

Need for redefining sustainable development: policies, practices and consequences in Sri Lanka focusing on to be a Hub in Asia

KK Pradeep Ranaweera

Department of International Relations, University of Colombo, Sri Lanka

kpradeep541@gmail.com

Abstract— *The concept of ‘sustainable development’ (SD) has an internationally accepted definition: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (Brundtland 1987, p9). In this respect, it entails a notion that socio-economic, environmental and political decisions within one country impact globally. In practice this concept has faced challenges in implementation in an age of globalisation, where competition for protecting status-quo or the struggle for development has intensified. The reality is that the negative impacts of development cannot be limited to developed-developing or any particular region. The harm is to the very survival of human beings. This paper argues for the need to re-define SD concept from a Human Security angle. The paper will focus on the Sri Lanka practices on SD with the support of International norms and ethics on the sustainability. If Sri Lanka is to thrive, it is essential to focus on environmental issues like climate change, global warming and melting icecaps where we have more sensitivity towards our security and survival. Development is imperative for Sri Lanka to be a hub in any level like economic, social, political and environmental, but narrow boundary level thinking will undermined the same.*

This paper argues that Sri Lanka being an island country should take a more comprehensive initiative towards developing through accepting a practical and apt SD concept. To attain this goal it examines Sri Lanka’s practical experiences of attempting to realise sustainability both issues and its consequences. Since South Asian region is in the middle of accelerated development; with post-neoliberal economic policy post-war Sri Lanka is aiming to be the “Wonder of Asia”. Yet, it is fact that, Sri Lanka faces several practical issues in sustainability in implementing policies.

The paper concludes that a re-defined SD might allow for a more practical yet indigenous success in SD. In order to realize the research objectives the paper will use both the primary and secondary data from many sources. To generate new epistemological knowledge on related discipline qualitative method will be employed by the author as a methodology for the paper. Therefore, both descriptive and analytical methods will make more

comprehensive conversation on the selected discipline to understand the policies practices and consequences related to sustainable development of Sri Lanka to be a hub in Asia in the present context.

Keywords— **Climate change, Human security, Sustainable development**

I. INTRODUCTION

How can we meet today’s needs without diminishing the capacity of future generations to meet their own? This is the challenge of “sustainable development”. This is the debate in both national and international level to be addressed. In one hand from the national level most of the developing countries raised the question of applicability of sustainable development in the context of reaching their national interest. On the other hand most of the International institutions adopted necessary mechanisms for the following sustainability in their works. In this respect this paper will have descriptive and analytical details on the concept of sustainable development with special reference to Sri Lanka.

II. WHAT IS SUSTAINABILITY?

“Sustainable development is the development that meets the needs of the present without compromising the ability of the future generations to meet their own needs.” (United Nations, Brundtland Report, 1987, p9) It contains within it two key concepts:

Generally the concept of needs, in particular are the essential needs of the world’s poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization is on the environment’s ability to meet present and future needs.

The topic of sustainable development (SD) has also been the theme at three summit meetings organized by the United Nations during the last few decades. The first UN Conference on Environment and Development (UNCED) was held in Rio de Janeiro in June 1992. (United Nations, Agenda 21, p6) This conference came out with an Agenda for the 21st century - referred to as Agenda 21 – outlining Plans of Action in 40 Chapters. The second meeting - World

Summit Conference on Sustainable Development was held in Johannesburg in August 2002. (ibid.) This conference also known as Rio+10, reviewed the progress made by nations in undertaking SD during the previous 10 years and produced a framework for action.

The third meeting (Rio+20)- United Nations Conference on Sustainable Development (UNCSD) was held this year in June again in Rio de Janeiro with the objective of how we can reduce poverty, advance social equity and ensure the environmental protection.(United Nations, United Nations Conference on Sustainable Development, 2012)

There is no doubt in taking the world as a system over space, air pollution from Europe affects air quality in Asia, at the same time pesticides sprayed in India could harm fish stocks off the coast of Sri Lanka. These transnational result or domino effect of one country's to another country, region to another region has made needs of management of their needs and interest while reaching national interest goals. On the other hand taking the world as a system over time, it is a fact that the decisions of our past generations - About how to farm the land continue to affect agricultural practice even today while the economic policies that we adopt or succeed today will have an impact on urban poverty and food security when our next generation are adults.

With the support of various literature and sources from international reports and documentaries sustainability can be realized as a goal of "sustainable development" but a process and its destination need to be negotiated. It is a concept that often has different interpretations and different meanings among the different interest groups within societies and also between different societies. In general concept of sustainability pursues quality of life and also stresses upon equality for all. In this manner, to attain sustainability there are multi-dimensional approaches stressed by many school of thoughts and institutions.

