanka's solid waste generation being attributed to the Western province alone<sup>3</sup>. In general, population densities and economic activities are comparatively high in the coastal provinces. 65% of Sri Lanka's industries are located along the coastline and 80% of the island's tourism industry depend on accommodations by the sea<sup>2</sup>. These figures illustrate how important clean and healthy oceans are for Sri Lanka's prosperity and how threatening the ongoing and growing marine pollution is for the country.

Marine litter and microplastic pollution put the ecosystems of the oceans surrounding Sri Lanka as well as its users at a great risk. Environmental risks include impacts on biodiversity and marine wildlife as well as climate change. Besides the direct impact of plastic production on greenhouse gas emissions, the presence of microplastics in the marine environment indirectly contributes to climate change by reducing the carbon fixation capacity of the oceans. From an economic point of view, especially the fishery and tourism industries face risks with regards to marine litter. Plastic waste floating in the oceans can cause damage to ships and reduce overall fish supply. Beach

<sup>1</sup> [https://papersmart.unon.org/resolution/uploads/position\\_paper\\_sri\\_lanka.pdf](https://papersmart.unon.org/resolution/uploads/position_paper_sri_lanka.pdf)

<sup>2</sup> [https://www.researchgate.net/publication/342546211\\_Status\\_of\\_Part particulate\\_Marine\\_Plastics\\_in\\_Sri\\_Lanka/link/5f605fefa6fdcc1164132c87/download](https://www.researchgate.net/publication/342546211_Status_of_Part particulate_Marine_Plastics_in_Sri_Lanka/link/5f605fefa6fdcc1164132c87/download)

<sup>3</sup> <http://www.statistics.gov.lk/pophousat/cph2011/pages/activities/Reports/SriLanka.pdf>

litter makes beaches that formerly used to attract many tourists unusable and thus deprives the industry of an important mainstay.

Sri Lanka is among the top countries contributing to marine debris<sup>1</sup>. Even though, there are roughly 170 plastic and polyethene collectors and recyclers registered in Sri Lanka, collection and recycling are not performed fast enough in light of the 20 million shopping bags, 15 million lunch sheets and about 10 million empty bottles entering the Sri Lankan environment every day<sup>1,4</sup>. Insufficient waste management in rivers and canals flowing into the sea causes these packaging materials to end up as marine litter. River mouths are found to be responsible for the major debris input to beaches. In addition, the Sri Lankan population and especially coastal residents and fishermen lack awareness about the dangers of marine litter and how to prevent it<sup>2</sup>. According to a study carried out in 2020, most of the debris present in the oceans around the island of Sri Lanka was domestic (99%) while only a minimal fraction originates from foreign sources (1%)<sup>2</sup>. The primary source of marine litter are packaging materials and consumer products, followed by waste from fisheries. Similar to the worldwide situation, almost 80% of marine debris are plastic materials.

Marine pollution originates either from land-based or sea-based waste<sup>1</sup>. In Sri Lanka, around 90% of the litter on coasts comes from land-based waste<sup>2</sup>. Figure 1 shows the various ways that transport waste into the oceans. Sri Lanka's land-based waste mainly results from its increasing population, urbanisation and industrial activities<sup>2</sup>. A growing population leads to a higher total production of plastic and consequently plastic waste, in coastal areas, which lack sufficient waste management systems, this inevitably results in higher levels of marine litter. Before the outbreak of the COVID-19 pandemic in March 2020, Sri Lanka used to welcome around 2 million tourists per year<sup>5</sup>. The island's small restaurants and hotels are not equipped with professional waste management systems and often end up dumping solid waste directly into the ocean. Inattentive visitors add to the problem by littering waste, mainly consisting of single-use plastic (SUP), at beaches. Sea-based waste is made up of ballast water, sea dumping, oil and chemical spills, ship emissions as well as pollution from fisheries and touristic activities<sup>6</sup>.

According to UNEP, current production and consumption patterns of SUP are the main driver of marine litter<sup>7</sup>. Plastic consumers and producers as well as governmental authorities still lack awareness and the required sense of urgency that is needed to appropriately manage plastic waste. Sri Lanka's solid waste management is regarded as one of the crucial factors responsible for marine litter<sup>8</sup>. The available waste management infrastructure is insufficient to handle ever-increasing amounts of waste, while proper strategies are not yet put into action by the responsible authorities.

<sup>1</sup> [https://papersmart.unon.org/resolution/uploads/position\\_paper\\_sri\\_lanka.pdf](https://papersmart.unon.org/resolution/uploads/position_paper_sri_lanka.pdf)

<sup>2</sup> [https://www.researchgate.net/publication/342546211\\_Status\\_of\\_Partuculate\\_Marine\\_Plastics\\_in\\_Sri\\_Lanka/link/5f605fefa6fdcc1164132c87/download](https://www.researchgate.net/publication/342546211_Status_of_Partuculate_Marine_Plastics_in_Sri_Lanka/link/5f605fefa6fdcc1164132c87/download)

<sup>3</sup> <http://www.statistics.gov.lk/pophousat/cph2011/pages/activities/Reports/SriLanka.pdf>

<sup>4</sup> <https://translate.google.com/translate?hl=de&sl=en&u=http://www.asianews.it/news-en/Environmentalist-calls-for-the-elimination-and-recycling-of-plastics-to-reduce-pollution-42958.html&prev=search&pto=aue>

