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Application of Sustainability Concepts in Selected Countries

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To identify sustainability concepts that can suit the territorial changes and facilitate physical planning in order to ensure spatial development in selected countries. Typical issues of sustainability emerging from the relations between economic objectives and environmental demands would also be analysed. The aim is to use sustainability criteria for territorial changes in regional and physical planning as well as in spatial development concepts. The evaluating locally acceptable and feasible localisations is the part of the aim too.

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AUTHOR'S DECLARATION

I hereby declare:

This thesis was prepared separately. All the literary sources and the information I used in the thesis are listed in the bibliography.

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ANNOTATION

Sustainable development has become eminent in recent times as a concept that affects every aspect of human life. Human actions have affected the natural ecosystem and have resulted in climate change, rapid depletion of natural endowments and continuous damage to the biodiversity has had a tremendous negative impact on the economic, social and environmental wellbeing. These have prompted the global community and governments around the world to find lasting solutions to correct the adverse effects the world's economy, our society and the environment. This thesis basically seeks to examine sustainability measures that have been taken by Latvia, Hungary and Finland to ensure sustainable development in their respective countries. After assessing the national sustainable development strategies, it was observed that the selected countries are doing their best within their own means to ensure sustainable development by creating awareness about the need to use environmentally-friendly technologies and to desist from practices that cause harm to the natural systems and promote economic growth and improve standard of living of their people.

KEYWORDS

Sustainability, sustainability concepts, sustainable development, pillars of sustainable economic growth, Finland, Latvia and Hungary.

NÁZEV

Aplikace konceptů udržitelnosti ve vybraných zemích

ANOTACE

Trvale udržitelný rozvoj získal v nedávné době na významu jako koncept ovlivňující všechny aspekty života lidí. Lidské činnosti ovlivnily přírodní ekosystémy a jejich výsledkem je klimatická změna, rychlý úbytek přírodního bohatství a nepřetržité poškozování biodiversity, které mělo velký negativní dopad na ekonomické, sociální a environmentální součásti blahobytu. Tyto skutečnosti byly pro globální společenství celosvětově i pro jednotlivé vlády podnětem k nacházení trvalých řešení, která by napravila nepříznivé efekty, týkající se světové ekonomiky, naší společnosti a prostředí. Tato diplomová práce se zabývá především zkoumáním opatření přijatých na podporu trvale udržitelného rozvoje v Litvě, Maďarsku a Finsku. Na základě zhodnocení národních strategií trvalé udržitelnosti se zjistilo, že vybrané země usilují, v rámci svých vlastních možností, o zajištění trvale udržitelného rozvoje, vytvářením povědomí o potřebě využívat environmentálně vstřícné technologické postupy, upustit od praktických přístupů, které škodí přírodním systémům a podporovat ekonomický růst a zlepšení životní úrovně lidí.

KLÍČOVÁ SLOVA

Trvalá udržitelnost, koncepty udržitelnosti, trvale udržitelný rozvoj, pilíře udržitelného ekonomického růstu, Finsko, Lotyšsko a Maďarsko

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List of Abbreviations

CBD	Convention on Biological Diversity
EU	European Union
EUETS	European Union Emission Trading System
EUTF	European Union Emergency Trust Fund
GCF	Green Climate Fund
GHG	Greenhouse gas
GMO	Genetically Modified Organism
GPP	Green Public Procurement
HIV	Human Immune Virus
HPV	Human papillomavirus
IPM	Integrated Pest Management
IT	Information Technology
NCCS	National Climate Change Strategy
NDC	Nationally Determined Contributions
NGO	Non-Governmental Organisation
NSDS	National Sustainable Development Strategy
PM	Particulate Matter
RDI	Research, Development and Innovation
SD	Sustainable Development
SDG	Sustainable Development Goals
SME	Small Scale Enterprise
WCED	World Commission on Environment and Development
NYS	National Youth Strategy

INTRODUCTION

Sustainability can be seen as a policy concept that had its source from the Brundtland Commission Report of 1987. That document was basically concerned with finding a clear distinction between the desires of mankind towards having a better life on one side and the restrictions imposed by nature on the other side. In the course of time, the concept of sustainability has been reviewed on a three-dimensional basis, namely social, economic and environmental. As pointed by Kloas et al., (2015) sustainability as a concept is not new but rather has a long history which has gone through changes over some time now. Significantly, this evolution was made possible by various “intellectual and political streams of thought that have moulded the concepts of sustainability” (Quental et al., 2011). Recently, the sustainability concept has become a topical issue of many disciplines. The main cause of its popularity is to ensure sustainable development.

Sustainability is concerned with social equity, economic growth and the cautious use of public reserves. Sustainability is a subject that gives scholars bits of knowledge into most parts of the human world from business, innovation, surroundings, and society. What nature has given to mankind must be protected now and be preserved for the generations unborn. This means that the earth resources that are both renewable and non-renewable must be used in a way that satisfies our current needs but does not compromise the future availability of those resources and ends the future of humanity. Sustainability is the ability to keep up or continue preserving the world around us for current and future needs. The pillars of sustainability are built around economic, social and environmental issues as interrelated aspects that determine stability and human progress. Sustainability looks for enhanced personal satisfaction and grasps equity for all, and thus a key point of sustainability is to empower multi-partner gatherings to characterize their vision of sustainability and to work towards it. Therefore, this concept is usually measured using multiple indicators such as socio-economic development, public health, governance, natural resources, etc.

Sustainability has entered the political and public agenda relatively recently, but it already occupies a central place in the development strategies of many countries. The European Union (EU), for example, has been committed to promoting sustainable development of its members by developing the common strategy and encouraging the countries to introduce and follow the national sustainability plans. Some of the EU states like Germany, Luxembourg, and Sweden

have been doing well in addressing the issues of sustainability whereas less developed countries such as Bulgaria, Romania and Poland, still lag in terms of embracing sustainable development as a guiding political concept.

Research objective

This thesis aims at examining how sustainable development strategies are being applied in **Latvia, Hungary and Finland** by examining their National Sustainable Development Strategies (NSDS).

Specific objectives

The following specific objectives are going to be analysed:

1. Assess the various measures undertaken to ensure economic, social and environmental sustainability in the selected countries.
2. To examine the appropriate measures that help to reduce or eliminate the harmful effect of the environment caused by human activities.
3. To provide recommendations on how sustainable methods can be utilized to ensure sustainable development.

The first part of the thesis is about the introduction and reviewing of related literature on sustainability and sustainable development. The main aims and objectives of the research work are also explained clearly here. The subsequent parts will look at methods that are going to be employed in the analysis. The NSDS of the selected countries would be analysed. The final part ends with the conclusion and recommendations of the research work.

1 THEORETICAL BACKGROUND OF THE STUDY

1.1 Analysis of the concept of sustainable development

The concept of sustainability has become well embraced by policymakers and governments alike in policy and decision making worldwide. The concept of sustainability lies at the core of the debate that presently exists over the usage of the world's natural resources, yet there is no agreement on its meaning in spite of its intuitive appeal (Park & Seaton, 1996). The term sustainability has become common among scholars, development practitioners and governments since it was first introduced in 1987 by the Brundtland Commission. Different scholars use the term to suit their discipline; this makes the concept lack a clear-cut understanding (Marsden et al., 2010; Mori & Yamashita, 2015; Pelletier et al., 2018).