With reference to the discussion on what 'sustainability', 'sustainable development or other associated terms have been used by many scholars. For the developed nations like Europe and highly industrialized countries they use the term sustainability rather using sustainable development, whereas many developing countries use sustainability purely with the process of development opting for sustainable futures' sustainable living' and sustainable communities'. Interestingly focus on many of these terms to define 'quality of life' and the process of achieving sustainability. Therefore it is widely understood as one of the defining statement that seeks a better quality of life for all.

In a broader sense sustainability relates to ways of thinking about the world, forms of social and personal practice that leads to:

- Ethically, empowered and personal fulfilled individuals
- Communities built on collaborative engagement, tolerance and equity
- Social systems and institutions also have to participatory, transparent and just.
- Environmental practices that value and sustain biodiversity and life supporting ecological processes.(John O'Neill, Alan Holland, Andrew Light, 2013, p183)

Most precisely sustainable development can be seen as a contribution of three different inter-subjective parameters. These three perspectives can be mentioned as protecting the environment, social development and economic development.

Environment	Social	Economic
Protecting the environment	Respecting individuals	Responsible sourcing of goods and services
Safeguarding the natural resources	Benefiting local communities	Business and operational efficiency
Using energy and water more comprehensive manner	Employee diversely, health and safely	Taking account of social and environmental costs
Minimizing waste	Being ethical, fair and honest	Ethical investment
Preventing pollution	Engaging with stakeholders	
Responding to climate change	Protecting vulnerable communities	
Sustainable Development		

Based on the above table it explains that sustainability cannot be undermined with only simple definitions of needs and limitation syndromes. At the same time it has been expanded in many aspects. In this respective the concept of sustainable development has its own value in the developing process of developing countries. To narrow down the focus area of my research will locate the developing countries explanations and understanding on the concept of sustainable development as a key to develop the well-being of the people.

III. IN THE CONTEXT OF SRI LANKA

In the post-conflict situation Sri Lanka has made copious significance on the sustainable development in terms of economic development, social development through the reconciliation process, addressing emerging trends such as violence, environmental issues are the foremost concern of today. On the other hand it has great responsibility of sharing its experience on the national and international level while working towards negative peace to positive

peace. However, the concept of sustainable development exists with many development strategies and new areas adopted by the international institutions such as World Bank, IMF, World Trade Organization. With the limited scale of research this paper will consider the few areas which Sri Lanka needs to be diverting their attention both at the policy level and practical level. Therefore Sri Lanka has to flourish with all its developmental efforts which concerns about sustainable development. Even it is arguable that Sri Lankan growth rate is high (8%), (Central Bank of Sri Lanka, Selected Economic Indicators, 2013, p11) to be a true story, but the problems can be illustrated a little further, even with the recent part of census and index income inequality increasing over the years by making big gap among the have and have not. Sri Lankan Gini index is 42 on a scale of 100, with 100 representing a perfect inequality. Also we are one of the country which most unequal countries of the world. If the census accurate 12% of the population is still living below poverty line even it can be more than that. (Thisal Dewundara, 2012) Moreover, unemployment, social inequality, resource distributions, health issues, labour capacity can be seen as another area which needs to be addressed. Focusing on the concept of sustainable development, it has contradicted many a times with the process of development. Thus there is a need for redefining sustainability as one of the vital element for Sri Lanka other than abusing or be embarrassed by the concept of SD. There is no argument, SD implies to work simultaneously on different objectives, which will take Sri Lanka towards prosperity and peace in a way forward to 'the Wonder of Asia'. It is not about achieving an ideal but it is a process of aiming towards constant improvement taking into account the environmental dimension in order to achieve a benefit for the whole population. To be empathetic on the problem which remains related to the issues in implementing SD this paper will examine the major areas which elevated the 2007 SD strategy report. In this scenario; poverty eradication, food security, water resources, land degradation, and sustainable energy will take the analytical area to understand our practices on sustainable development.

IV. SRI LANKA'S STRATEGIES AND PLANS ON SUSTAINABLE DEVELOPMENT

In the year 2007, the ministry of environment made the first effort to develop a national strategy for sustainable development. The report emphasized on achieving SD vision through eradication of poverty, ensuring competitiveness for the economy, improving social development, ensuring good governance, and a clean and healthy environment. With the implementation of this programme in 2008 an action plan was issued in the year 2008-2012- Caring for the environment as a path to the sustainable development. Successively the Presidential secretariat developed these plans to prepare an Action Plan with short-term, medium- and long-term goals for the period 2009-2016

which was called the Haritha (Green) Lanka Programme (HLP). (Ministry of Environment and Natural Resources, 2009, p14) Under the above theme GoSL will establish a National Council for Sustainable Development (NCSLD) chaired by the President with 22 ministers in charge of major economic development sectors serving as members. The objective of the Council is to function as a national platform to launch and promote the process of achieving sustainable development, and to oversee and guide the implementation of its Action Plan.