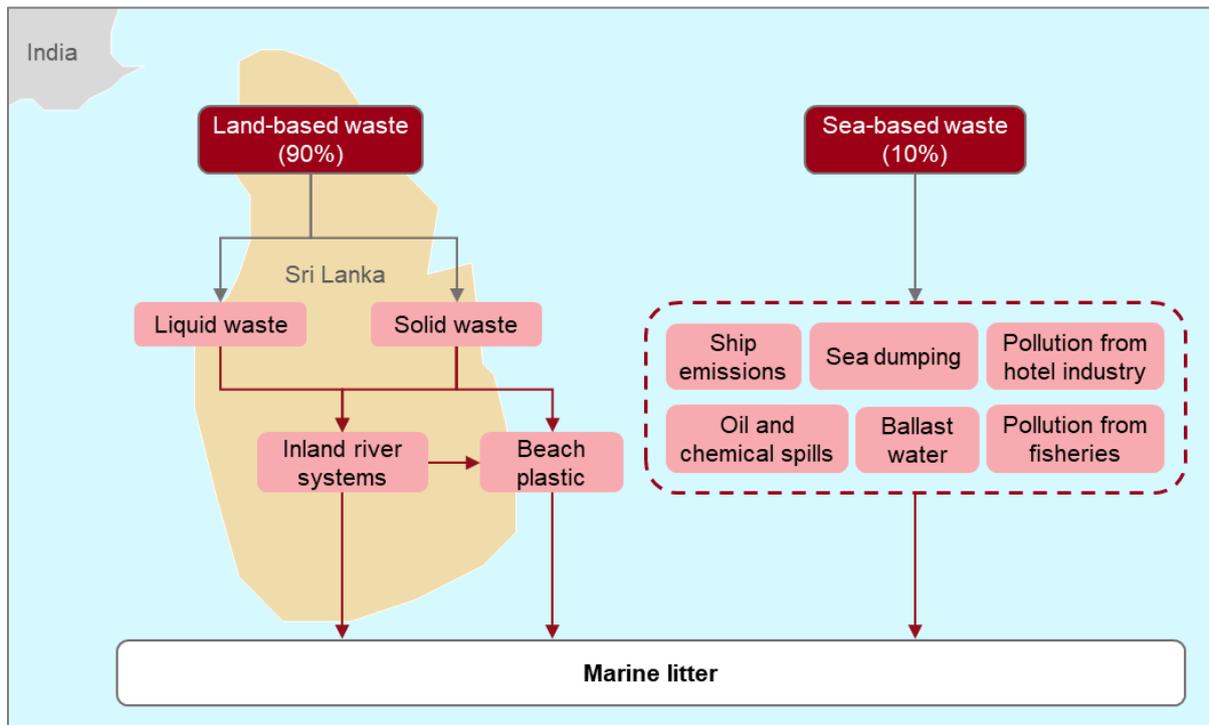
<sup>5</sup> <https://sltda.gov.lk/en/statistics>

<sup>6</sup> [https://papersmart.unon.org/resolution/uploads/position\\_pape\\_r\\_sri\\_lanka.pdf](https://papersmart.unon.org/resolution/uploads/position_pape_r_sri_lanka.pdf)

<sup>7</sup> [https://wedocs.unep.org/bitstream/handle/20.500.11822/7968/-Marine%20Litter%20in%20the%20South%20Asian%20Seas%20Region-2007Marine\\_Litter\\_in\\_the\\_SAS\\_Region.pdf?sequence=3&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/7968/-Marine%20Litter%20in%20the%20South%20Asian%20Seas%20Region-2007Marine_Litter_in_the_SAS_Region.pdf?sequence=3&isAllowed=y)

<sup>8</sup> [https://www.researchgate.net/publication/342546211\\_Status\\_of\\_Partuculate\\_Marine\\_Plastics\\_in\\_Sri\\_Lanka/link/5f605fefa6fdcc1164132c87/download](https://www.researchgate.net/publication/342546211_Status_of_Partuculate_Marine_Plastics_in_Sri_Lanka/link/5f605fefa6fdcc1164132c87/download)

Figure 1: Pathways of Marine Litter



Picture source: developed as part of this policy brief

### 3. Important Actors and Initiatives

#### 3.1 Policy Framework

Within its Exclusive Economic Zone, Sri Lanka holds the jurisdiction over 90,000 sq. miles of ocean, including the sovereign rights to explore, exploit, conserve and manage its natural resources. The **Marine Zones Law** of 1976 provides a declaration of the territorial sea and defines various Maritime Zones of the country<sup>9</sup>. In 1964, the **Water Resources Board Act** was established to clarify the responsibilities of managing these water resources, although it focused mainly on water streams on land<sup>10</sup>. Complementary, the **National Water Supply and Drainage Act** of 1974 (amended in 1992) established the National Water Supply and Drainage Board (NWS&DB) to develop and operate an efficient water supply, sewerage systems, and supply water in bulk to local authorities<sup>9</sup>. In terms of waste management, the **Municipal Council Ordinance Act** (1947, amended 1979) created the legal base on a municipal level for further development<sup>11</sup>. After a pledge given in the 1978 Constitution to safeguard the environment<sup>12</sup>, the basis for environmental regulations was laid out with the **National Environment Act** of 1980 (amended in 1998, 2000 and 2005<sup>9</sup>), which aimed to preserve the environment and reduce pollution. The Act also established the Central Environmental Authority (CEA) in 1981 as the primary state agency responsible for implementing and formulating policies and strategies to manage and protect the environment<sup>12</sup>. Though initially on a superficial level,

<sup>9</sup> <http://www.boblme.org/documentRepository/BOBLME-2011-Ecology-14.pdf>

<sup>10</sup> <http://extwprlegs1.fao.org/docs/pdf/srl14834.pdf>

<sup>11</sup> [http://www.commonlii.org/lk/legis/consol\\_act/mc576223.pdf](http://www.commonlii.org/lk/legis/consol_act/mc576223.pdf)

<sup>12</sup> <https://portals.iucn.org/library/sites/library/files/documents/2005-100.pdf>

waste management was also addressed during the same time period with the introduction of the **Provincial Councils Act** of 1987 containing provisions for waste management as well as the **Pradeshiya Sabha Act** of the same year specifying waste management responsibilities of Pradeshiya Sabhas, which are part of the local government system of Sri Lanka. The **Marine Pollution Prevention Act** (amended in 2008) and the **Coast Conservation Act** (amended 1988) were both introduced in 1981. Whereas the first since 2009 authorizes the Marine Environment Protection Agency (MEPA) to implement and take necessary steps to prevent marine pollution in the territorial waters of Sri Lanka, the second defines the Coastal Zone and sets out the regulations pertaining to development activities that are permitted and prohibited within this zone<sup>9</sup>.

