

Environmental Challenges and the Sustainable Development Goals: A Study about the Emerging Environmental Issues in Sri Lanka

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ABSTRACT

Poverty, inequality, economic as well as social instability and environmental degradation are common features of unsustainable development. In general, the need for sustainable development is rarely at the top of priority lists of the people in developing countries because their livelihoods are mainly depended on available economic opportunities and environment variables. As a developing country, Sri Lanka has shown a progress of many aspects in sustainable development goals. However, irresponsible planning, unplanned development activities, absence of a proper monitoring as well as evaluation system and lack of knowledge on sustainable development has resulted in damaging the ecosystems over the last few decades. In this context, this study attempts to investigate the direction of some of the key environmental variables in the country. It also analyses the knowledge and attitudes of people in Sri Lanka towards the sustainable development, climate changes, forest as well as biodiversity conservation and government policies. Results show that performances of most environmental indicators are not consistent with achieving main targets set up under the sustainable development goals. It is found that people as well as policy makers have given low priority on sustainable development and environment which may be one of the main reasons for environmental degradation in the country.

KEYWORDS: Sustainable development; Environment; Sri Lanka

Introduction

Environmental degradation is one of the main priority areas that need to be paid more attention in the world today (Bakshi and Kumar, 2013). Long term environmental degradation can completely destroy the various components of the environment such as biodiversity, ecosystems, natural resources and habitats (Nakicenovic *et al.*, 2015). Environmental degradation is mainly driven by many factors including economic growth, population growth, urbanization, intensification of agriculture, rising energy use, extensive use of natural resources and transportation. The primary cause of environmental degradation is human disturbance and a rapid growth of population adversely affects the natural resources and environment in any country. The uprising population and the environmental deterioration face the challenge of sustainable development (Asheim, 1987).

Unsustainable development occurs when present progress is at the expense of future generations (Barbier, 1987; Robert *et al.*, 1997). Especially, irresponsible planning that results in environmental degradation through exploitation of resources generates waste and pollution that damages ecosystems¹. The challenge is to change this unsustainable pattern and create a more evenly balanced relationship with the natural environment (Chatterjee, 1997; Lu *et al.*, 2015). Achieving sustainable development will require collective actions to deliver on the legitimate aspiration towards further economic and social progress and at the same time strengthening environmental protection (Nakicenovic *et al.*, 2015). Many developing countries are adopting their own consumption and production patterns that include greening of agriculture, industry and services which can be more sustainable. It is evident that sustainable management of natural resources must be accompanied by economic growth generating sufficient wealth, welfare, social justice and equality of opportunities (David, 1994; Asheim, 1997). This need to be achieved through an adaptive process of integration which is required to identify trade-offs among the different stockholders as well as different methods of using existing resources (Howarth and Richard 1992; Pezzey and Toman, 2002). In this context identifying the present trend of existing variables that represent the sustainability and recognition the different perspectives of ordinary people on environment are both inevitable and legitimate in any country.

Sri Lanka has rapidly improved its economic and social status since the early 1980s, and has undergone rapid industrialization with social development. However, this has resulted to emerge many environmental issues in the country which are still unsolved. The industrialization with extensive agricultural practices have led to an increase in pollution, deforestation, soil erosion, loss of biodiversity while developing unsustainable production and consumption patterns among Sri Lankans. While the Government of Sri Lanka anticipates achieving the SDGs by 2030, a lack of public awareness as well as government policies and practical implementation issues of the public policies has curtailed the sustainable development targets. Given this background this study is attempting to identify the direction of key environmental variables related to the SDG 15² in the country after 1990 where the MDGs were set up. It also will investigate peoples' knowledge, attitudes and awareness about the sustainable development, climate change and some environmental issue in the country using survey data in Sri Lanka.