The National Action Plan (NAP) 2009-2016 developed 10 major missions - clean air, Fauna, Flora & Ecosystems, Climate Change, Coastal Belt & Sea, Land Resources, Solid Waste, Water, Green Cities, Industries and Knowledge Dissemination and for each mission area, it listed the strategies with a set of targets to achieve within three time frames – short, medium and long term.

According to the NAP (2009-16) it is to be coordinated by the Ministry of Environment and its progress monitored by the Ministry of Plan Implementation. However, it was a fact that there was no integrated coordination between the ministries and responsibilities related institutions. It is a significant example many of the short-term targets achieved by 2009-2013 are yet to be realized.

A. Poverty Eradication

With reference to the SD summit which was held on 1992, 2002 and 2012 it points out that eradication of poverty as a one of the pre-requisite for SD. From Independence to the present times many regimes adopted various programmes to eradicate poverty, for example welfare mechanisms like Janasaviya and Samurdhi. But in actual terms it has been questioned about the real benefit that will reach the target groups. (Ministry of External Resources, Report, p35) Because many governments used those mechanism as political instruments for getting their votes from the people. Also some questions has been raised about the sustainability of the projects to enhance and address the poverty related issues in Sri Lanka. With the end of the 30 years war this added more challenges to both GoSL and all the citizens to take their responsibilities on reaching the SD goals in a more comprehensive manner. The problems occurred when international financial institutions adopted a policy of deducting subsidies as a strategy for development. As a consequence many poverty eradication project lost their strength before their reaching destinations.

Quantifying poverty, a person is identified as poor if he or she cannot earn the monthly income that is required to enjoy the minimum living standard in society. This income is referred to as the poverty line (PL) and is determined by the Census & Statistics Department (CSD). It varies from district to district and from year to year. The national poverty line varies from year to year, for the year's 2002,

2006/07, 2012 and 2013, it was Rs. 1423, Rs. 2142, Rs. 3545 and Rs. 3781 respectively. (Central Bank of Sri Lanka, Economic and Social Statistics of Sri Lanka, 2013, p127) The proportion of population receiving income below the PL to the total population is referred to as Poverty Head Count (PHC) and it is used as an indicator of poverty in a country. Even though census wise there is a decline of population in the poverty line, still Sri Lanka has to work for the eradication of poverty completely.

Under the present regime, there has been an implementation of significant programme like 'Divi Naguma' targeting the poverty eradication. Under the above programme development of small scale entrepreneurs, facilitating to get bank loans (short terms-long terms), (Government of Sri Lanka, Divi Naguma Act, 2012) investment are the major initiatives taken to eradicate poverty by empowering people which is called sustainable poverty eradication rather than subsidizing and being dependant on others.

According to the Programme it has been proposed that 100 home gardens be made based into economic units each gramiladhari (GN) divisions which numbers about 14,000 in the country. Also all the units are expected to focus on agriculture or cottage industry. In this respective most important elements of the programme can be seen as an adaptation of sustainable practices in the process. As it was mentioned "through this (Divineguma) Act, the government hopes to eradicate poverty, ensure social justice, enhance economic development activities related to employment, ensure food security, develop social and physical infrastructure facilities and micro finance facilities to uplift living standards of people...". (ibid.) But the problem is that the programmes even after the implementation there is a doubt that the poorest would be seen, because he may not possess any home garden to participate in the programme. Also another major challenge is those who are in the poverty lines have or have not enough garden to cultivate. Another difficulty was found is that most GN divisions do not have even 100 home gardens, according to 2002 Agricultural Census.

Another aspect that needs attention is that in assessing poverty it is not the income earned that matters but the savings taken home by the breadwinner. If he is addicted to liquor or drugs and wastes all his earnings on them even those who have high incomes ultimately will have to live in poverty. It is the duty of the authorities and the society to ensure that steps are taken with vigour to eradicate addiction of people to liquor and drugs by enforcing existing laws strictly, preventing penetration of these items to the society, if the country aspires to achieve SD. Eradication of poverty in any country cannot be done just by focusing on one aspect. In this scenario government, institutions, social groups, need to realize their responsibilities while depositing their commitments to eradicate poverty.