In the mid-nineties, more emphasis was given to participatory environmental management. Revisions in 1996 to the **Fisheries and Aquatic Resource Act** for instance promoted setting up local fishery management committees<sup>12</sup>. This development towards higher stakeholder participation in governance, also included the emergence of a variety of strategies and guidelines that equally recognize the participation of private sector and local communities e.g. the Coastal Action Plan (2000), the Biodiversity Legislation, the National Strategy for Clean Development Mechanism and the **National Strategy for Solid Waste Management**<sup>12</sup>. With the latter, a concrete strategy on waste management was first put into action in 2000. It contained a three-year action plan to reduce waste along the lines of the “3Rs” (reduce, reuse, recycle). The **National Environment Policy**, which came into effect in 2003, aimed at promoting environmental management while balancing social and economic development needs<sup>9</sup>. It was followed by the **National Watershed Management Policy** of 2004 which also recognizes the need for private sector and community participation to conserve, protect, rehabilitate, sustainably use and manage watersheds<sup>9</sup>. A new ten-year plan under the title “**Vision for a new Sri Lanka**” initiated in 2005 by the Ministry of Finance, again promoted initiatives for solid waste and pollution management. In 2006, the relevance of marine litter gained relevance through the introduction of a revised **Coastal Zone Management Plan** (originally of 1997), where coastal pollution was identified as an issue that needed focused attention. Former solid waste management strategies of 2000 were translated into Policy in 2007 with the **National Policy on Solid Waste Management**. Capacity building, research and development, and regulation of sanitary landfills using best available technologies were among the focus areas of the policy. The policy’s main objectives were (a) to ensure environmental accountability and social responsibility of waste generators, managers and service providers, (b) to involve individuals and all institutions in integrated and environmentally sound solid waste management practices (c) to maximize resource recovery while minimizing the amount of waste for disposal and (d) to minimize adverse environmental impacts due to waste disposal<sup>13</sup>. This policy was even strengthened with the introduction of the **National Environmental (Municipal Solid Waste) Regulations** of 2009 and the **Scheduled Waste (hazardous waste) Management Regulations** of 2008. The latter regulated the procedures for obtaining a Scheduled Waste Management License and tolerance limits for other industrial waste disposal into marine coastal waters. In 2009, also the topic of sustainable development was brought on the political agenda of Sri Lanka, leading to the release of a **National Action Plan for the Haritha Lanka Program**. Waste that specifically appears in marine ecosystems was first specifically addressed through a regulatory act in 2008, when the **Marine Pollution Prevention Act** came into action.

For the purpose of strengthening the prevention of sea-based marine litter in the fishing sector, discharge standards and sea dumping permits were covered under the **Marine Environment Protection Sea Dumping Regulation** of 2012. The **National Policy on Protection and Conservation of Water Sources, their Catchments and Reservations** in Sri Lanka of 2014, which aims to “ensure the protection and conservation of all the water sources and their source areas in Sri Lanka through an optimum management “(p. 4)<sup>14</sup>, does consider water pollution through agricultural activities but focuses more on water on land. Additionally, the **Regulations on Polythene & Plastic Management** of 2017 regulate and prohibit among other things the manufacture of polythene and plastic bags, as well as food wrappers, containers and plates made from polystyrene<sup>15</sup>. In 2019, a new **National Waste Management Policy** was introduced which addressed disposal of municipal waste, packing waste and industrial waste in environmentally sensitive areas. It offers guidance to mandated institutions and service providers and

<sup>13</sup> <http://www.boblme.org/documentRepository/BOBLME-2011-Ecology-14.pdf>

<sup>14</sup> [https://luppd.gov.lk/images/content\\_image/downloads/water\\_policy\\_english.pdf](https://luppd.gov.lk/images/content_image/downloads/water_policy_english.pdf)

<sup>15</sup> [http://www.cea.lk/web/?option=com\\_content&view=article&layout=edit&id=1080](http://www.cea.lk/web/?option=com_content&view=article&layout=edit&id=1080)

recognizes the contribution of communities<sup>16,24</sup>. Most recently, the **National Policy on Sustainable Consumption and Production (2019)**<sup>17</sup> as well as the **National Environmental (Plastic Material Identification Standards) Regulations** came into effect in 2021, which specified how to mark plastic products.

On a state level, provinces have sometimes established bye-laws and guidelines to complement national policies. The Western Province for instance implemented **Municipal Solid Waste Management Rules** applying for seven regionally defined zones of the province. However, policy developments of provinces are often initiated as part of international initiatives rather than regional or local authorities<sup>16</sup>.

### 3.2 Finance Mechanisms

Economic instruments to tackle marine litter have various objectives such as minimizing the production of marine litter, minimizing the harm caused by marine litter and avoiding unintended consequences from the application of economic instruments<sup>18</sup>. If applied correctly, such instruments may incentivize industry stakeholders to use less plastic, using economic disincentives or subsidies to internalize external costs, implementing a disposal fees, or discouraging polluting behaviour by paying for the collection and treatment of waste<sup>14</sup>. Financial instruments such as taxes, charges as well as subsidies to encourage environmentally friendly activities as well as resource use taxes have also been identified as adequate tools in Sri Lankas environmental action plan: Caring for Environment 2003-2007<sup>19</sup>.

Different charges have for instance been applied regarding plastic bags and other single-use packaging products as they have caused particular concerns globally and in Sri Lanka. In 2017, the government therefore put a provision in law to **ban plastic use and manufacturing** of polystyrene packaging and polyethylene sheet, as well as the incineration of plastic, including violation charges. However, the ban is widely considered ineffective due to weak enforcement and a lack of high-quality alternatives<sup>20</sup>. Another measure to discourage waste deposit on land and on water was the introduction of **Environmental Protection Licences (EPL)**. They regulate the discharge of waste for certain prescribed activities<sup>21</sup>, by defining tolerance limits for industrial and domestic waste disposal including in marine coastal areas and defining the fees for generators, collectors, stores, transporters, recyclers and disposers regarding licence applications<sup>22</sup>. After a **fee-based waste collection** system was established in the Eastern Province, it is now increasingly considered also by local authorities in other parts of the country<sup>23</sup>. In some cities such as Negombo, waste collection fees for industries were also introduced<sup>24</sup>.

Tax measures have been used to encourage innovation and strengthen waste management infrastructure. The Ministry of Mahaweli Development and Environment suggested in their Position Paper on Marine Litter and Microplastics to incentivize frontrunning producers who engage in innovation development for plastic alternatives through **tax concessions**<sup>25</sup>. Tax measures were again used to address poor financial returns of recycling plants and collecting centres in Sri Lanka. Since plastics are imported into Sri Lanka in large quantities, the CEA in 2007

<sup>16</sup> <https://www.unep.org/ietc/resources/report/state-municipal-solid-waste-management-negombo-city-sri-lanka>

<sup>17</sup> <http://env.gov.lk/web/images/pdf/2018/EPE/scp%20policy%20english%20draft.pdf>

<sup>18</sup> [https://link.springer.com/chapter/10.1007/978-3-319-16510-3\\_14#Sec15](https://link.springer.com/chapter/10.1007/978-3-319-16510-3_14#Sec15)

<sup>19</sup> <https://portals.iucn.org/library/sites/library/files/documents/2005-100.pdf>

<sup>20</sup> [https://www.researchgate.net/publication/342701426\\_The\\_Ways\\_To\\_Minimize\\_the\\_Plastic\\_Wastage\\_in\\_Sri\\_Lanka/link/5f01daae6fdcc4ca44e796f/download](https://www.researchgate.net/publication/342701426_The_Ways_To_Minimize_the_Plastic_Wastage_in_Sri_Lanka/link/5f01daae6fdcc4ca44e796f/download)