It is commonly accepted that the environmental degradation is a result of the dynamic inter play of socio-economic, institutional and technological activities (Chatterjee, 1997). Environmental changes may be driven by many factors including economic growth, population growth, urbanization, intensification of agriculture, industrialization, rising energy use and transportation. All these are challenges for achieving different goals of the sustainable development. In this context, any policy

¹ An important sustainable development challenge arises from unsustainable consumption and production patterns that have evolved in developed countries, a pattern that is increasingly being followed by developing countries.

² Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

aims to promote the sound management of Sri Lanka's environmental resources need to take into account the needs for social and economic development as well as environment integrity. It is also required to manage the environment by linking together the activities, interests and perspectives of stakeholders and to assure environmental accountability. For this purpose, identifying the trend of key environmental variables as well as knowledge and attitudes of the people are extremely important. However, no proper studies are found in the literature that provide sufficient information for policy makers to understand the existing environmental challenges and direction of environmental variables in the country. This paper is partly attempting to fill this void in the literature.

Methodology

This study used an analytical approach primarily based on secondary data as well as primary sources of information. The necessary and required secondary data was collected through secondary information by reviewing the published and unpublished reports. Primary data was gathered through surveys, key informants' interview and focus group discussions. We conducted a survey in 2017 to investigate people's knowledge, attitudes and awareness of sustainable development as well as the environment in Sri Lanka. The survey basically covered 9 districts (Ampara, Anuradhapura, Badulla, Gampaha, Hambanthota, Jaffna, Kandy, Kegalle, Kurunagala) representing 9 provinces in the country. Each district 60 households (30 from rural and 30 from urban) were interviewed and collected the information. Questionnaire was two pages, simple one and questions related to the knowledge, attitudes and awareness on sustainable development as well as general environment and socio-economic background information were included. The final data includes 260 urban households and 265 rural households.

The questionnaire consisted of 26 questions under three categories, such as their knowledge on sustainable development, their suggestions on mitigation and adaptation and their socio-economic demographic information. The questions were aimed at measuring peoples' level of awareness on sustainable development, the contributing factors, their mitigation measures and recommendations. The data collection was done by the enumerators in close supervision of the research coordinators. The necessary suggestions and feedback were provided to the enumerators during the data collection process. The completed questionnaires were also checked by researchers to ensure proper information. After completion of the data collection, the data was cleaned by cross checking and field verification. The descriptive statistics including frequency, percentage, ratio and mean analysis were carried out and tables have been used for data presentation. All the respondents involved in the study were fully informed about the nature of the study, research objectives and confidentiality of the collected information. The study team solicited each respondent a verbal consent prior to the enrolment in the study. Only those respondents who voluntarily agreed to participate were interviewed. All the study participants were

informed of their right to refuse participation and to withdraw the interview at any time.

The respondents represent different strata of the population such as farmers, government and non-government employees, students, self-employed and unemployed. They are between the ages of 20 to 65. They represent 50 % from rural sector and 50 % from urban sector and 52% of the respondents are females and 48 % are males. The mean monthly income of the average household is around Rs. 47,500 while means the income of a family is approximately Rs. 84,800. It was observed that there was a higher variation in the income level of selected families. Concerning education, 62 % of households have a head who has an advanced level of education. The average Sri Lankan household consists of approximately 3 members which is consistent with our sample data.

Current Trend and Future Direction

The Government of Sri Lanka anticipates achieving the SDGs by 2030 working towards the provision of basic needs of the people, progressive alleviation of poverty, elimination of all forms of discrimination and inequalities, and establishing a society based on social justice and human security (Department of Census and Statistics, 2017). Although Sri Lanka has made an efficient effort to achieve most of the SDGs, severe environmental issues have emerged due to little dedication and knowledge to conserve the environment in the country. There are many emerging environmental issues in Sri Lanka, however the most harmful and increasing problems are deforestation, loss of biodiversity, habitat degradation, water pollution and air pollution, respectively.