For the example eradication of poverty can be linked up with;

- Unemployment
- Agriculture market
- Industrial decentralization
- Strengthen all the poverty eradication project and programmes
- Improving health care facilities
- Awareness among the people

These are the main issues which need to be addressed by the multi-stake holders in the process of attaining SD eradicating poverty in Sri Lanka.

B. Food Security

In the year 1975, United Nations held the 'World Food Conference' where the focus was on the adequate supplies available to meet the growth in world consumption. Based on the UNFC food security means; Availability at all times of adequate world supplies of basic food stuffs . . . to sustain a steady expression of food consumption . . . and to offset fluctuations in production and price. (United Nations 1975, quoted in Le Normand 1996:p 89) Also the 1983 world food organization stated Food security is ensuring that all people at all times have both physical and economic access to the food they need. (Food and Agriculture Organization (FAO) 1983, quoted in Le Normand 1996: 89) on this ground for the development of developing countries food security became a most necessary factor in terms of population, resources, security, stability and survival.

In 1996 the world food summit stated that Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. (WFS 1996a) On the basis of this definition a number of different aspects were raised related to the sustainable food security. Based on this, the state has to take initiatives to eliminate nutritional problems other than the increase food availability unlike earlier definitions which focuses on basic food needs. Also the adequate access and supplies needs to be addressed, there should be fair distribution of foods among all members of the family. Moreover it points out that the person must be in good health and he should be capable of absorbing and efficiently metabolizing the nutrients; they must have clean water, basic sanitation and clean air; they must have access to satisfactory health care services and must lead an active and healthy life. (D. D. Barry Dalal-Clayton, Stephen Bass, 2002, p10) Therefore analysis of food security includes accessibility, consumption, production and circulation or availability of the foods in order to have sustainable food security. Accessibility and individual consumption are linked to a new set of factors, not reflected in the global economic analysis. Indeed, they are linked to the

dynamics of the relations between institutions and within institutions where the circulation of food takes place. This circulation takes place at several levels and is determined by a complex set of factors.

- Between world markets and nations,
- Between national stocks and regions,
- Between regional stocks and communities or families,
- Between family stocks and the final individual consumption.

In the process of development in Sri Lanka, these levels can be stressed as crucial areas which seek to enhance its capability to be a guide liner of the region. Unfortunately in the present context it has been functioning more negatively rather positive for food security.

Analyzing this context in Sri Lanka even though it is a debatable, Sri Lanka is near to self-sufficiency in rice, the country's staple food. Nonetheless, with growing population and liberation of the ungoverned areas after the conflict it is a challenge to maintain this position in the future. The other two key components in the food supply are sugar and wheat flour, and these two rely on imports.

The total expenditure on the import of food items has been Rs. 94.5 billion in 2007 while in 2011 it has almost doubled to Rs. 173 billion (Central Bank of Sri Lanka, Annual Reports 2007-2011). Except for wheat, the rest of the commodities that are imported are sugar, lentils, onions, milk, and fish. This could be produced locally, and even with wheat, it could be substituted by rice in bread making at least partly. Even though GoSL Increased imported revenue to encourage and enhance local productions and supply in the point of view of food security it has made insecurity and strange situation in the future foods availability.

Generally food production depends on the availability of water. Also the larger no of food is coming from the dry zone because of proper condition for the cultivation. But in the present, due to the extreme weather condition much of the agriculture productions have been affected in Sri Lanka. Therefore Sri Lanka needs to look for other options which can solve the problems related to production.

On the other hand it was a big issue between the farmers and consumers with the release of world health organization report on the Rajarata rice production, the report and research was conducted by both local institutions as well as international institutions. As an outcome of the research it stated that contaminated chemicals were found in the rice produced by the Rajarata (Anuradhapura and Polonnaruwa District) farmers. (Thilanka Bodhikotuwa, 2011) Unfortunately it has been taken to the political level discussion and still there is a need to take actions and prevent further problems from happening. Based on the

above definition it is clear that the quality of food has been threatened in terms of food security. Therefore issues need to be addressed in a more sustainable manner rather than keeping it as a political agenda. The food supply in Sri Lanka is hampered not so much due to lack of production but due to problems associated with post-harvest losses including storage losses, transport losses and marketing problems. In the past, the country had a well-established system in which dedicated institutions collected, distributed and marketed commodities such as vegetables and paddy. Apparently, with the hope of improving the efficiency of this system, these institutions were scrapped expecting the private sector to take over. Unfortunately, this has proved to be a failure resulting in losses to both the farmers and the consumer affecting food security.

From the beginning this paper stressed on the need for a multi-dimensional approach and corporation and its major challenge for Sri Lanka is to conduct its work on SD. A significant example from the recent part, is the authorities have introduced plastic crates to transport vegetables to reduce losses and were initially met with resistance, but even with constraints from the transporters at a certain level it is still being practiced.