<sup>21</sup> <http://www.boblme.org/documentRepository/BOBLME-2011-Ecology-14.pdf>

<sup>22</sup> <http://www.cea.lk/web/images/pdf/Gazette-Notification-No-1534-18-dated-01-02-2008.pdf>

<sup>23</sup> <https://openjicareport.jica.go.jp/pdf/12250213.pdf>

<sup>24</sup> <https://www.unep.org/ietc/resources/report/state-municipal-solid-waste-management-negombo-city-sri-lanka>

<sup>25</sup> [https://papersmart.unon.org/resolution/uploads/position\\_paper\\_sri\\_lanka.pdf](https://papersmart.unon.org/resolution/uploads/position_paper_sri_lanka.pdf)

launched the “National Post Consumer Plastic Management Programme”. The programme is funded by a **tax on plastic importers**<sup>26</sup>, which is used to establish collection and recycling infrastructure for waste.

In addition, a new tax regime was introduced in 2012 in order to **promote domestic and local private investments** for SMEs, project expansions and strategic import replacement enterprises in order to address a lack of technical capabilities and appropriate business models in the waste management system<sup>27</sup>. These tax benefits include a minimum **tax holiday** of four years and a maximum holiday of 12 years for projects including, among others, fisheries, manufacturing and services (including tourism)<sup>21</sup>.

### 3.3 Stakeholders and Initiatives

Sri Lanka’s waste management falls under the responsibility of several central and local government agencies<sup>28</sup>. Due to the dangers associated with rising levels of marine litter, the topic has become one of the focus areas of the Sri Lankan government in recent years. 23 municipal councils and 41 urban councils are responsible for municipal solid waste management and collection in Sri Lanka<sup>28</sup>. Figure 2 shows the various Sri Lankan institutions responsible for waste management and their interconnections.

The **State Ministry of Provincial Councils and Local Government Affairs** is responsible for the implementation of plans and policies and coordinates the responsibilities between the central government and the provincial councils. Another central actor in Sri Lanka’s waste management, the **National Solid Waste Management Support Center** (NSWMSC), operates under this ministry. The NSWMSC provides guidelines and technical assistance to local authorities and analyses current practices to compare them with best practices from other countries. The **Central Environmental Authority** (CEA) of Sri Lanka is situated under the **Ministry of Environment** (MoE). The CEA mainly deals with environmental impact assessment and regulates waste management in line with the National Environmental Act. On top of that, it regulates all activities associated with environmental pollution, laboratory services and monitoring. The CEA also includes a designated waste management division which was, for example, responsible for the **National Post Consumer Plastic Waste Management Project** (2007-2015)<sup>29</sup>. The MoE also formulates the national policy for waste management. Additionally, the **State Ministry of Urban Development, Coast Conservation, Waste Disposal and Community Cleanliness** hosts the **Coast Conservation and Coastal Resources Management Department**, which regulates all developmental activities in coastal zones that are particularly important in the context of marine litter, the **Marine Environment Protect Authority** (MEPA), which is in general responsible for the regulation of marine pollution as well as its prevention, mitigation and control, the **Urban Development Authority** (UDA) which develops urban development plans and waste management strategies, and the **Sri Lanka Land and Development Corporation** (SLLDC) which, for example, produces compost from organic waste.

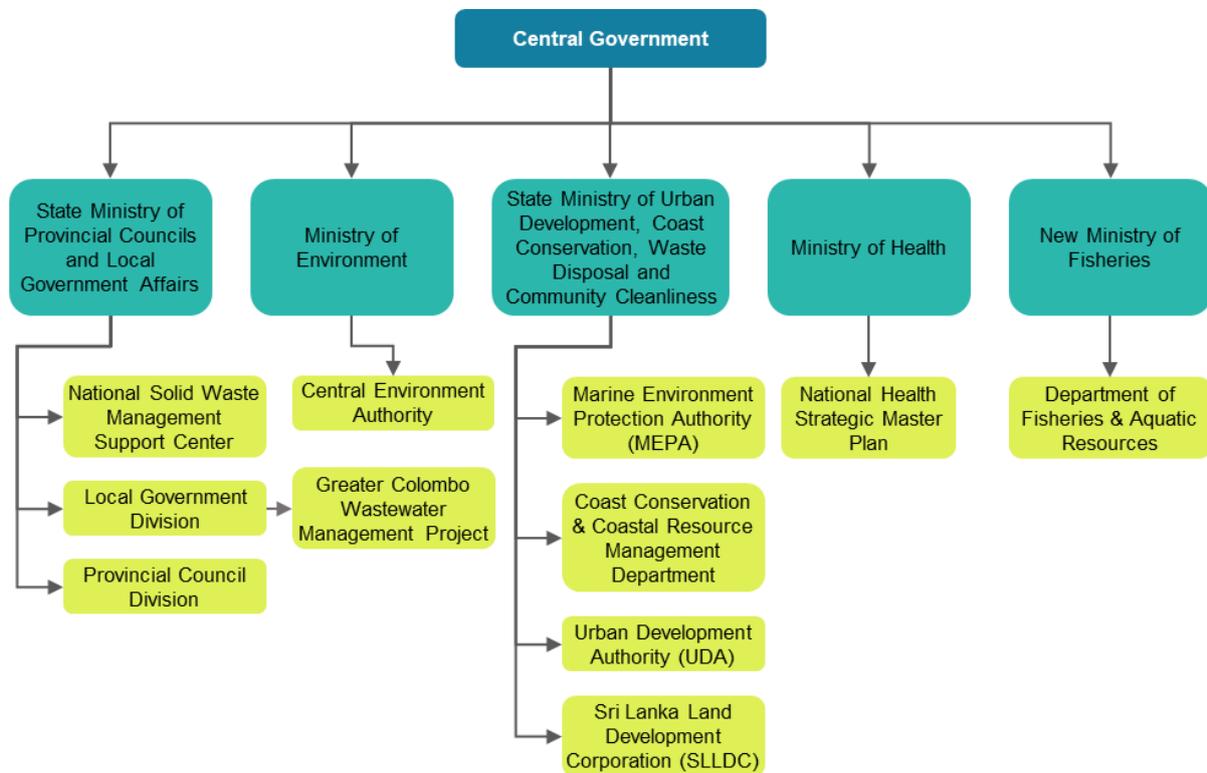
<sup>26</sup> [https://www.researchgate.net/publication/342546211\\_Status\\_of\\_Part particulate\\_Marine\\_Plastics\\_in\\_Sri\\_Lanka](https://www.researchgate.net/publication/342546211_Status_of_Part particulate_Marine_Plastics_in_Sri_Lanka)