But the concept has received the utmost attention during the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992. The increasing concern for resources, environment and social equity in the 1980s brought about the concept of sustainable development (Hunter, 1997; Mowforth & Munt, 2009).

Despite the ambiguity surrounding the definition and meaning of the term (Aleixo et al., 2018; Garren & Brinkmann, 2018), efforts will be made to provide some widely accepted definitions that have been well embraced. We can commence our understanding of the term sustainability from its genesis; the Brundtland Report provides the standard definition that is widespread and frequently used. The Brundtland Report used the term sustainability to mean ‘development that meets the needs of the present without comprising the ability of future generations to meet their own needs’ (Brundtland, 1987). The theoretical definition provided by the Brundtland Commission encompasses two key ideas and it can be construed as needs against resources with “needs” focusing on the specific and important basic needs of people that needs much urgent attention and resources stresses on the notion of limits imposed by the excessive reliance on technology to exploit the environment in the quest to meet the present and future needs (Mebratu, 1998). This definition can also be viewed within the timeframe that is either short or long time periods (Pintér et al., 2018).

Another definition that encompasses all the three dimensions of sustainability is provided by the United Nations in their Agenda for Development. They define sustainability as development

as any *multidimensional undertaking to achieve a higher quality of life for all people. Economic development, social development and environmental protection are interdependent and mutually reinforcing components of sustainable development (United Nations, 1997)*. This definition is widely acceptable because for many scholars as it captures the three dimensions of sustainability. But this has been subjected to criticism especially by Gibson (2001). He argued that since the concept is about people and their environment, the cultural and political dimension also need to be incorporated in the definition to make it more acceptable.

Another tentative definition of sustainable development has been provided by Burton (1987); he defines sustainability as the *“ability to meet the needs of the current population without compromising the chance of future generations to meet their own needs”*. This definition entails a better quality of life for all people of the planet, both the present and the future generations, encouraging the idea of reconciling socio-economic progress without jeopardizing the natural balance of the planet earth.

Daly (2006) has also suggested that sustainable development can be understood from two areas; firstly, human consumption and utility must be sustained so that the utility of future generations need not decline. He used utility to mean the normal per capita utility of the people. The future generations must be well off as the current generation with regards to its access to natural resources and ecosystem services. That is, the unborn generation should be as comfortable as the current generation in terms of their satisfaction and happiness. Secondly, physical inputs must also be sustained, meaning that the flow from nature’s resources from the economy and their use should not be depleted. Another definition provided by Popescu (2005) is based on the fundamental importance of sustainability. This involves the ability of a system to change, without diminishing the quantitative and qualitative characteristics already attained.

Scholars define sustainable development as a new approach towards the human environment, establishing relationships between the two entities, human nature and the environment. There must be a new harmony and balance between them (Ciegis et al., 2009). The concept cannot be restricted to environmental quality assurance and economic growth alone but must contain a favourable framework for resolving social problems facing individuals and societies. This ensures the combination of environmental protection, balanced economic growth, democracy, and social justice (Panayotou, 2016).

1.2 The relationship between the pillars of Sustainable Development

According to the Brundtland Report developing interconnections among the pillars is an essential justification for the formation of the Commission (Brundtland, 1987). Jordan & Lenschow (2008) claim that the need to have a mutual relationship among the pillars of sustainable development is one of the contributions made by the World Commission on Environment and Development (WECD) report. Sustainability encompasses co-operation between social, economic and environmental dimensions and advancement towards sustainability, therefore, it requires directing policy focus to all the three pillars (Hammond & World Resources Institute, 1995).

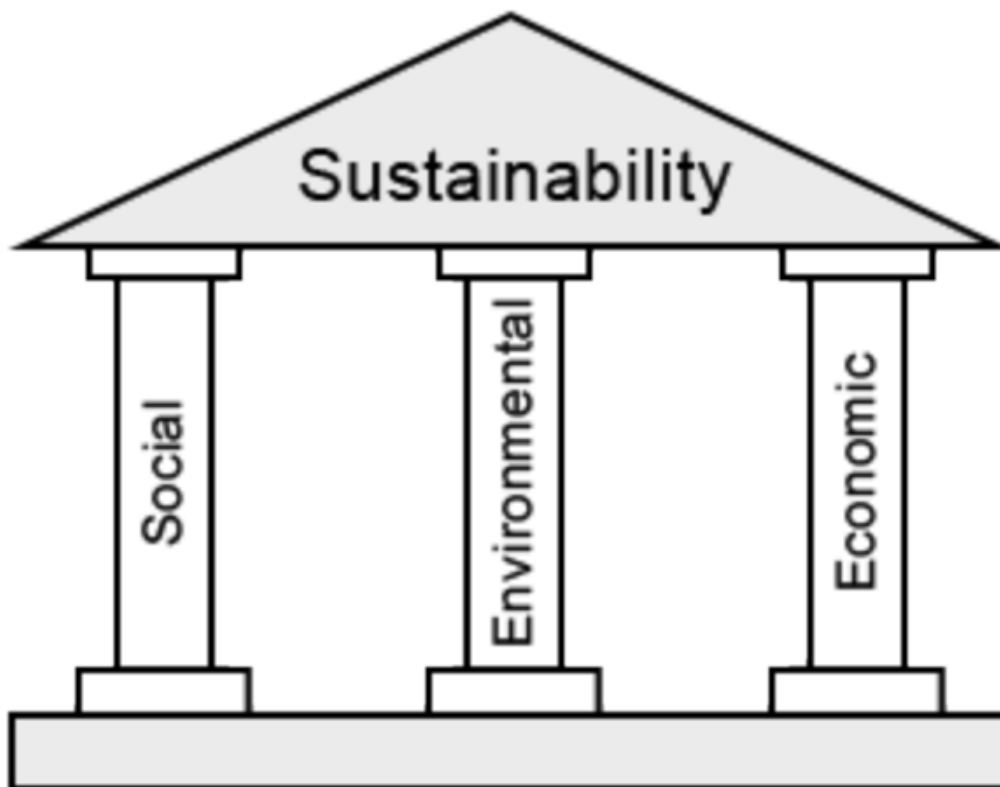


Figure 1: Pillars of sustainability

Source: Meadowcroft, 2007

From figure 1 sustainable development strategy calls for the incorporation of social, economic and environmental considerations in order to be coherent and reciprocate each other. According to Ghosh (2008) the notion of sustainable development as a geometric figure, that is, a triangle consisting of three main parts, namely; social, economic, and environment. To him, sustainable development has become the most essential concept of the day and gives a more concise definition of development, that is, connecting environmental services and quality of well-being

with economic growth. To ensure sustainable development, there should be cooperation among environmental, social and economic goals of society and allowing for the welfare of the current and upcoming generations. Sustainability can be well-defined by involving the sustainability of economic systems, ecological procedures and social phenomena (Epstein & Buhovac, 2014).