The establishment of centralized economic zones (CEZ) for the purchase of agricultural produce from the farmers initiated by the government with good intentions has also proved not to be so successful, especially during glut periods. Farmers were compelled to destroy their produce even after transporting them all the way to the centres when they could not get a price to cover their costs. (Mandana Ismail Abeywickrema, 2010) However, during the normal days or glut days, it is a visible factor that there is widespread disparity between the price paid to farmers and the price demanded from consumers. Because of this, at the end of the day all the advantages are being taken by the middleman and hence neither the farmer nor the consumer gets anything out of it. In order to manage and address these issues which remain in food security, Sri Lanka needs to take necessary action to bring SD in the development agenda.

C. Water resources, land degradation

Sustainable water management is one the most important challenges that Sri Lanka faces today. Because of this, it is difficult to think of a resource more essential to the health of human communities or their economies. It is a simple fact that humans cannot live for more than several days without water, shorter than for any source of sustenance other than fresh air. Therefore meeting their needs of water for domestic, agricultural, industrial and environmental purposes depends upon better management of water resources and more efficient use of water for productive purposes which can be called as sustainable water resource management. (A Day without Water: Managing Sri Lanka's Water Resource', 2013)

Generally, Sri Lanka is satisfying her water resource merely from rainfall. Climate wise from May to September south west winds bring rain to the south west region and western slopes of the central hills and also from December to February. In addition, convection activity during inter-monsoonal (IM) periods bring substantial amount of rainfall that spreads over the entire country. Rainfall received during SW monsoon and second IM share more or less equally. But the main problem is stated with the wake of extreme weather condition, this system has been changed. Due to wide fluctuation of the actual rainfall patterns many times Sri Lanka witnessed prolonged droughts in certain parts of the country, while heavy rains and flood caused a threat to the well-being of the people. Even in the past, it had the experience of managing water resource in more sustainable manner, in present condition raised the serious attention on the village tanks and large number of reservoirs of tanks to collect and manage waters. From the post-independence era, many governments took the initiative to implement programme like Mahavali Project and canal system with the changing of governments the continuation of same policies towards protecting water resource in Sri Lanka got disrupted.

Even though there are no critical issues on the water sources, when it comes to the urban water resources particularly on the drinking water it stresses on the importance of management of water resources in a sustainable manner. For example in the recent past an incident from Ratupaswala which highlighted the quality of the water other than the availability. (Chaminda Silva, 2013) If the sources do not carry quality for the use of those resources, this is the place where we need to look for sustainable management of the water resources. Since it does not raise the continuation of resources while asking about human security it cannot be undermined by the any institutions or actors.

With the latest census of housing conducted in 2012 it states that for drinking purposes, at a national level, 51% of households depend on well water, 31% on pipe-borne water, 9% on community projects, 3% on tube wells, 1% on bowser and bottled supplies and 5% on open surface water sources, such as rivers and lakes. However, there are wide fluctuations over these figures across districts. (Janaka Ratnasiri, 2012) People dependent on well water often have to undergo water shortages during drought periods even in the wet zone. Therefore it is a challenge faced by the government to provide proper quality of water for drinking purpose.

Also with the involvement of private sectors ground water sources are also being used by commercial farms and industries. The excessive use of ground water by the latter could deplete the resources prematurely and may cause hardships to urban places as well as villages. Hence there is a need to control the extraction of ground water

for commercial use. This however should be implemented cautiously and should not affect the small scale farmer or the domestic user. If the concept does not support the interest of both development and needs it has to be redefined without the most necessary element of sustainability.

On the other hand using many chemicals for agricultural productions can be more harmful for the security of water. Health wise, it has been a serious problem associated with drinking ground water in the dry zone, the incidence of chronic kidney disease (CKD) prevalent in many parts of the NCP.(ibid.) Though the exact cause for the disease has not been identified so far, the presence of heavy metals in water along with hardness is suspected as one of the possible cause. Therefore to stop the indiscriminate methods of using water is one of the major tasks for the GoSL as a result it help to attain its development goals.

As 1992 Rio Summit adopted an agenda 21 this implemented the policy of Precautionary principle which states that in order to protect the environment, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. (United Nations, Agenda 21) Thus, if there is some evidence that agro-chemicals containing hazardous trace elements such as cadmium or arsenic could cause CKD, the state should not hesitate to remove them from the market without waiting for 100% proof that they are the cause. In this respect it is duty to protect and manage resources for the fulfilment of future generations needs by using it in a more comprehensive manner. Therefore only win-win precautionary measures could help Sri Lanka to manage domestically its issues while being a model of sustainable development to the region and at the global level.