Table 1: Environmental Performance Index

Country	2018		2014		2010	
	EPI Ranking	EPI Index	EPI Ranking	EPI Index	EPI Ranking	EPI Index
Bhutan	131	47.22	103	46.86	40	68.0
India	177	30.57	155	31.23	123	48.3
Maldives	111	52.14	-	-	48	65.9
Nepal	176	31.44	139	37.00	38	68.2
Pakistan	169	37.5	148	34.54	125	48.0
Sri Lanka	70	60.61	69	53.88	58	63.7

Source: EPI, 2018.

Note: Number of countries in 2018 was 180 while it was 178 in 2010

One of the interesting indexes that capture the environmental performance of a country is Environmental Performance Index (EPI) which, at present ranks 180 countries on 24 performance indicators across ten issue categories covering environmental health and ecosystem vitality. The EPI offers a scorecard that highlights in environmental performance and provides guidance for countries that aspire to be leaders in sustainability. Following Table 1 summarizes the EPI ranking of selected south Asian countries 2018. It is evident that environmental performance of all

selected countries in south Asia has been moving into negative direction during even in this short term period (Nakicenovic *et al.*, 2015; EPI, 2018). Low scores on the EPI are indicative of the need for national sustainability efforts on a number of fronts, especially cleaning up air quality, protecting biodiversity, and reducing GHG emissions. The EPI draws attention to the issues on which policymakers must take further action. According to the figure India, Nepal and Pakistan come in near the bottom of the rankings. Sri Lanka ranks 58th out of 178 countries in its efforts to address environmental challenges by 2010. Sri Lanka has performed the worst among other emerging economies which has resulted to decrease the ranking to 70th by 2018. Given this general background, key environmental issues that country has faced can be discussed as follows.

Forest Degradation: Forests in a country play an important role in protecting biodiversity and absorbing carbon dioxide emissions. While many tropical countries are experiencing rapid deforestation, some have experienced transition of their forest from net deforestation to net reforestation. It is known that countries in South Asia are environmentally and geographically rich, diverse, and dynamic region. Therefore, we analysed the trend of the forest in those countries after 1990. Table 3 summarizes the information. The figures in Table 2 clearly show that net change of the forest area in Nepal, Pakistan and Sri Lanka is negative during last 20 years period.

Table 2: Forest Area as a Percentage of Land Area in Selected South Asian Countries

Country Name	1991-1995	1996-2000	2001-2005	2006-2010	2011-2015	Net Change
Bhutan	57.35	64.98	67.82	70.45	71.75	25.12
India	21.63	21.90	22.54	23.19	23.65	9.37
Maldives	3.33	3.33	3.33	3.33	3.33	0.00
Nepal	32.08	28.54	25.92	25.36	25.36	-20.94
Pakistan	3.14	2.85	2.55	2.30	2.02	-35.73
Sri Lanka	35.54	34.48	33.63	33.11	33.14	-6.77
South Asia	16.52	16.55	16.82	17.18	17.42	5.42

Source: World Bank, 2018.

As the spatial variations in rainfall, altitude and soil in different area in Sri Lanka is different, country has a variety of different forest types such as montane forests, sub-montane forests and lowland rainforests (FAO, 1997; Bogahawatta, 1999). In contrast, sparse forests, mangroves, riverine dry forests and monsoon forests are located in the dry zone and the intermediate zone while different types of grasslands occur in the wet and dry areas, in the lowlands as well as in the hills (Lindstrom, 2011). These forest covers in Sri Lanka have been greatly reduced by legal as well as illegal forest clearing over the last few decades. In the dry zone the cultivation of cash crops, large-scale development schemes and shifting cultivation have impacted on natural forests

(Lindström *et al.*, 2012). Mangrove ecosystems on the other hand, are threatened by the reclamation of land, urbanisation and prawn culture. Intensive agricultural practices have led to the decline in quality of most of our natural environments. Majority of farmers resort to converting forests and grasslands to croplands which reduce the quality of natural forests and vegetation cover.