<sup>27</sup> [https://www.unccd.or.jp/content/documents/7413Sri%20Lanka\\_Country%20Report+Front%20page.pdf](https://www.unccd.or.jp/content/documents/7413Sri%20Lanka_Country%20Report+Front%20page.pdf)

<sup>28</sup> [https://www.researchgate.net/publication/342546211\\_Status\\_of\\_Part particulate\\_Marine\\_Plastics\\_in\\_Sri\\_Lanka/link/5f605fefa6fdcc1164132c87/download](https://www.researchgate.net/publication/342546211_Status_of_Part particulate_Marine_Plastics_in_Sri_Lanka/link/5f605fefa6fdcc1164132c87/download)

<sup>29</sup> [https://www.researchgate.net/publication/330467647\\_Cost\\_Benefit\\_Analysis\\_for\\_the\\_National\\_Post\\_Consumer\\_Plastic\\_Waste\\_Management\\_Project](https://www.researchgate.net/publication/330467647_Cost_Benefit_Analysis_for_the_National_Post_Consumer_Plastic_Waste_Management_Project)

Figure 2: Structure of Marine Debris Management Institutions



Picture source: developed as part of this policy brief

Besides the central governmental agencies, local provincial councils also have responsibilities with regards to waste management. The **Western Provincial Council**, for example, has its own **Waste Management Authority** with the mission to establish appropriate waste management strategies in collaboration with the central government<sup>30</sup>. As the tourism industry is among the biggest contributors to marine litter in Sri Lanka, the **Sri Lanka Tourism Development Authority** (SLTDA) advocates for sustainability policies to implement a clear strategy for sustainable tourism in Sri Lanka<sup>31</sup>.

Efforts required to prevent marine litter should be driven collaboratively across governments, the industry, civil society organizations and NGOs. The United Nations (UN) play an important role in initiating initiatives towards achieving global sustainability goals regarding marine litter. The **Global Partnership on Marine Litter**, for example, was initiated by the UN to bring together policymakers, civil society actors, the scientific community and the private sector and serve as a voluntary multi-stakeholder coordination mechanism. Adding to that, the **Honolulu Strategy** was created as a planning framework to globally prevent and manage marine litter and reduce its ecological, human health, and economic impacts<sup>32</sup>. It aims to reduce the amount and impact of all kinds of waste, including land-based solid waste, sea-based debris like lost cargo or fishing gears as well as marine debris on shorelines, entering the oceans<sup>33</sup>. **CleanSeas** is another important initiative launched by the UN Environment Programme aiming to engage governments, the general public and the private sector in the fight against marine

<sup>30</sup> <http://wma.wp.gov.lk/2020/about-company/>

<sup>31</sup> <https://www.sltida.gov.lk/en/about-us>

<sup>32</sup> <https://wedocs.unep.org/handle/20.500.11822/10670>

<sup>33</sup> <https://gicait.maps.arcgis.com/apps/Cascade/index.html?appid=430700ada8ee48fa936b66b9d096bf8e>

plastic pollution<sup>34</sup>. Sri Lanka has joined the global initiative in 2017, to join forces on measures like bans for plastic bags, creating new marine reserves and driving recycling<sup>35</sup>. In addition, the country served as a UNEP Advisory Group member for the UNEA-2 Marine Litter Study 2015-2016 and Advisory Group member for the Marine Plastic Litter and Microplastic Assessment – 2017<sup>36</sup>. Looking at governmental institutions, the **South Asia Co-operative Environment Programme** (SACEP) is an important inter-governmental organization that engages in regional cooperation to promote and support the protection of the environment. Under this programme, the **South Asian Seas Programme** (SASP) was created<sup>37</sup>. Sri Lanka is working closely together with both programmes to develop a regional management plan on marine litter and micro plastics and plan activities within the international coastal clean-up days and the environment day<sup>36</sup>. The **International Maritime Organization** (IMO) adopted an International Convention for the Prevention of Pollution from Ships, known as **MARPOL**, addressing one of the most threatening sources of plastic pollution in the oceans<sup>38</sup>. Sri Lanka already ratified five out of the convention’s six annexures<sup>36</sup>. Furthermore, Sri Lanka also signed up the **Common Wealth Clean Oceans Alliance** (CCOA) which means committing to take steps to eliminate avoidable SUP, reduce SUP bags and introduce bans on selling and manufacturing microbeads in rinse-off cosmetic and personal care products<sup>39</sup>.

## 4. Problem Analysis

A major issue with respect to marine litter is the fact that, once it entered the ocean, it requires immense efforts to recover it again. Even worse, marine litter that entered deep-sea waters in most cases cannot even be accessed anymore<sup>36</sup>. It is therefore of utmost importance to tackle the root-causes of marine litter, which mainly lie in inefficient waste management and by addressing these, ultimately prevent litter from entering the aquatic environment. Some of the most pressing problems with regards to marine litter in Sri Lanka are listed below.

Sri Lanka is still lacking the appropriate infrastructure for **waste collection, transportation and recycling**. Many polyethylene collectors and recyclers registered in Sri Lanka cannot keep up with the speed needed to treat the enormous amounts of waste present in the country. Open dumping is still very common in the country and proper environmental management processes are missing. Even though, municipal solid waste collection is performed daily and beach clean-ups are organized from time to time, final disposal of the collected waste still poses a major problem<sup>40</sup>. While there is simply not enough land for final dumping, at the same time recycling and composting facilities as well as proper equipment for waste management are lacking. Such equipment would for example include vehicles and advanced recycling technology<sup>41</sup>. Especially in the Southern Province of Sri Lanka, many households lack access to direct waste collection, a situation which is even more pressing in rural areas. Most cities in the province do not have the capacities needed to adequately handle the amount of waste generated<sup>41</sup>.

As shown in the stakeholder analysis of this policy brief, many different actors are responsible for waste management in Sri Lanka. Thus, responsibilities are dispersed and not a single agency has full authority over all components with regards to waste management and marine pollution. **Poor coordination among institutional stakeholders** results in ineffective and non-transparent waste management structures<sup>40</sup>.