D. Land Degradation

Sri Lanka has a land area of 65,610 km with over 20 million populations, the country's population density is 323 per km, which is one of the highest in Asia. (op cit.) With this high population density, 14% of the land is consumed for farmsteads, Paddyland occupies 11%, while the 3 plantation crop jointly occupies 11%. The perennial and seasonal field crops occupy 4%. Vegetable and fruit cultivation occupy 3%. Forest cover is 31% and non-usable land (mountain slopes, shores, sand dunes and water bodies etc) occupy 16% of land. The balance 10% is covered by public utilities and sparsely used land. Since it is considered to be an agricultural based country the significance of keeping food security and economic sustainability, with many policies and practices became the sources for the degradation of land. The plantation of tea and other vegetables in the hill places in the up-country causes soil erosion. Unless soil conservation practices are followed (Ram Alagan, 2011,p4) it is evident that high rates of land slide will take place, waterways will drain in the up-country. The problem is that erosion causes not only depletion of the top layer soils but

also the nutrients found in the soils which is necessary to the bio-diversity.

The excessive urbanization and also the use of chemical fertilizer can be seen as a major threat for the livelihood of people in Sri Lanka. In this manner soil infertility led to the decrease of agricultural production while making vulnerabilities to the environment, on the other hand uncontrolled sand mining, and unregulated gem mining in specific areas also contributed to land degradation. Though regulations are in force to limit sand mining so as not to cause damage to river beds and banks, people over-exploit these resources without even caring for its preservation. With political involvement in the exploitation process, rules and regulation started being misused by many actors in the name of development. Also in the private sector misuse takes place after the high demand from the construction industry. Even though technology and mechanisms available for the construction of houses are more sustainable with no concrete which will save sand and cement, another threatened material, but people continue to over use them unconcerned with the possibility of making these material non-existent for the future generations. Therefore it is fascinating to see, that in each sector the actor have given-up the sustainable use of resources for the development process which can lead to more problems for the future in Sri Lanka.

Though an unavoidable fact our day-to-day activities, generate waste solid or liquid. But we do not hesitate to dispose this waste without thinking of environmental pollution. While the technology is available for recycling waste into convenient products, people do not bother to sort the garbage before it is disposed.(ibid.) The proper disposal of garbage if attended to within one's own premises through the use of compost bins will make the disposal process sustainable. Unfortunately this is not practiced, and instead unsorted garbage is collected and dumped in marshy land causing both environmental and health hazards. The government has in the meantime launched a programme to establish composting centres in outstation towns, but sustainable disposal of solid waste in the city remains a problem. While, it is difficult to point out or to blame the government, when the people do not care about their activities. Therefore lack of commitments, understanding, communication responsibilities and awareness are the major problems related to the sustainable development in Sri Lanka. Till date there has been no assessment done on the loss of biodiversity and the damage done to the forest ecology by converting large extents of virgin forests into cropland. The degradation of soils due to intensive agriculture needs to be studied and solutions need to be found out for sustaining the

agriculture in the country, if Sri Lanka needs to regain its prosperity and be a model for the world in the process of development.

E. Energy

Energy is an essential input to all activities related to the development in Sri Lanka. Industrial, manufacturing, technology, agriculture or in every aspects, energy cannot be ignored by any country. Sri Lanka as one of the developing country, which is seeking its global position after the thirty years of war is looking to reach its development goal by managing energy sources. Based on the UNDP's efforts in energy for sustainable development support the achievement of;

F. Universal access to modern energy for the poor

Enhance quality, security and affordability of modern energy(<http://undp.org>)

There is no doubt that access to sustainable sources of clean, reliable and affordable energy create a profound impact on multiple aspects of human development. Since, it does not confine only to the physical infrastructure, but also on the energy affordability, reliability and commercial viability. Therefore in the process of development Sri Lanka needs to realize its capacities, while engaging in the global interest to make the world a better place to the people ,due to this in one counter energy policy can affect or have an impact on another country's development, security and national interest aspirations. For example in the recent part *Kudankulam* nuclear power plan raised the question of security of the people in Sri Lanka. In this respect sustainable energy policy is not only linked up with development but also with other aspects and thus needs to be addressed.