Loss of biodiversity: Sri Lanka has some of the richest biodiversity in Asia (IUCN, 2007). This high biodiversity is closely related to the insular and relatively isolated environment as well as to topography and climate (Di Falco and Chavas, 2009; Karunaratna and Wilson, 2017). These factors also support a large number of endemic species of fauna and flora. The wet zone rain forests provide habitats of special importance, supporting 94 per cent of the country's woody endemic plants and 75 per cent of the endemic animals. Many of the species are endemic, a reflection of the island's separation from the Indian subcontinent. This is especially relevant for mammals, amphibians, reptiles and flowering plants³ (IUCN, 2007; Karunaratna and Wilson 2017). The diversity of ecosystems in the country has resulted in a host of habitats, which contain high genetic diversity. Sri Lanka has the highest biodiversity per unit area of land among Asian countries in terms of flowering plants and all vertebrate groups except birds (Kotagama, 2002). However, high population density and expansion of the human environment have increasingly threatened the island's biodiversity over the last few decades. Furthermore, the loss of biodiversity is expected to continue at an unchanged increasing pace in the coming decades as well (Karunaratna and Wilson, 2017). The major threats to biodiversity in Sri Lanka⁴ are the ever-increasing demand for land for human habitation and related developmental activities. Poor land use planning, indiscriminate exploitation of biological resources, weak enforcement of legislation and the absence of an integrated conservation management approach are other threats to biodiversity.

Environmental pollution: Pollution of the land, air, and water poses long-term cumulative impacts on the quality of the natural environments. Pollution impacts natural process of lands, soil, ocean, underground water and rocks in different ways. Air pollution from automobiles and industries that results in the formation of acid rain which in turn brings about acidic lake is an example of how the environment is degraded by pollution (Senevirathne, 2003; Seneviratne *et al.*, 2011). Air pollution is a problem in Asian countries including Sri Lanka and it is mostly caused by vehicles emission in the country (Ileperuma. 2010). The number of motor vehicles almost tripled during the 1990s which also led to an increase in traffic jams (Nandasena *et al.*, 2010). In addition to the outdoor pollution, indoor pollution also is a concern. Air pollution inside buildings is a severe problem when firewood is used for cooking. Still approximately 80 % of Sri Lankan lives in the rural area and their main source of energy is the firewood

³ These species are distributed in a wide range of ecosystems which can be broadly categorized into forest, grassland, aquatic, coastal, marine and cultivated (Ministry of Environment and Natural Resource in Sri Lanka, 2007).

⁴ The provisional list of 'threatened' faunal species of Sri Lanka includes over 550 species, of which over 50 per cent are endemic (Ministry of Environment and Natural Resources in Sri Lanka, 2007).

(Karunasekera *et al.*, 2001). This has become one of the serious challenges for deforestation in the country while increasing health issues of the indoor pollution.

Accumulating Solid Wastes: Disposal of solid waste has become one of the major environmental issues in Sri Lanka. Dumping of garbage on road sides and sensitive areas⁵ such as wetlands, marshy lands, reservation is a common practice adopted by the public (Bandara 2008). Sri Lanka generates approximately 16000 MT of solid waste per day in urban areas which has been increasing over the last two decades (see Table 3). At present, each person generates an average of 5.1 kg of waste per day which is far higher than most of other countries in the world (see Table 4). According to the Waste Management Authority and the Central Environmental Authority, only half of the waste generated is collected. The seriousness of waste problems is on the rise due to a surge in the amount of waste generated and attributed mainly to economic development in Sri Lanka (Mahees *et al.*, 2011). This is one of the top priority issues for most of the local authorities because they are responsible for executing solid waste management in the country.