Gray & Milne (2002) describes sustainability as an effective and an unbiased distribution of natural resources inter-generationally and intra-generationally within a given period of time with the operation of economic activity within the boundaries of a fixed environment. Schrijver (2008) suggested that economies cannot be sustained if the rate of using natural resources is beyond the limits and if societies also continue to depend on practises that deplete the environment in the past. According to the Aalborg Charter, sustainable development policies must incorporate people's social needs like employment, housing and healthcare together with environmental protection (Murphy, 2012). Similarly, Jordan & Lenschow (2008) review strategies of EU on sustainability documents noted clearly that environmental and social pillars must be integrated. Zeijl-Rozema et al (2011) stated that the importance of integration for working towards sustainable development can be achieved if environmental factors are considered in the formulation and execution of policies that regulate economic and social activities else environmental and social sustainability in the long term cannot be achieved. While subject such as environmental economics has a linkage with the environment and economic imperatives, sustainable development is unique in that it adds social aspects into the interdimensional mix (Tracey & Anne, 2008).

The economic and social aspects of sustainable development must also be given due attention because social sustainability is a vital area on its own right, it can support environmental sustainability. Economic sustainability may be crucial if social and environmental sustainability are to be achieved (Gilbert et al., 2013).

1.2.1 Social Pillar of Sustainability

The idea of sustainable development is basically about attaining an integration among the economic, ecological, and social dimensions of sustainability but the objectives of the social pillar remain vogue (Thin, 2002). Among the three generally accepted pillars of sustainable development which is the environment, economic and social, the social aspect of it has not been given the attention it deserves, and no clear practical directions have been clearly defined in

sustainable development strategies (Vifell & Soneryd, 2012). People are of the view that the social dimension of sustainability has not been given the treatment as it deserves comparing it with the other pillars (Vavik & Keitsch, 2010).

Social sustainability is described as a scope to which social relations, social identities, social values, and social organizations can carry on into the future (Black, 2004). Sustainability from a social perspective posits that human well-being cannot be sustained without a healthy atmosphere and is equally improbable in the absence of a vibrant economy (Torjman, 2000). Social sustainability needs that the unity of society and its capacity to work towards common objectives be kept. Individual needs, such as those of health and well-being, education, accommodation, nutrition and cultural expression should be met (Gilbert, 1996). The social pillar of sustainable development may be possibly the most vital and critical for the long-term survival of human civilizations (Liu & Diamond, 2005).

1.2.2 Environmental Pillar of Sustainability

The world economy is dependent on the natural environment in many significant ways. On one side the environment is a source of energy and materials which are transformed into goods and services to meet human needs. On the other hand, it is a sink for the wastes and emissions generated by producers and consumers. In addition, the environment provides a number of basic conditions for human life and the economy (Kula, 2012).

Environmental sustainability is to preserve the qualities that are valued in the physical environment (Sutton, 2004). Environmental sustainability is the ability of biological systems to remain productive and diverse forever. Examples of sustainable biological systems include long-lasting and healthy wetlands and forests. Sustainability, in general, can be seen as the endurance of processes and systems. (Chee, 2004).

To enjoy fully and use the services endowed on this planet throughout the ages, mankind should learn to live within the capacity of the boundaries of the biophysical environment (Moldan et al., 2012). Means of reducing harmful human impact include environmentally-friendly chemical engineering, effective environmental resources management and environmental protection (Chee, 2004). The importance of biodiversity for human well-being is enormous

because it generally dwells on the diversity of plant and animal species and habitats in and around us. (Tzoulas et al., 2007).

The environmental approach to sustainable development gives much consideration to the stability of natural and physical systems. By this method, the basic task of economic development is to determine the limits of the biological system for several economic activities (Tietenberg & Lewis, 2016).

1.2.3 Economic Pillar of Sustainability

Sustainable economic development is directly connected with increasing the living standards of people, which can be measured quantitatively in terms of food availability, educational services, health-care, real income, water and sanitation and others. Generally, the basic objective of economic sustainability is to decrease absolute poverty by providing permanent and secure livelihoods that reduce resource depletion, environmental degradation, social instability and cultural disruption (Elliott, 2012). Economic sustainability denotes the capacity to make returns to benefit and survive the economic systems at the local and general level (Roberts & Tribe, 2008). Sustainability in economic context focuses on the economic impact on the community, such as local wages, job creation and their role to local economic development (Landrum & Edwards, 2009). Economies will not be sustainable if natural resources are used beyond the limits and if society continues to depend on phenomena that drove growth in the past (Brand, 2009).

In a nutshell, we can summarise the three dimensions emerging from the extant literature reviewed. It can be concluded that the **social** perspective relates to the unrelenting satisfaction of vital human needs. The **environmental aspect** also lays emphasis on the sustained productivity and well-functioning ecosystems in tandem to the safeguarding natural resources and the preservation of biological diversity and finally, the **economic perspective** entails solving the limits which a sustainable society must provide to achieve economic growth (Brown et al., 1987). This cannot be viewed as a separate dimension, but they must be handled at the same time to ensure sustainable development. This assertion is supported by Barbier (1987) who articulates that the development process can be viewed as a continuous interaction between these three systems: social system, the environmental system, as well as the economic system. The relationship between these dimensions are depicted in figure 2 below, so sustainable

development can only be achieved when these three dimensions work simultaneously i.e. the intersecting circles. Any imbalance in the interaction will lead to unsustainable development. This is supported by Giddings et al. (2002) who highlighted that all the three dimensions of sustainability are mutually exclusive and hence cannot be detached from each other.