The multitude of organizations responsible for waste management, pollution as well as services related to water and coastlines further leads to **overlapping stakeholder responsibilities**<sup>42</sup>. For example, the National Solid Waste

<sup>34</sup> <http://www.cleanseas.org/about>

<sup>35</sup> <https://www.cleanseas.org/impact/chile-oman-sri-lanka-south-africa-join-cleanseas-campaign-against-ocean-pollution>

<sup>36</sup> [https://papersmart.unon.org/resolution/uploads/position\\_paper\\_sri\\_lanka.pdf](https://papersmart.unon.org/resolution/uploads/position_paper_sri_lanka.pdf)

<sup>37</sup> <http://sacep.org/programmes/south-asian-seas/about>

<sup>38</sup> [https://www.imo.org/en/About/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx](https://www.imo.org/en/About/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx)

<sup>39</sup> <https://bluecharter.thecommonwealth.org/action-groups/marine-plastic-pollution/>

<sup>40</sup> [https://www.researchgate.net/publication/342546211\\_Status\\_of\\_Part particulate\\_Marine\\_Plastics\\_in\\_Sri\\_Lanka/link/5f605fefa6fdcc1164132c87/download](https://www.researchgate.net/publication/342546211_Status_of_Part particulate_Marine_Plastics_in_Sri_Lanka/link/5f605fefa6fdcc1164132c87/download)

<sup>41</sup> <https://www.sciencedirect.com/science/article/abs/pii/S0956053X18307086?via%3Dihub>

<sup>42</sup> <http://www.boblme.org/documentRepository/BOBLME-2011-Ecology-14.pdf>

Management Support Center is situated under the Ministry of Local Government and Provincial Councils, while the Ministry of Mahaweli Development and Environment formulates the national policy for waste management and local governments are mainly responsible for waste collection issues.

Sri Lanka promotes **waste to energy** (WtE) plants and pays a premium price for the electricity generated from such plants. However, this led to a situation in which most of the municipal councils in Sri Lanka's Western province abandon waste segregation as they collect mixed waste and direct it to WtE plants instead.

A lack of **awareness creation** among citizens, stakeholders in waste management and political actors is another problem adding to marine litter in Sri Lanka. Government officials lack sufficient capacities to address the environmental impacts of micro plastics or open dumping. Public waste handling agencies frequently dump different waste types into a single collection site, annulling the potential effects of prior segregation. Many Sri Lankans, especially those living on coastlines, still dispose of their solid waste in the environment, irrespective of the harm they are doing to their own livelihood<sup>43</sup>. The low level of awareness about the dangers associated with environmental pollution and marine litter results in low labour productivity and a lack of political will to tackle such problems<sup>43 40</sup>.

Current policies in Sri Lanka that concern the country's water and waste management systems add to the problem as they mainly concern the accessibility of clean water allocation and supply for communities. Despite its relevance these **regulations are not reaching far enough**, while disregarding the environmental aspects such as preservation of marine ecosystems<sup>42</sup>.

Sri Lanka is still in the course of developing an **EPR scheme**, including the **polluter-pays-principle** (PPP), as an amendment for the Environment Act. Pilots and policy proposals have been suggested in regard to both, EPR as well as PPP, but a solid regulation addressing the responsibilities of industry stakeholders in particular has yet not been passed<sup>44</sup>. Such policies may bridge an important link between environmental governance and industrial activities, which both partly carry responsibilities for waste entering the ocean<sup>43</sup>.

In addition, there is an **absence of an integrated waste management strategy**, meaning that there are no clear mechanisms to manage marine debris along seashores, despite policy measures such as the National Policy on Solid Waste Management, the Coast Conservation Act and the Marine Pollution Prevention Act, which claim to thrive for pollution mitigation. It is therefore crucial to introduce regulations which integrate the socio-economic and environmental issues related to marine litter. This absence is particularly critical as it hinders to identify the duties of agencies, stakeholders, and the general public. The slow developments towards a regulatory framework, and political interference together with a lack of a sound national policy for Solid Waste Management (SWM) has led to an accumulation of negative environmental impacts in Sri Lanka<sup>45</sup>.

Although the most recent amendment of the National Policy on Solid waste management recognized the relevance of tracking generated waste, there is still a **lack of applied policy monitoring mechanisms**. In particular, there is an acute need to understand pathways and consistencies of different types of marine litter to reduce its accumulation through effective marine debris pollution management plans<sup>46</sup>. Although beach clean-ups have been carried out on a regular basis, including the collection of waste-related data, few underwater surveys have been carried out to assess the composition of marine debris<sup>46</sup>. Sri Lanka additionally lacks realistic coastal water quality standards to facilitate effective monitoring<sup>47</sup>.

Besides weak monitoring, also a **lack of enforcement** is lowering the potential effectiveness of policies<sup>48</sup>. Breaching environmental regulation often remains without consequences, while financial incentives to encourage innovative

<sup>43</sup> [https://papersmart.unon.org/resolution/uploads/position\\_paper\\_sri\\_lanka.pdf](https://papersmart.unon.org/resolution/uploads/position_paper_sri_lanka.pdf)

<sup>44</sup> [http://www.cabinetoffice.gov.lk/cab/index.php?option=com\\_content&view=article&id=16&Itemid=49&lang=en&dID=7186](http://www.cabinetoffice.gov.lk/cab/index.php?option=com_content&view=article&id=16&Itemid=49&lang=en&dID=7186)

<sup>45</sup> [http://www.cabinetoffice.gov.lk/cab/index.php?option=com\\_content&view=article&id=16&Itemid=49&lang=en&dID=7186](http://www.cabinetoffice.gov.lk/cab/index.php?option=com_content&view=article&id=16&Itemid=49&lang=en&dID=7186)

<sup>46</sup> [https://www.researchgate.net/publication/342546211\\_Status\\_of\\_Part particulate\\_Marine\\_Plastics\\_in\\_Sri\\_Lanka/link/5f605fefa6fdcc1164132c87/download](https://www.researchgate.net/publication/342546211_Status_of_Part particulate_Marine_Plastics_in_Sri_Lanka/link/5f605fefa6fdcc1164132c87/download)

<sup>47</sup> <http://extwprlegs1.fao.org/docs/pdf/srl183129.pdf>

<sup>48</sup> <http://www.boblme.org/documentRepository/BOBLME-2011-Ecology-14.pdf>

alternatives of packaging are moreover lacking. The penalties for violations are minimal, which among other reasons has contributed to a failure of the polystyrene and polyethylene ban<sup>49</sup>.

Policy developments on sub-national level are moreover often driven by international initiatives. The engagement of local and regional authorities in regard to policy making, enforcement and monitoring of regulations that are specifically targeted to the provinces requirements, is generally low.

## 5. Recommendations

Based on this problem analysis, PROMISE recommends policy makers to pay attention to some of the following potential areas of intervention in order to improve the implementation and compliance of marine litter policies.