Table 3: Municipal Solid Waste Generation in South Asian Countries

Country	MSW Generation Per Capita (kg/capita/day)
Sri Lanka	5.1
India	0.34
Pakistan	0.84
Nepal	0.12
Bhutan	1.46
Maldives	2.48

Source: World Bank, 2017

Table 4: Municipal Solid Waste Generation in Sri Lanka

Year	1995	2000	2010	2015
Solid waste (MT)	8300	9600	12400	17600
Percentage change	-	13 %	29 %	41 %

Source: Author's estimation using country-wide data

Water Pollution: Water pollution is another critical issue with rising population by urbanization, agricultural chemical intensification and development activities in Sri Lanka (Athukorala *et al.*, 2017). Due to industrial effluents, dumping of solid waste, open excretion, seepage of chemicals and pollutants, water in urban areas is polluted and has resulted in life-threatening diseases (Silva, 1996). While domestic activities, industry and agriculture mainly contribute to water pollution in Sri Lanka, rivers and lakes are most affected by pollutants. Surface inland waters in urban areas are

⁵ Open dumping sites in natural areas cause pollution of ground and surface water. Open burning of waste at low temperatures is also widespread and it leads to increased atmospheric pollution and many cause serious health problems as well.

polluted heavily with domestic sewage and industrial effluents, and in rural areas with agricultural runoff (Kularatne and Wanigasundera, 2003). With regard to ground water in certain areas of the dry zone, there is a high fluoride content and a high concentration of iron. Oil spills, dumping of waste from ships, coral and sand mining, and activities are the main causes of marine pollution in the country.

Climate Change: Sri Lanka's geographic location makes it vulnerable for climate change impacts. Expected impacts are an increase in temperature, more frequent extreme weather events like floods as well as landslides. These impacts negatively influence agriculture, fisheries, tourism, people's livelihood, and the environment (Chandrasiri, 2013). The impacts on agriculture will in turn influence food security in certain season in the country. Negative consequences for the environment include biodiversity loss, ecosystem degradation and water cycle disturbances (De Silva *et al.*, 2007). Some regions has already experience more extreme heat while others have cool slightly. Five years average temperature and precipitation level over the last 25 years are reported in Table 5. This figure clearly shows that average temperature level has been increasing gradually while there is a slight fluctuation of precipitation level with upward trend.

Table 5: Temperature and Precipitation Level (Five Years Average)

	1991- 1995	1996- 2000	2001- 2005	2006- 2010	2011- 2015	Change
Temperature (c)	26.97	27.20	27.26	27.27	27.35	+ 0.38
Precipitation(monthly/mm)	137.53	141.07	140.72	150.13	145.44	+ 7.91

Source: World Bank, 2018.

Land Degradation: Land degradation⁶ is one of the most critical problems affecting the future sustainable development in Sri Lanka. In Sri Lanka, soil erosion and declining soil fertility have been the major land degradation issues in central highlands. Extensive use of land for cash crop cultivation and tea cultivation in highland areas contribute significantly for soil erosion (Bandara *et al.*, 2001). Extensive agricultural activities as well as a rapidly expanding population have resulted in a high level of land degradation (Asrat *et al.*, 2004). Main outcomes of these activities includes heavy soil losses, high level of sedimentation, soil fertility decline, salinization, landslides and deforestation. A significant extent of agricultural land in different parts of the country have already become marginal or uneconomic. Furthermore, the unplanned conversion of lands into urban settings, mining areas, housing development projects, office spaces, shopping malls, industrial sites, parking areas and road networks have significantly

⁶ The causes of land degradation can be divided into natural hazards, direct causes, and underlying causes.

contributed to the degradation of natural habitats⁷ and ecosystems in Sri Lanka over the last few decades.