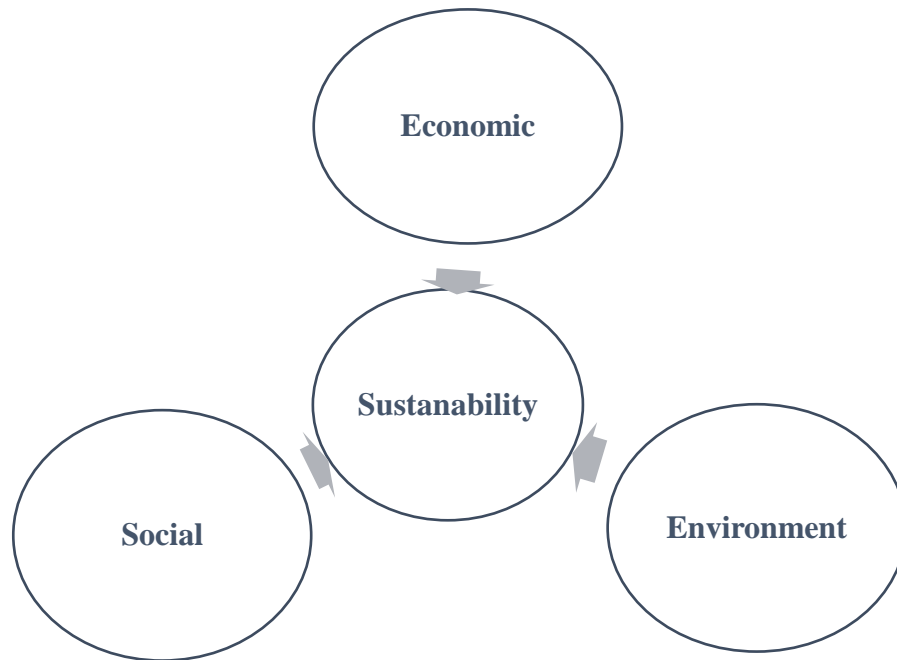


Figure 2: Relationship between sustainable development dimensions

Source: Own elaborations

1.3 Technological Aspects of Sustainability

Technology may be understood as a set of human activities evolving over history, working processes and means of production based on the application of science which allows humans to adapt to their environment using energy and their mental and physical strength. To put it briefly, technology is concerned with the manufacturing of materials and products from raw materials and it also deals with developing, implementing and improving manufacturing processes (Arthur, 2009). Technology is important when it comes to ensuring sustainable development but according to Foxon & Pearson (2008), much attention has not been paid to it when it comes to the development of policies regarding the involvement of innovation and diffusion of cleaner technologies.

Technology and sustainability have an ambivalent relationship (Weaver et al., 2017). The adoption of modern non-environmentally friendly technology is partly responsible for today's environmental problems. A sustainable society well functions if it can utilize reliable

technological systems. These should be highly efficient and socially affordable (Wiles & Watts, 2014). Technological regimes are thought to be greatly relevant to achieving sustainable development. Technology is widely considered as the most essential means to reduce the environmental burden of society. Technology may be used as a tool for meeting the challenges of sustainable development (Leal Filho et al., 2009). The use of more environmentally friendly materials and the reformulation of existing technologies are necessary if we are to achieve a sustainable economy. To achieve sustainable environment, changes in technology is important, because a switch away from hydrocarbon-based energy supply towards the use of renewables or electric vehicles powered by batteries or fuel cells or the replacement of car commuter traffic by interactive telecommunications systems allowing for activities like telework and teleshopping will help a lot (Ljungberg, 2007).

The creation of a market niche for radically new technologies with a low environmental impact should be considered as a learning experiment, not just for suppliers and potential users of these technologies but also for public authorities that want to achieve a smooth transition towards a more environmentally sustainable energy future (Hellström, 2007).

In addition to promoting the values compatible with sustainable development and implementing the economic instruments of environmental and sustainable development policy, there is a third possible approach to sustainable development. This rests on using our creative energy through scientific discoveries and knowledge and skills and then further into the technological process to obtain and use materials and energy (Kemp, 1994).

1.4 Environmentally Sustainable Strategies

Ensuring environmental sustainability means using non-renewable mineral resources in a manner which does not impede easy access by generations yet to be born. Sustainable development entails an adequately slow-rate of depletion of non-renewable energy resources to guarantee a high possibility of an orderly societal transition to renewable ones. Natural resources and the environment constitute the ultimate foundation upon which all future economic activity must be construed. From this, it follows that future economic progress will be increasingly dependent on the sustained integrity of the resource and environmental base (Bergstrom & Randall, 2016).

The uncertainty about the ecological threshold of the earth's carrying capacity necessitates the implementation of precautionary measures. It is also imperative to know that the environment can impose thresholds for certain human activities and that there are situations in which trade-offs should not be made of natural resources or harm against potential benefits. The ability of the environment to continue providing resources, absorb wastes and provide elementary 'life support' services such as protection against radiation and temperature maintenance are of crucial importance for human existence and well-being. If we do not have adequately clean air to breathe, enough water to drink, an atmosphere that shields us from harmful radiation, and soils and climate which enable us to grow sufficient food, we are unlikely to regard any combination of other benefits as compensating us for their loss. (Mol et al., 2009).

To ensure a sustainable environment, there is the need to maintain water, air and soil qualities at levels sufficient to sustain human life and wellbeing as well as animals and plant life. Environmental sustainability can be ensured when the renewable materials like water and energy are not consumed faster than the rate they can be replenished by nature (Kula, 2012).

1.4.1 Ecological citizenship

The main theme of ecological citizenship is about the individual's responsibility and personal fulfilment of duties towards the protection of the environment. It is presumed that attitudinal change in the behaviour of people, organizations and institutions are requirements for sustainable development. Quality of the environment is for the public good and altruistic behaviour is necessary for a person to contribute his or her quota in a significant manner. (Hobson, 2013).

According to Jackson (2005), partaking in community-based processes could offer effective solutions towards the exploration of pro-social behavioural and pro-ecological change.

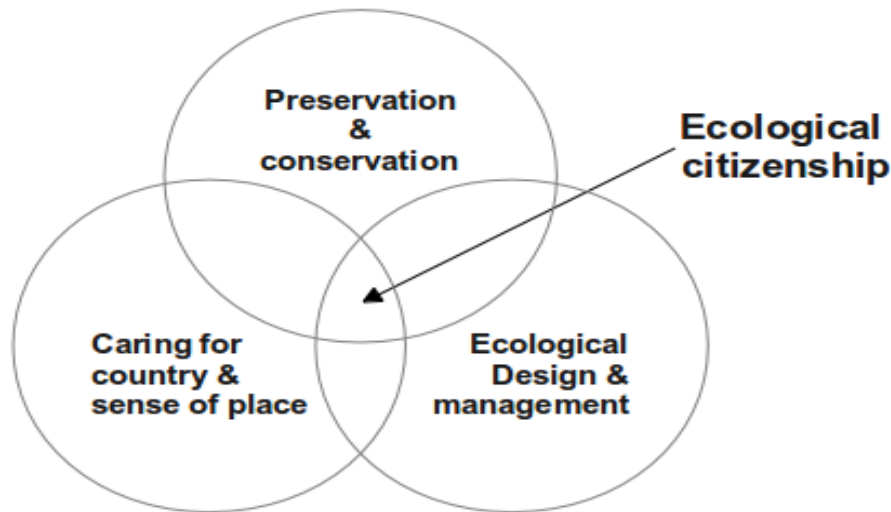


Figure 3: Ecological citizenship

Source: Mulligan & Hill (2001).

From figure 3 above, it can be seen that environmental citizens play a major responsible role in ensuring sustainable society, and this encompasses all the activities an individual might usually think of as relating to good environmental citizenship and this is about reusing, recycling, preserving, conserving, managing and designing the ecology.

Environmental or ecological citizenship recognises that selfish behaviour will not sustain and protect the environment always. Therefore, environmental citizens must make a commitment to be part of the common goal (Ihlen, 2008). From the environmentalist view, every human behaviour has a public inference. As we continue to utilize environmental resources and leave environmental waste, as it is inevitable in human life, we need to protect the environment (Dobson, 2007).

Environmental citizenship goes beyond the national borders of the nation-state and grasps both the private and public domains. All citizens have the right to equal environmental space, and also have a responsibility to play to ensure that we do not inhabit an unjust size of it (Dobson, 2009). There is a need to acknowledge the fact that ecological citizenship is both global and intergenerational. It is the responsibility of the environmental inhabitants to live sustainably so that the future generations may benefit from it. People are therefore required to be ecological

citizens to minimize their environmental impact by way of riding a bicycle, saving water and recycling (Melo-Escrihuela, 2008).