- **An integrated waste management system and infrastructure** urgently need to be established in Sri Lanka and treatment plants need to be better equipped to ensure the recycling of various plastic and waste types. This should counteract the disincentives to segregate waste created by the implementation of waste to energy plants.
- Along with establishing an appropriate waste management infrastructure comes the need to **provide sufficient land** for waste treatment facilities. A first step towards tackling this problem could be to rehabilitate existing dumpsites.
- **Establishing and strengthening the policy framework to regulate waste management** should be a main priority for future initiatives. Monitoring and enforcement of these policies should gain particular attention.
- The introduction of an **EPR scheme**, which is already partly on its way, is crucial to engage the private sector. The Ceylon Chamber of Commerce could be a leading actor in implementing an EPR scheme for Sri Lanka as the respective dialogue process with private sector stakeholders has already started.
- **Cross-cutting policies** linking industry and governance, such as sustainable production policies and green public procurement, need to be strengthened. The introduction of zero-waste concepts could, for example, be part of such policies.
- **Funding and financial incentives** for marine litter prevention initiatives should be increased. Viable business models need to be created to finance improved collection systems. Governmental bodies should therefore make use of financial policy instruments that combine reward and penalty, motivation and support regarding private stakeholders that engage in recycling processes as well as innovating on alternatives to common packaging products.
- A **clear distribution of roles and responsibilities** among all actors is needed to effectively implement waste management policies and limit littering. The coordination between central and local agencies as well as different ministries should be clearly defined.
- **Collaboration among different stakeholders** should be increased to enable an integrated approach to fighting marine litter. Such efforts could be led by the CEA or MEPA and foster, on the one hand, cross-ministerial collaboration and, on the other hand, include international stakeholders like SACEP, MARPOL or the CCOA.

<sup>49</sup> [http://www.wepa-db.net/activities/2012/20120827\\_srilanka/pdf/WEPA\\_DM\\_SriLanka\\_Arachchi.pdf](http://www.wepa-db.net/activities/2012/20120827_srilanka/pdf/WEPA_DM_SriLanka_Arachchi.pdf)

- Governmental bodies also need to create and strengthen their **cooperation with the private sector** including plastic manufacturers as well as stakeholders from fisheries and the shipping as well as tourism industries to establish effective plastic waste management systems and distribute responsibilities.
- Cooperation with global organizations and initiatives should be strengthened in order to **facilitate the international circulation of re-usable and recyclable resources** as well as **remanufactured products** as mutually agreed by countries and in accordance with international and national laws.
- Human capacities of central and local authorities as well as the civil society should be strengthened through proper **awareness creation programmes**. In such a way, communities could be integrated in waste segregation and minimization processes, fostering an overall attitude change in consumption and disposal behaviour. Government officials should further be educated on the problems of marine litter, enabling them to take the right decisions with regards to fighting it.

**Disclaimer:** This paper has been produced with the financial support of the European Union in the framework of the project 'Prevention of Marine Litter in the Lakshadweep Sea (PROMISE)'. Its contents are the sole responsibility of the authors and do not necessarily reflect the views of the European Union.

## Publication bibliography

Arachchi, K. H. Muthukuda (2007): Environmental Regulations and the Role of the Central Environmental Authority in Industrial Waste Water Management. Available online at: [http://www.wepa-db.net/activities/2012/20120827\\_srilanka/pdf/WEPA\\_DM\\_SriLanka\\_Arachchi.pdf](http://www.wepa-db.net/activities/2012/20120827_srilanka/pdf/WEPA_DM_SriLanka_Arachchi.pdf), checked on: 30/06/2021

Arachchi, Namal; Thathsarani, Sulaksha; Kaluarachchi, Anuththara; Nilmini, Aradhana (2020): Current Plastic Wastage and Introducing New Innovations to Minimize Plastic Wastage in Sri Lanka. Available online at: [https://papersmart.unon.org/resolution/uploads/position\\_paper\\_sri\\_lanka.pdf](https://papersmart.unon.org/resolution/uploads/position_paper_sri_lanka.pdf), checked on: 30/06/2021

BOBLME (2013): Country report on pollution. Available online at: <http://www.boblme.org/documentRepository/BOBLME-2011-Ecology-14.pdf>, checked on: 30/06/2021

Central Environment Authority (2017): Regulations on Polythene & Plastic Management. Available online at: [http://www.cea.lk/web/?option=com\\_content&view=article&layout=edit&id=1080](http://www.cea.lk/web/?option=com_content&view=article&layout=edit&id=1080), checked on: 30/06/2021

Clean Seas (2021): Clean Seas Homepage. Available online at <https://www.cleanseas.org/>, checked on 30/06/2021

Commonwealth Clean Ocean Alliance (2021): Action Groups. Available online at: <https://bluecharter.thecommonwealth.org/action-groups/marine-plastic-pollution/>, checked on: 30/06/2021

Department of Census and Statistics, Population Census and Demography Division (2012): Census of Population and Housing. Available online at: [http://www.statistics.gov.lk/pophousat/cph2011/pages/activities/reports/cph\\_2012\\_5per\\_rpt.pdf](http://www.statistics.gov.lk/pophousat/cph2011/pages/activities/reports/cph_2012_5per_rpt.pdf), checked on 30/06/2021

Fernando, R. Lalitha S. (2019): Solid waste management of local governments in the Western Province of Sri Lanka: An implementation analysis, Waste Management, Volume 84, Pages 194-203, ISSN 0956-053X, <https://doi.org/10.1016/j.wasman.2018.11.030>.

Government of Sri Lanka (2019): Draft National Policy on Sustainable Consumption & Production for Sri Lanka. Available online at: <http://env.gov.lk/web/images/pdf/2018/EPE/scp%20policy%20english%20draft.pdf>, checked on 30/06/2021

Haran, Rivi; Sanmugam, Mahaluxmi; Kirusanurethan, Kirushnapillai; Thavaseelan, Dinesha. (2020): The Ways to Minimize the Plastic Wastage in Sri Lanka. Volume 1. 24. Available online at: [https://www.researchgate.net/publication/342701426\\_The\\_Ways\\_To\\_Minimize\\_the\\_Plastic\\_Wastage\\_in\\_Sri\\_Lanka](https://www.researchgate.net/publication/342701426_The_Ways_To_Minimize_the_Plastic_Wastage_in_Sri_Lanka), checked on 30/06/2021

International Convention for the Prevention of Pollution from Ships (MARPOL) (2021): Conventions. Available online at: [https://www.imo.org/en/About/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx](https://www.imo.org/en/About/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx), checked on 30/06/2021