Over the past two decades, sustainable development has emerged as the preferred way of dealing with rapid degradation of the natural environment (Department of Census and Statistics, 2017). The ultimate goal of sustainable development is to improve the quality of life for all members of a community while ensuring the integrity of the life support systems of all human and non-human. It is obvious that Sri Lankan government has taken many steps to achieve the sustainable development goals and results are also fascinating at least some aspects. However, the results of this study shows that country has not put forwards of goal 15 which is “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”. There are a number of reasons that ecosystems degrade over time in the country. While it may not always be the fault of government, existing government, institutions as well as people still need to recognize the values of the environment and ecosystem. Therefore, there is a need to have an integrated approach to address the existing issues in the country. Much of these environmental issues can be solved through a proper coordinating system and implementation of strict rules and regulation while providing required knowledge and information to communities in the country. It is evident that various government institutions, the corporate sector and development sector have been involved in finding a solution to the existing environmental issue in Sri Lanka but unfortunately the lack of coordination among them, lack of priorities to the environmental goals, unplanned development activities and lack of sufficient policies have curtailed the progress of achieving environmental goals under SDG.

Peoples’ Knowledge, Attitudes and Awareness of the Sustainable Development Goals

We also conducted a survey in 2017 to investigate people’s knowledge, attitudes and awareness of sustainable development as well as the environment in Sri Lanka. The survey⁸ covered 9 districts representing 9 provinces in the country. Each district 60 households (30 from rural and 30 from urban) were interviewed and collected the information. Questionnaire was two pages, simple one and questions related to the knowledge, attitudes and awareness on sustainable development as well as general environment and socio-economic background information were included. The final data includes 260 urban households and 265 rural households. The simple percentage calculations of the answer given to different questions are reported in Table 6 and 7.

In our sample, most of the respondents were males (72 %) and in the age group of 15 – 52 years (98 %). The mean monthly income of the household was around Rs. 75200 in urban area while it was Rs. 45600 in rural households. Concerning education, 67 % of sample has an advanced level of education in urban area which is relatively lower in

⁷ Habitat fragmentation carries long term environmental impacts, some of which can destroy entire ecosystems

⁸ Survey was carried out through MDP students at the University of Peradeniya.

rural sample (46 %). Table 6 and 7 summarizes the percentage of answers given to each questions by two groups. Out of the 260 respondents, only 31 % had ever heard of the sustainable development in urban area while it was 29 % of the rural respondents (of 265).

Interestingly only 18 % and 4 % of respondents have heard about SDGs in urban and rural respondents respectively. Furthermore questions asked by the enumerators in this study showed that those who claimed to be aware could not tell at least the total number of SDGs and many seems be confusing SDGs with the MDGs. The results clearly shows some of the interesting differences between two samples. For example, it is evident that more people in rural households (94 %) are aware about the climate change than in urban area ((80 %). Also it is clear that most people are not aware about their contribution to climate change in different way.

In the second part of the questionnaire we include a set of questions related to peoples' attitudes. Before asking these questions enumerators explain the basic meaning of the sustainable development to respondents. Then respondents were allowed to select one of the three options. Simple average calculation for both samples to each question is given in Table 7.

Table 6: People's Knowledge on Sustainable Development (%)

Questions	Urban		Rural	
	Yes	No	Yes	No
Have you ever heard about the sustainable development	31.54	68.46	29.43	70.57
Have you heard about sustainable development goals	18.46	81.54	4.53	95.47
Have you heard about the climate change	80.77	19.23	94.72	5.28
Do you contribute to the climate change	11.92	88.08	10.57	89.43
Do you think that climate changes has some impacts on your livelihood	20.38	79.62	91.32	8.68
Do you think that climate changes will have more impacts on our future generation	25.77	74.23	94.72	5.28
Do you like to have a large forest coverage in Sri Lanka	46.15	53.85	87.17	12.83
Do you contribute to protect the forest in your area	4.62	95.38	86.79	13.21
Do you know that forest coverage has been decreasing in the country over the last two decades	2.31	97.69	42.26	57.74
Have you ever heard about the biodiversity	12.31	87.69	68.68	31.32
Do you know the three main components of the biodiversity	1.54	98.46	1.51	98.49
Do you think that protecting biodiversity is extremely important in the country	6.92	93.08	67.17	32.83
Do you contribute to protect the biodiversity in your area	5.00	95.00	71.70	28.30
Do you know that some species are disappearing from the planet	3.85	96.15	43.77	56.23

Sources: Authors' estimation

According to the results, it is clear that most people expect that development should be sustainable in the country. However, their awareness as well as attitudes show that still people have not given any priority for it. Also lack of proper policies, lack of regulations and absence of good governance have resulted in unsustainable development practices in the country. Also, the importance of the educational system on sustainable development as the focal enlightenment point on SDGs has been duly recognized by the results of this study.