To ensure citizens participation in environmental decision-making processes, residents need to be knowledgeable about environmental problems, their roots and consequences (Horton, 2006). Education for sustainable development, through developing peoples' skills, commitment to active contribution in the democratic and other decision-making processes that do not disturb the structure, the value and the health of the environment, society and discovering the values that ascertain people's actions within the pillars of sustainable development, is one the ways of ensuring sustainable development. (Tidball & Krasny, 2011).

Personal values to embark on pro-environmental initiatives are triggered by beliefs that ecological conditions pose a threat to things the individual cherish and because of that the individual can act to minimize the threat. Such values create universal predisposition that affects all various kinds of behaviour taken with pro-ecological intent (Stern, 2000). Concepts of environmental citizenship as personal responsibility presume that sustainability can be attained through the means of aggregation of individual acts. Inhabitants are therefore perceived as the key actors for environmental and social change; they are required to do their part for the environment by refraining from certain consumptions and bring about changes in personal lifestyles to minimize their impact on the ecosystem. The threat that over-utilisation brings to nature is enormous and self-discipline is a public virtue (Crane et al., 2008).

MacGregor (2011) put it that, in such articulations of environmental citizenship, self-interested and irresponsible inhabitants are understood to be the cause of ecological challenges. Environmental citizenship cannot only be a matter of individual's behaviour but must consist of collective action which is geared towards producing political, economic and social, political conditions whereby people decide to act in a sustainable and just manner. Citizens' involvement and motivation are very crucial in protecting the environment as it is a collective responsibility (Jackson, 2005). Government policy initiatives can go a long way to help attain international agreements like minimizing carbon dioxide emissions by way of unloading the burden of achieving the targets onto the citizens of the country (Jagers, 2009). The public must be considered in addition to the state and the environmental planners as a representative for the transformation of inhabitants to ecological citizens (Latta, 2007).

1.5 The Role of Local authorities in Sustainable development

Environmental challenges in particular are putting much pressure on local authorities to look for means to limit the adverse environmental effect while minimising harm to economic development. According to Van Zeijl-Rozema et al (2011), governance serves as a tool which directs the processes involved in achieving sustainable development. Governments have many techniques at their disposal, and it includes regulations, innovation policies, information programmes, environmental subventions and environmental taxes (Gilbert et al., 2013). To ensure sustainable development, the local authority's role should be as manager of the local eco-system by ensuring that the linear flow of natural resources into wastes and pollutants is transformed into a circular, self-adjusting flow of an eco-system. The implementation of sustainable approach to the environment, economic and social activity and development involves positive will at all levels of the political and corporate spectrums and participation of all members of the public active citizens and consumers to make policies for sustainability successful (Gilbert et al., 2013). In order to be sustainable, the level and degree of natural resources depletion and pollution emissions should not be faster than the level and rate of its renewal or absorption by the environmental systems. Emitting pollutants that exceed the ability of the air, water and the soil to absorb them must be avoided (Kula, 2012).

To assess the sustainability of current patterns of development, both the level of demand for natural resources and transformation process required by human activities should be considered. This is influenced by the size and characteristics of human activities but also by the process and technologies employed (Huang et al., 2010). Continuous investments in urban innovation procedures across the infrastructural, technical, and socio-economic spectrum are needed by local authorities to ensure sustainable development in their various micro-regions (Nam & Pardo, 2011).

The understanding that urban sustainability is only possible if it is clearly planned for local authorities requires greater knowledge and competence with respect to both urban policy and spatial planning. Land use policy and controls are a critical means of ensuring sustainable development and that the development plans of the local planning authorities are a principal policy statement on land use (Ahern, 2013).

1.6 Sustainable Development and spatial planning

Sustainable development relates to issues that are central to spatial planning. Planners are used to considering the long-term socio-economic or environmental effects of physical development proposals (Haughton, 2012). Sustainable development refers to development that delivers basic environmental, economic and social services to all inhabitants of a community without harming the viability of the natural, built and social systems upon which the delivery of these systems depends (XI, 1996).

Spatial planning can have an impact on sustainable development by improving mobility management. That is minimising the number and distance of journeys by such measures as spatially concentrating work, home and leisure activities, mixed-use development rather than separation of land uses by zoning and locating certain activities which attract large traffic flows near public transport and residential areas. Bringing services closer to people, where it is economically practicable may cut down transport requirements and can improve the quality of life in areas of scattered settlement (Enoch, 2016).

The overall energy usage generated by the built environment includes the energy necessary to provide heat and light in buildings, the energy used to make building equipment, energy used for travelling from home to work and shopping and so on. Spatial planning can contribute in several ways to reduce the overall amount of energy utilisation by upgrading the thermal performance in buildings, increasing passive solar heating by the orientations of buildings and design of buildings and through better location policies of land use thereby reducing the need to travel (Radovanović et al., 2012).

Sustainable development dwells on the efficient use of limited resources. Evidently, higher density development is useful in decreasing the quantity of land required for new development and decreasing energy needs. It also enables better scope for public transport use and planning can thus contribute to better use of the transportation system (Buys & Miller, 2012).

Natural and man-made resources are unreplaceable, and it necessitates protection so that future generations can benefit from it. The quality of the built environment is also vital in terms of sustainable development. Buildings must be in good conditions, in terms of design, and in terms

of durability. Durability in terms of the lifetime of the building but also in terms of providing flexibility for different usage of the buildings (Dewulf et al., 2015).

The most significant role for land use planning systems in relation to sustainability is to make sure that ecological carrying capacities are not exceeded and that the stock of both natural and the built heritage is well maintained and passed on to the future generation. Spatial planning policies designed to sustain society within such capacity limits may indicate that some development should be ruled out whatever their current benefits (Short et al., 2013). Spatial planning based on sustainable development must aim at rational effective socio-economic development that must go with maximum conservation of natural resources as well as landscape. The prime objective of regional landscape management is to ensure biological diversity, healthy environment, safeguard landscape stability and optimization of natural resources consumption (Kavaliauskas, 2008). Spatial planning can be used as a tool to coordinate socio-economic development by avoiding ecological challenges and at the same time protect the natural ecology and the social environment. The purpose for planning is to make sure that limited land resources are used efficiently and contribute to balanced regional development and balanced use of natural and landscape resources such as soil, water and air (Termorshuizen, & Opdam, 2009).

Summary of chapter

This chapter was devoted to the review of existing literature about the concept of sustainability. The chapter concluded that although the concept of sustainability has become a household name for the past four decades, there is still no consensus on its definition. Numerous scholars have defined this concept from their areas of specializations. The extant literature reviewed showed that sustainability cannot be achieved by focusing on just one dimension, but rather all the three dimensions should be considered simultaneously. This chapter also proved that in recent times technology is playing a key role in countries drive towards ensuring sustainability. This chapter also brought to bear an important concept of ecological citizens, that simply means involving the citizens to be aware of the role they need to play in order to conserve the natural endowment the environment provides. This chapter conclude that sustainable and spatial development cannot be achieved without the active role of governments at all levels.