Japan International Cooperation Agency (2016): Data Collection Survey on Solid Waste Management in Democratic Socialist Republic of Sri Lanka, Final Report. Available online at: <https://openjicareport.jica.go.jp/pdf/12250213.pdf>, checked on 30/06/2021

Kallesoe, Mikkel F.; De Alwis, Diana (2005): Financial Incentives for Ecosystem Conservation: A Review of the Development of Markets for Environmental Services in Sri Lanka. IUCN Water, Nature and Economics Technical Paper No. 4, IUCN — The World Conservation Union, Ecosystems and Livelihoods Group Asia

Karunaratana, Anurudda; Singh, Rajeev Kumar; Rajapaksha, Thilini; Premakumara, Dickella Gamaralalage Jagath; Onogawa, Kazunobu (2019): State of Municipal Solid Waste Management on Negombo City, Sri Lanka. United Nations Environment Programme and Institute for Global Environmental Strategies

Mafaziya, Fathima; Atugoda, Thilakshani; Kumara, P. Terney PradeepB.; Gunasekara, A.; Vithanage, Meththika (2020): Status of Particulate Marine Plastics in Sri Lanka. Available online at: [https://www.researchgate.net/publication/342546211\\_Status\\_of\\_Part particulate\\_Marine\\_Plastics\\_in\\_Sri\\_Lanka](https://www.researchgate.net/publication/342546211_Status_of_Part particulate_Marine_Plastics_in_Sri_Lanka), checked on 30/06/2021

Ministry of Land and Land Development “Mihikatha Medura”, Land Secretariat (2014): National Policy on Protection and Conservation of Water Sources, their Catchments and Reservations in Sri Lanka. Available online at: [https://luppd.gov.lk/images/content\\_image/downloads/water\\_policy\\_english.pdf](https://luppd.gov.lk/images/content_image/downloads/water_policy_english.pdf), checked on 30/06/2021

Municipal Councils (1947): An Ordinance to Amend and Consolidate the Law Relating to Municipal Councils. Available online at: [http://www.commonlii.org/lk/legis/consol\\_act/mc576223.pdf](http://www.commonlii.org/lk/legis/consol_act/mc576223.pdf), checked on 30/06/2021

Newman, Stephanie; Watkins E., Farmer A., Brink P., Schweitzer JP. (2015) The Economics of Marine Litter. In: Bergmann M., Gutow L., Klages M. (eds) Marine Anthropogenic Litter. Springer, Cham. [https://doi.org/10.1007/978-3-319-16510-3\\_14](https://doi.org/10.1007/978-3-319-16510-3_14)

Ninth Regional 3R Forum in Asia and the Pacific (2019): Country 3R Progress Report. Available online at: [https://www.uncrd.or.jp/content/documents/7413Sri%20Lanka\\_Country%20Report+Front%20page.pdf](https://www.uncrd.or.jp/content/documents/7413Sri%20Lanka_Country%20Report+Front%20page.pdf), checked on 30/06/2021

Office of the Cabinet of Ministers – Sri Lanka (2016): Press Briefing of Cabinet Decision. Available online at: [http://www.cabinetoffice.gov.lk/cab/index.php?option=com\\_content&view=article&id=16&Itemid=49&lang=en&dID=7186](http://www.cabinetoffice.gov.lk/cab/index.php?option=com_content&view=article&id=16&Itemid=49&lang=en&dID=7186), checked on 30/06/2021

Perera, Melani Manel (2018): Environmentalist calls for the elimination and recycling of plastics to reduce pollution. Available online at: <https://translate.google.com/translate?hl=de&sl=en&u=http://www.asianews.it/news-en/Environmentalist-calls-for-the-elimination-and-recycling-of-plastics-to-reduce-pollution-42958.html&prev=search&pto=ae>, checked on 30/06/2021

Shantha, A. Aruna; Samarakoon, Ajantha (2019): Cost Benefit Analysis for the National Post Consumer Plastic Waste Management Project. Available online at: [https://www.researchgate.net/publication/330467647\\_Cost\\_Benefit\\_Analysis\\_for\\_the\\_National\\_Post\\_Consumer\\_Plastic\\_Waste\\_Management\\_Project](https://www.researchgate.net/publication/330467647_Cost_Benefit_Analysis_for_the_National_Post_Consumer_Plastic_Waste_Management_Project), checked on 30/06/2021

South Asia Co-operative Environment Programme (2007): Marine Litter in the South Asian Seas Region. Available online at: [https://wedocs.unep.org/bitstream/handle/20.500.11822/7968/-Marine%20Litter%20in%20the%20South%20Asian%20Seas%20Region-2007Marine\\_Litter\\_in\\_the\\_SAS\\_Region.pdf?sequence=3&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/7968/-Marine%20Litter%20in%20the%20South%20Asian%20Seas%20Region-2007Marine_Litter_in_the_SAS_Region.pdf?sequence=3&isAllowed=y), checked on 30/06/2021

South Asia Co-operative Environment Programme (2021): About SASP. Available online at: <http://sacep.org/programmes/south-asian-seas/about>, checked on 30/06/2021

Sri Lanka Tourism Development Authority (2021): Tourism Research and Statistics. Available online at: <https://sltda.gov.lk/en/statistics>, checked on 30/06/2021

The Gazette of the Democratic Socialist Republic of Sri Lanka (2006): Extraordinary. Available online at: <http://extwprlegs1.fao.org/docs/pdf/srl183129.pdf>, checked on 30/06/2021

The Gazette of the Democratic Socialist Republic of Sri Lanka (2008): Government Notifications. Available online at: <http://www.cea.lk/web/images/pdf/Gazette-Notification-No-1534-18-dated-01-02-2008.pdf>, checked on 30/06/2021

United Nations Environment Programme (2016): The Honolulu Strategy: A Global Framework for Prevention and Management of Marine Debris. With assistance of Ecosystems Division. Available online at <https://wedocs.unep.org/handle/20.500.11822/10670>, checked on 30/06/2021

United Nations Environment Programme (2019): Promotion of Countermeasures Against Marine Plastic Litter in Southeast Asia and India. Available online at <https://gicait.maps.arcgis.com/apps/Cascade/index.html?appid=430700ada8ee48fa936b66b9d096bf8e>, checked on 30/06/2021

Waste Management Authority Westran Province (2021): About Us. Available online at: <http://wma.wp.gov.lk/2020/about-company/>, checked on 30/06/2021

Water Resources Board (1964): An Act to Provide for the Establishment of a Water Resources Board, and to Make Provision for Matters Connected Therewith or Incidental Thereto. Available online at: <http://extwprlegs1.fao.org/docs/pdf/srl14834.pdf>, checked on 30/06/2021