In the Sri Lankan context, we are dependent heavily on traditional use of biomass to meet our energy requirements leaving much room for improvement. According to Sustainable Energy Authority (SEA) the total primary energy supply (TPES) of Sri Lanka for the decade 2001-2010 has been in the range 350 – 448PJ. The energy mix in 2010 comprises 39.1% petroleum, 47.4% biomass, 11.1% hydro, 0.6% coal and 1.8% Non-Conventional Renewable Energy (NCRE).(Janaka Ratnasiri)

Basically in the energy sector Sri Lanka highly depends on the foreign sources. Particularly oil is one of the major sources for producing energy in the economic sectors and respectively for the transport sector 51.4%, power sector 26.6%, industries 8.2%, and household and marine and aviation 14%. Interestingly, in the renewable energy sector the sustainable energy authority proposes the follow 10% of total power from the non-conventional renewable resources by 2015.

Cumulative RE Capacity Additions (MW)						
Year	Biomass	Hydro	Wind	Other	Total	%Energy
2007	1	119	3		123	4.0
2008	11	155	3		169	4.5
2009	15	165	14		194	4.7
2010	15	200	34	1	250	6.4
2011	20	225	34	1	280	6.8
2012	20	280	35	1	336	9.1
2013	20	295	85	2	402	9.8
2014	30	310	85	2	427	9.9
2015	40	330	85	5	460	10.0

Table 1. (<http://www.info.energy.gov.lk/>)

Even though Sustainable Energy Agency adopted the sustainable energy use as a primary concern of the country in the process of development, with the implementation of the many recent part issues and incident it questioned the sustainable energy policy in Sri Lanka.

- Failed of Norochchol coal power plant
- Improper maintains of the hydro energy sources
- Political decisions in the international level can be spotlight as major issues which need to be revisited.

For example from the initial stage till present norochcholai coal power plant failed to substitute its commitment of energy production to Sri Lanka. The project used US\$ 450 million for the add 300 megawatts to the energy grids. But the systematically unproductivity of the project have received a loss of rs. 117 billion. The problems with the above project was not only because of the failure but also referring to the sustainable energy definition, coal is not the resource which Sri Lanka has and it has imported from outside. On the other hand it is considered as a depleting resource while its environmental impact will fall much more heavily and the burden will be much more costly to Sri Lanka than any other land-locked countries in future. Therefore sustainable energy management is a necessary step to keep in the main stream both policy and at the practical level or we can better put it as sustainable development needs to be redefined what we practice in the process of development.

Improper maintenance of the hydro energy sources: Interestingly, geographically Sri Lanka has many water resources for the fulfilments of energy needs. But in the practical sense most of the hydro project has been malfunctioning due to the improper maintain by the

respective sectors. It is a fact that Sri Lanka already is in the midst of energy crisis particularly in electricity, due to the extreme weather conditions and also due to drought as a result affected those hydro energy plant located in such areas, past decades witnessed hydro energy sources facing many challenges when they produce their energy to the national energy demands. But when the rainy season started all the hydro power plant maintainers took the initiatives for the maintenance by ill-functioning most of the hydro power plant, when the resources were there. These types of problems, such as clash of interest between the government and workers cause energy shortages in Sri Lanka, while threatening the most important sources for its development. Therefore all the stake-holder has to take their responsibilities and commitments with the common intention about the development goals.

With the wake of the global power rivalry between USA and Iran on the nuclear issue led to the interruption of many countries energy polices. Sri Lanka also was among them, based on the US sanction on Iran's crude oil, Sri Lanka had to stop its oil import from Iran within six month's period. After the first quarter, though USA extended its condition to another period, as a consequence of that Sri Lanka lost many economic benefits which resulted into energy insecurity. Globally Sri Lanka imported 94% of the crude oil from Iran, with these sanctions Sri Lanka had to look for alternative solutions and sources as well as countries for imports to satisfy her oil needs from the international market. Therefore in the process of sustainable development, Sri Lanka needs to look into her capacity and enhance domestic capability other than depending on the foreign sources which can disturb, interrupt her interest and goals. For that making good international environment changing patterns of energy needs more comprehensively addressed to the renewable energy sources, management of the remaining resources and exploration of new sources are the major things that Sri Lanka needs to focus on for her sustainable energy development.

VI. CONCLUSION

Even it is debatable to say that, no country is sustainable or comes close to it. There is no proven recipe for success. The international community has come to identify that attaining sustainability is an essential phenomenon in the on-going process of learning that actively involves multi-dimensional actors to bring about a change across every aspect of society. After the 1987 Brundtland commission report as stated SD as a major concept for the development, many international documents adopted the concept of SD as a fundamental principle for economic development in any country. Countries from the third which prefer to be the next global actors in the modern world order stated to take and keep sustainability in their agenda. This approach

enables people to reflect on their experiences, learn how to make change and move forward particularly in Sri Lanka, seeking its position while trying to regain its global position after 30 years of conflict.