2 RESEARCH METHODOLOGY

This section of the dissertation is concerned with the research design and methods employed to develop this dissertation. This section of the thesis serves as a guide on how the research was planned and carried out, it analyses the different sources of data utilised and data gathering methods that were employed.

2.1 Research Design

The research design is a crucial element of this study. The description of the selected research approach in this chapter is to ensure transparency of this research. The research design is the blueprint on which this research was built upon. This plan gives much information about how this research was conducted from the beginning to the end. The research design or plan offers an in-depth insight into the research problem. This consist of the description of the research design, the principles as well as the methods of data gathering and the analysis.

Marshall & Rossman (2014: 73), stated that “*a research design is essentially a plan illustrating the strategy of an investigation by the researcher*”. Adding to the above definition, Creswell & Poth (2017: 142) have also provided an alternative definition for research design. According to them, the research design is “*a plan that describes how, when and where data are to be collected and investigated*”.

The aims of the thesis are to find out the various measures undertaken to ensure economic, social and environmental sustainability in Finland, Latvia and Hungary and also to examine the appropriate measures that help to reduce or eliminate the harmful effect of the environment caused by human activities and finally to provide recommendations where possible to be utilized to ensure sustainable development.

2.2 Qualitative Approach

Several compelling issues were studied and analysed before selecting the qualitative method as an approach for this study. According to Bogdan (2003) and Denzin & Lincoln (2011), a qualitative research approach is convenient when it comes to discovering the meaning and understanding people give to events they experience. Qualitative research aimed at gaining a deep understanding of events rather than a shallow description of a large sample of the

population. Attride-Stirling (2001), sees qualitative research as a tool for finding out and to examine an issue whereby we have little knowledge about it. The importance of the qualitative approach is that the information is richer and has an in-depth understanding of the phenomenon under study. Qualitative research makes use of an inductive method in which the researcher first gather data, examines it and then tries to ascertain meanings from those data generated. (Baxter & Jack, 2008).

One of the features of qualitative research is that it is exploratory in nature because it seeks to provide insight and understanding of how people or groups of people understand their worlds. Another feature that cannot be overlooked is its inductive nature. This is because the potential understandings of the problem at hand are attained through the data collected. Due to its inductive nature, concepts are framed following the gathering and preliminary analysis of the data, at which point supplementary information is gathered to assess, examine and evaluate the hypothesis in an iterative procedure. The hypotheses that are used in qualitative research often focus on the role of contextual issues that impact the phenomenon of interest seeks to differentiate why and how people with different opinions and experiences comprehend the phenomenon in a different way. The aim of qualitative analysis is not to produce a generalized outcome but rather to give comprehensive or copious accounts of an exact experience or situation.

A researcher can achieve highly systematic and well-organized work through qualitative research because the researcher is required to carefully record both of his observations and experiences in gathering the data. Another concern is that qualitative research confirms the researchers' own perception of the situation at hand. Good qualitative research aims at analysing data from different sources, however, it involves gathering and thorough analysing data in an iterative procedure until no further information pops up. It is systematically generated, and it has a piece of saturated qualitative information that provides a degree of insight into which complex phenomenon that distinguishes vividly from what is given through quantitative analysis. *This study is typically based on the qualitative design of research because the focus and questions of the research are not based on numerical data and it adopts case study as a means of research strategy.*

2.3 Research Strategy: Case Study

The current research study will make use of explanatory case study as a strategy for gathering data. Starting and building a research strategy is one of the significant tasks of effective and meaningful research. In this research, content analysis has been done by analysing the current data, policies and researches in the context of sustainable development within some selected countries in Europe. The gathering of suitable data helps in the attainment of the research aims and objectives. It is a known fact that an actual foundation of research helps in the identification of the method that could be used by the researcher to gather his information. There are different kinds of research strategies in qualitative research which includes: interviews, surveys, experiments, case studies, observations, content analysis, archival research, action research and the rest (Maxwell, 2012). In a case study, a researcher has an advantage of examining closely the data obtained within a specific context. Case study usually uses a limited geographical area or a small number of the individual as an area of concentration for the study. To do a thorough contextual analysis of a given contemporary real-life issue, the case study approach is the finest tool to be used in order to get a clear understanding of the phenomena.

A case study is a comprehensive study that is undertaken on a topic to assist in narrowing down a broad area of research into an easy and simple researchable topic (Yin, 2013). The case study research method, “is an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (Yin, 2017).

2.4 Justifying the use of case study method for designing research

Case study as a method of research helps researchers to thoroughly scrutinize the data within a specific context. In a case study, a researcher is able to do a thorough and comprehensive contextual analysis of a given situation because its intention is usually on a small topographical area and uses a limited number of people in its study.

Case study as a method of research has received some criticisms. Yin (2017) elaborates on three kinds of arguments people always make against the case study method. Foremost, people are of the view that the case study lacks firmness. Yin (2017) notes that most often, the case study researcher allows biased opinions to influence the path of his findings and conclusions and recommendations. Due to a small number of participants or limited geographical area used in the case study as a focus, people are of the assumption that it will be very difficult to make a

scientific generalization. The frequent question people raised is “how you can generalize from a single case?” (Yin, 2017). Similarly, Tellis (1997) had the same opinion that case studies’ dependence on a single case exploration makes it cumbersome to reach a generalized conclusion.

In another area of thought, people criticize the case study approach because it produces lengthy work and not easy to undertake because it leads to setting up quite a numerous number of objectives for the study.

In the face of all the above criticism, the case study research method thoroughly explores past studies, it allows for the examination and understanding of complex matters in a real-life setting. It can be regarded as a robust research technique particularly when all-inclusive and an in-depth investigation is to be achieved. Regarded as the best tool in many social science studies, the essence of case study technique in research has become very eminent when issues pertaining to sociology (Zainal, 2007) and education (Gülseçen & Kubat, 2006) are concerned.

The case study method is seen to be more advantageous than the quantitative method because in the sense that we are able to examine social and behavioural problems holistically which quantitative method does not but rather deals with numbers and figures. In using a case study method, a researcher can go an extra mile beyond the quantitative statistical information and clearly understands the behavioural patterns through the actor’s perspective

2.5 Sources of Data Collection

To put up a successful research study, it is imperative to choose the research approach that is suitable for the gathering of the data. There are basically two kinds of methods that are used in researches for the gathering of data, the first one is the primary data gathering method and the second is the secondary data collection approach. In the primary method of research, data is gathered directly through participants (Flaherty et al., 2015), which is executed using observations, participation, interviews, and surveys. Whereas, secondary data on the other side focuses on the collection of data from the existing sources of information such as previous research studies (Clark, 2013).

Research studies do not always dwell on collecting data directly from participants or primary source. There is a bulk amount of information that exists already in the libraries on a wide range

of subjects that could be researched and analysed for responding to the research questions. A secondary source of data is beneficial as it helps to save time and energy. It is cost effective and vastly convenient for the researcher. Another reason why this method (secondary data) was adopted was the researcher's inability to embark on field trips. Therefore, in this study, the researcher solely used secondary research data for the collection of data throughout the case study to analyse the various sustainable development concepts adopted in by the selected countries.