Table 7: People’s Attitudes on Sustainable Development

Different Measures	Agree	Disagree	Not sure
Development should be sustainable in Sri Lanka	59.05	16.38	24.57
Country needs to develop the sustainable consumption pattern	39.62	58.10	2.29
Country needs to develop the sustainable production pattern	74.48	19.43	6.10
Government has taken many steps to achieve the sustainable development in Sri Lanka	10.29	54.10	35.62
Education for sustainable development is essential in Sri Lanka	78.48	20.00	1.52
We cannot slow the rate of climate change	56.38	39.62	4.00
Individually I will be unable to contribute to reduce the climate change	61.14	26.48	12.38
Individually I will be unable to contribute to protect my environment	67.05	19.05	13.90
We all have a huge responsibility to protect our environment	78.48	16.95	4.57
Conservation of natural resources should be a priority area in Sri Lanka	82.29	9.71	8.00
Overuse of our natural resources is a serious threat to the health and welfare of future generations	75.24	17.33	7.43
It is useful to estimate the monetary value of the services that the ecosystem provides to us	24.57	51.43	24.00
Lack of proper policies is the main threat to sustainable development in Sri Lanka	75.24	15.81	8.95
Lack of proper policy implementation is the main threat to sustainable development in Sri Lanka	92.19	4.19	3.62
Corruption is one of the issue in achieving sustainable development	44.00	49.90	6.10
We need stricter laws and regulations to protect the environment	86.10	11.43	2.48
The teaching of sustainability principles should be integrated into the curriculum in all disciplines and at all levels of schooling	76.57	21.71	1.71
Education through media is an important component of education for sustainable development	61.14	36.00	2.86
Taxes on polluters should be increased to pay for damage the environment	9.33	87.24	3.43

Sources: Authors’ estimation

Conclusions

The seventeen Goals for Sustainable Development represent the agreement of world leaders on a shared vision of a sustainable future. The Government of Sri Lanka is committed to achieving the United Nations Sustainable Development Goals (SDGs). The Sri Lankan government has demonstrated a strong commitment to achieving the SDGs by 2030. It is clear that Sri Lanka has made a significant progress with the MDGs, and indeed stands far ahead of some of its neighbors. Sri Lanka has more than halved its poverty rate, achieved universal primary education, reduced child mortality and improved maternal health. However, country has faced many environmental challenges which are extremely important aspects under SDGs. In this context, Goal 15 of SDGs deals specifically with the attributes of ecosystems, land, forest and biodiversity. This study focuses this goal and attempt to identify some of the challenges that Sri Lanka may face in making a significant progress of this goal by 2030.

Environmental issues have been a concern for many years in Sri Lanka. However, many indicators show that quality of the environment in the country has been deteriorating for the last few decades. The challenge now is to find sensible and simple solutions to the existing environmental issues. In order to do that Sri Lankan government has to take some measures immediately. The educating people about the sustainable development and their possible contribution to make it success may play a critical role here. Further, strengthening effective governance, policy coordination among various institutions, strengthening institutional capacities, taking decision from evidence-based policy options, identifying the existing constraints are some of the measures that provides a critical foundation for achieving SDGs goals in the future. It is extremely important to introduce a monitoring framework, covering entire country for assisting relevant departments for the successful implementation of the SDGs. Careful monitoring and evaluation of the progress will help identify whether and to what extent such efforts are successful. Establishing monitoring and evaluation processes will provide measurable outcomes, enabling countries to meet the SDGs within the time frame. Also country should design a national-level planning and review mechanisms for successful implementation of SDGs.

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