In the case of Sri Lanka, the analysis of sustainable development would be of little interest if current patterns of economic development were judged to be sustainable. The problems are not the case, but also the policies and principles which were adopted by us have lifted the economic and social well-being of a large no of individuals. Therefore there are two things remaining with the country, in one side redefining concept of SD in their economic process in proper manner while adopting acceptable and reliable policies for development. However, despite the importance of “de-coupling” economic growth from environmental pressures, the implementation of effective policies is made more difficult by the existence of many unsatisfied social needs. Referring to the concept of sustainable development in Sri Lanka, it is a fact that many policies and practices exists within the development process in the present context. Generally concluding this conversation SD can be linked up with the common features of;

- Satisfying human needs
- Favouring a good quality of life through decent standards of living
- Sharing resources between rich and poor
- Acting with concern for future generations
- Looking at the ‘cradle-to-grave’ impact when consuming.
- Minimizing the resource use, waste and pollution would be most successful areas that can bring long-term success for Sri Lanka to be a way ahead in the future.

At the same time the concept needs to divert its attention particularly on the protection of nature by thinking about the long-term outcomes, realization of systems within which we live, identifying the limits, practicing the policy of fairness, embracing creativity in each sector can bring extra weight on the concept of sustainable development in Sri Lanka. Therefore practices of sustainable development in Sri Lanka need to focus on the illustrated table below:

Concluding are the remarks on the policies and practices of sustainable development in Sri Lanka in the context of economic development, seven major challenges can be outlined as major areas that needs attention both policy wise and at the practical level. Among these are:

The challenge for production and patterns of consumption

What is to be sustained:	Focuses Time line	What is to be developed
Nature	25 Years “Now and in the Future”	Peoples
Earth Biodiversity Ecosystems		Child survival Life expectancy Education Equity Equal opportunity
Life Support		
Ecosystem Services Resources Environment	Linking with Needs rather interest of the Peoples, states, institutions	Economy
Community		Wealth Productive sectors Consumption
Culture Groups Places		Society
		Institutions Social capital States Regions

The challenge of developing knowledge and information related to the concept and practical

- Challenge of climate change and energy
- Challenge for sustainable mobility of the resources
- Challenge for demography and social integrations
- Challenge for good governance
- Challenge for biodiversity conservation and sustainable management

These are the prerequisite areas in the process of economic development for Sri Lanka, and Sri Lanka needs to divert her attention in order to fulfil the scope of sustainable development. There is no doubt that with growing populations and demands of the people it has questioned the patterns of consumption of the people. Also many institutions and actors adopted the concept of sustainable development as a priority concept in the economic development-lack of knowledge and information on the correlated subject of SD as criticized by many professionals, saying that our practices on development as unserviceable for the well-being of people. Therefore it is time to adopt acceptable definition on the SD while taking leadership in the region towards development. Sri Lanka being an island country, so it is not possible to take any initiatives without the consent of the climate change. In the recent part research on the impact of climate change in south Asia committed Sri Lanka as one of the vulnerable country which can have both threats and challenges in the process of development. Putting more effort on the renewable energy sources and eco-friendly principles will help to overcome with its problems related to the climate change in the country. It has been witnessed that extreme weather conditions, land slide, flood, and sea level rise and soil erosion are the major threats for the survival of the people while red lighting on the Human security of the country. Absence of resource mobilization and utilization for development, with the political commitment within the liberal democratic framework will be the indispensable things to get the commitment from the government and

civil society. Unless multi-dimensional approaches are not been taken sustainable development can be a farther goal for Sri Lanka in the post-conflict era. Therefore rebalancing of the economics, social and environmental development only can sustain the development of Sri Lanka to be a regional power as well as to be a model for the rest of the world in the process of development. Citing very famous statement such as “we are all learning by doing” but the operative word “doing” needs to be changed for the sustainable development in the country. Redefinition of the concept adaptation of the human security as a major objective of the development can bring the lasting and successful development in Sri Lanka.

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BIOGRAPHY OF THE AUTHOR



Author is an Assistant Lecturer in the Department of International Relations at University of Colombo, Sri Lanka. His research interests include Area Studies, International Political Economy, Indo-Sri Lanka Relations, China Studies, Environmental Governance and International Humanitarian Law. He has published numerous International and Local journal articles on Emerging trends and Peace Governance in post-war Sri Lanka. He has completed undergraduation at the University of Colombo, and pursued Masters Degree in South Asian Studies (Pondicherry Central University) in India full scholarship offered by the UNESCO Madanjith Singh Institute for South Asia Regional Cooperation and South Asia Foundation in 2009-2012. Present He is waiting to get placement for PhD. Research on International Political Economy and its impact in South Asia.