2.6 Data Analysis

Analysing data in secondary research basically refers to the procedure that relates to the use of the pre-existing research material in order to attain the research objectives and aims, and respond to the research questions (Trzesniewski et al., 2011). The Secondary data for this study was gathered from libraries along with several other articles, journals from search engines. Therefore, in this study the researcher will employ thematic analysis to examine the data that will be generated. Analysing data in secondary research basically refers to the procedure that is connected with the use of the pre-existing research material in order to attain the research objectives and aims, and respond to the research questions (Trzesniewski et al., 2011). The Secondary data for this study was gathered from libraries along with several other articles, journals from search engines. Therefore, in this study, the researcher will employ a thematic analysis to examine the data that will be gathered by the researcher. The data collected has been grouped into various themes based on the research aims and objectives to accomplish the desired result for the study. The data collected has been grouped into various themes based on the research aims and objectives to accomplish the desired result for the study.

2.7 Data Accessibility Issues

An impartial and objective research work depends on the credibility and reliability of data used (Saunders, 2012). One of the issues and challenges confronted by the researcher while undertaking this research includes the difficulty of getting access to reliable and trustworthy data to analyse the research theme. Additionally, getting access to current data, precisely the literature which replicates the current researches, facts and statistics was really time-consuming in this study. Besides, most of the online literature available on the internet requires paid access

and sometimes provided limited access to the information. This limited the researcher to obtaining sufficient amount of strong and reliable information.

2.8 Ethical Considerations

Great emphasis was laid on the ethics of research and the study was undertaken with all attention by focusing on the important ethical considerations. The sources where data and literature were gathered were cited and referenced correctly with full acknowledgement to the owners. A good research work must make use of reliable and credible sources of information. This research work was conducted using authentic online materials and literature to present the researcher's findings. Also, the research was conducted using an appropriate format to meet the ethical demands of good research work.

2.9 Research Limitations

Limitations and restriction were encountered during conducting the research for several reasons. The research limitations are basically the issues happened during the whole research process. These issues in one way or the other can influence the reliability, credibility, and authenticity of the study and may also limit the scope of the research. Some of the major limitations faced by the writer during the study are stated below:

- ❖ The study was conducted within the scope of NSDS of the selected countries – Latvia, Hungary, and Finland. Its generalizability and scope are within the selected country. This makes it limited in its scope and generalizability beyond the context of the selected countries.
- ❖ Financial constraints and the inability to conduct field trips restricted the scope of this research work.
- ❖ The research is qualitative and therefore, it is limited in presenting the quantifiable performances of the selected countries as far as sustainable development is a concern.
- ❖ Because this research is qualitative and content analysis is the strategy adopted to embark this research, the challenges faced in getting literature by the researcher might limit the cause of this study.

Summary of chapter

This chapter focuses on the method, data collection procedures and the approach used in the research work. A qualitative method was adopted in this dissertation. Under the qualitative approach, secondary data analysis was used as a means of gathering data. Three countries were selected as a case study where their National Sustainable Development Strategies were closely examined. The study also used the comparative study approach to compare the sustainable development approached adopted and implemented in the selected countries. This approach helped the researcher to know the areas of focus of the countries under study.

3 ANALYSIS OF SUSTAINABLE DEVELOPMENT STRATEGIES OF THE SELECTED COUNTRIES

3.1 Introduction

This chapter basically talks about the various sustainable development strategies adopted by the selected countries. The selected countries include Finland, Latvia, and Hungary. The national sustainable development strategies adopted and drafted by these countries are going to be analysed based on global sustainable development goals. These goals are going to be examined based on the three dimensions of sustainable development, which are; economic, social and the environment. The country profiles, together with their National Sustainable Development Strategies (NSDS) would be briefly analysed in this chapter.

3.2 Brief country profile and NSDS of the selected countries

3.2.1 Finland

Finland is a European country located in the northern and eastern hemisphere. It shares borders with Norway, Russia and Sweden, and by the Baltic Sea, Gulf of Bothnia and the Gulf of Finland. It is part of the Scandinavian countries. It has a total area of 338,145km² with the land area being 303,815 km² and the water area of 34,330 km². The population of Finland is about 5.5 million. The major language of this country is Finnish and Swedish. They practise parliamentary democracy with a republican constitution.

Finland has an extensive tradition as far as promoting sustainable development at both domestic, national and at international level are a concern (Fifka & Drabble, 2012). This long tradition gives the country a good beginning to the implementation and application of agenda 2030. From the Finnish point of view, the foremost and current trends of sustainable development got to do with adaptation to fast world economic changes, environmental conditions and population dynamics. There are several issues confronting the World as far as sustainable development is a concern. These include environmental conditions (for example, climate change), poverty and disparities in societies and demographic issues (Halonen et al., 2017). Finland is also affected by these global challenges. To achieve sustainable resolution, there is the need for a joint and mutual co-operation in setting up short, medium and long-term policies among Finnish, the EU and at the international level.

Since the public sector purse is mostly financed by the workforce, the Finnish are of the view that 75 per cent employment rate is the required condition to provide a sustainable foundation for a welfare society, therefore, getting more people employed and putting good measures in place to improve the well-being at work for the working populace will go a long way to ensure sustainable development. Again, access to education and continuous in-service training is also a factor to be considered as far as sustainable development is a concern. Controlling the labour force immigration is also eminent to enhance the offer of employment in the areas where there is a lack of domestic labour.

Finland on its part to reduce greenhouse emission has developed energy and climate strategy to outlines their plans. The plan focuses on the use of renewable energy sources and energy savings to decrease greenhouse gas emissions. Also, new technologies are being developed to complement the existing ones to help reduce greenhouse emissions. Citizens' awareness is going to be boosted to make environmentally friendly choices.

Industries are going to be encouraged and supported to advance and produce innovations and business strategies that consider the ideologies of sustainable development. This will go a long way to strengthen the Finnish industry and boost the labour force by maintaining high-quality human resource in the country. Finnish entrepreneurs will be motivated to partake in executing the goals of the UN's Millennium Declaration. Companies will also be supported to channel their attention and activities to the developing countries, with the goal of helping to co-operate and partner the public and private sector.

Since greenhouse emission reduction is a global issue, Finland has put in place measures to finance projects in developing countries to reduce poverty thereby ensuring sustainable development. The intention is to make sure that developing countries consider climate change when developing sustainable development policies. Finland on its part to reduce greenhouse emission has developed energy and climate strategy to outlines their plans. The plan focuses on the use of renewable energy sources and energy savings to decrease greenhouse gas emissions. Also, new technologies are being developed to complement the existing ones to help reduce greenhouse emissions. Citizens' awareness is going to be boosted to make environmentally friendly choices.

The Finnish are of the view that to be successful in achieving sustainable much attention and good policies has to be put in place in the area of technological innovations, robust investment in research and education in addition to social security. According to Finland's NSDS, these key factors should not be overlooked because innovations are an important basis for economic development. (NSDS, 2006).

3.2.2 Latvia

Latvia is in north-eastern Europe with a coastline along the Baltic Sea. It has a total area of 64,589km², with a water area of 62,249km² and a land area of 62,249km². It has a population of 1.95 million people (in 2017). Latvia is bordered with Estonia, Russia, Belarus and Lithuania. It is part of the Baltic Countries. Major languages spoken by the people of Latvia include Latvian (official) and Russian. Its landscape is flat and offers a mix of beaches, marshes, lakes, rivers and forests. The type of government system is a unitary parliamentary constitutional republic.

The Sustainable Development Strategy of Latvia summaries the sustainable development aims of Latvia and it endorses resolutions for effective and sustainable use of economic, social capital, human capital, ecosystem and culture. The main priority of Latvia as far as sustainable development is a concern is to place much emphasis on its cultural identity (Jones & Ross, 2016). Since culture determines the way and manner people in which people live, the Latvians are of the view that a strong and creative nation must protect and preserve its unique inherited culture and newly created resources. The uniqueness of a particular society or people lies in its common culture legacy, traditions, the perception of values, customs and language. To promote a sense of belonging and national identity, Latvia will continue to maintain and develop its culture by adopting a qualitative cultural atmosphere for her people. (UNESCO, 2012)

Creating a creative society which can make use of its imaginative potentials are the main basis for ensuring development within society. A society like this is able to reason in a sustainable manner. Latvia in its quest to ensure sustainable development will place much emphasis on people with creative minds. Participation is another key area in the strategies to achieve SD. One of the key principles that were emphasized in Latvia 2030, was to cooperate and tolerate opinions from the masses and to instil in them creative minds and actions. (UNESCO, 2012)

Another important factor which cannot be left out in Latvia's sustainable development strategy is creating a conducive environment, that directly and indirectly supports research and manufacture of new products.

Latvia as part of applying sustainable concepts to ensure sustainable development has put in place mechanisms to facilitate the process. As part of ensuring sustainable development, Latvia will make full use of its human capital. To ensure efficient human capital, there will be an improvement in social facilities like health, social security, social care, in addition to lifelong educational policies and systems. This will go a long way to reduce poverty and social exclusion. Quality education which is oriented towards creativity and innovation is one of the pre-requisite conditions which helps to provide a quick response to global challenges.

As part of Latvia's policies to ensure sustainable development, support and education would be given to entrepreneurs to use innovative and eco-efficient initiatives. Entrepreneurs would be motivated to create goods and services with low carbon emission methods, renewable energy sources and development of know-how to ensure sustainable development.

To improve air quality, Latvia's main objective here is to reduce the use of private cars by improving the accessibility and efficiency of public buses always. There will also be an improvement in the infrastructure suitable for cyclists and pedestrians. This will help reduce CO₂ emissions which have become global canker. Participation of the populace in the fight of preserving the environment must be encouraged. As part of creating the awareness of the need to protect and preserve the ecosystem, the government will conduct environmental education to sensitize the society the need to live sustainable lifestyles. Pupils would also be taught about how to protect and clean up the natural environment through theory and practical skills.

3.2.3 Hungary

Hungary is a landlocked central European country bordered by Austria, Croatia, Romania, Serbia, Slovakia, Slovenia, and Ukraine. It has a population of 9.781 million (2017) according to the World Bank. Hungary has a total area of 93,028 km², with water area being 3,420 km² and a land area of 89,608 km². Hungary has a democratically-elected unicameral parliament system of government. The official language is Hungarian.

Hungarians main objective of achieving sustainable development is to implement policies that will help eliminate poverty in every form by creating an all-in and buoyant society and to guarantee economic growth while paying attention to the terrestrial boundaries. This, to Hungarians, will improve the well-being of its citizens and live in a safe and non-violent environment. To achieve a hunger-free world, there will be a maximum global partnership with international institutions or bodies.

As part of ensuring economic growth, living sustainably and ensuring the well-being of the people, the Government's aim is to increase competition in all areas of the economy and to lay more emphasis on the use of science, technology and innovation (Hegyes et al., 2017).

Issues of water and sanitation have been given much attention in Hungary. As stated in SDG 6, "*ensuring availability and sustainable management of water and sanitation for all*", Hungary has placed greater emphasis on water as a lone goal on its own. Access to clean water and potable water is very important in sustainable development, therefore, particular attention has been given to it in their NSDS.

The Hungarian government has also put much emphasis on environmental sustainability by helping to combat the dangers associated with climate change. This is because one of the prerequisite conditions for ensuring socio-economic well-being is to create a sustainable environment. To show commitment and to achieve this objective, directorate in charge of environmental sustainability has been put in place measures to maintain and coordinate with educational institutions, organization and international bodies in the quest to ensure a sustainable environment. Hungary was also the first EU country to append her signature to adhere to Nationally Determined Contributions (NDCs) of the Paris Agreement (Senshaw & Kim, 2018). This agreement serves as the elementary condition to achieve the goals stipulated within the sustainable development agenda. Since sustainability is a core principle and very important in policy making in Hungary, all government policies, regulations, fundamental laws, and international agreements are carried out along the lines and requirements of SDG.

The human resource development aspect of the strategy has also been given the utmost attention. According to NSDS, Hungarians will focus much on having a steady and dynamic populace with positive values and self-confidence. The people will also be sensitized to adhere to the need and importance of protecting and preserving the renewable natural resources

endowed the country. Economically, people will be motivated and supported to modify the already existing technology and develop new ways of production in order to increase capital investment.

There are also institutions being put in place to foster sustainability in Hungary. There is a special office created on behalf of the “generation unborn”. The Office of the Ombudsman was put in place in 2008 to advocate for the interest of the generation yet coming (Düwell et al., 2018). His role is to make sure policies are made in a manner that protects and preserve the physical environment and the cultural values of the nation.

Sustainable development cannot be achieved without given attention to external relations. Since there are strong and interconnected goals of sustainable development, policies of a country must take into consideration both internal and external cooperation. Before Agenda 2030 for sustainable development, Hungary has already put in place a body called International Development Cooperation (IDC) Strategy of Hungary in 2014. The IDC decides which areas should the government gives priorities to in the Hungarian development cooperation. The activities of IDC were later streamlined to the SDG 2030 goal 17 which is about international cooperation and partnership.

Summary of Chapter

This chapter briefly talks about the profiles of the selected countries reviewed for this study. The chapter provides a general profile of the selected countries and it also touched briefly on the country ranking of sustainable development. We found out that Latvia has focused her attention on ensuring efficient human capital development, by improving social facilities like health, social security, social care, as well as lifelong educational policies and systems. In Finland, the government has remained committed to providing a good sustainable foundation for a welfare society is 75 per cent employment rate, therefore more people are employed to help grow the economy as well as the well-being of its people. In Hungary, the directorate in charge of environmental sustainability has been put in place measures to help maintain and coordinate with educational institutions, organization and international bodies in the quest to ensure a sustainable environment.

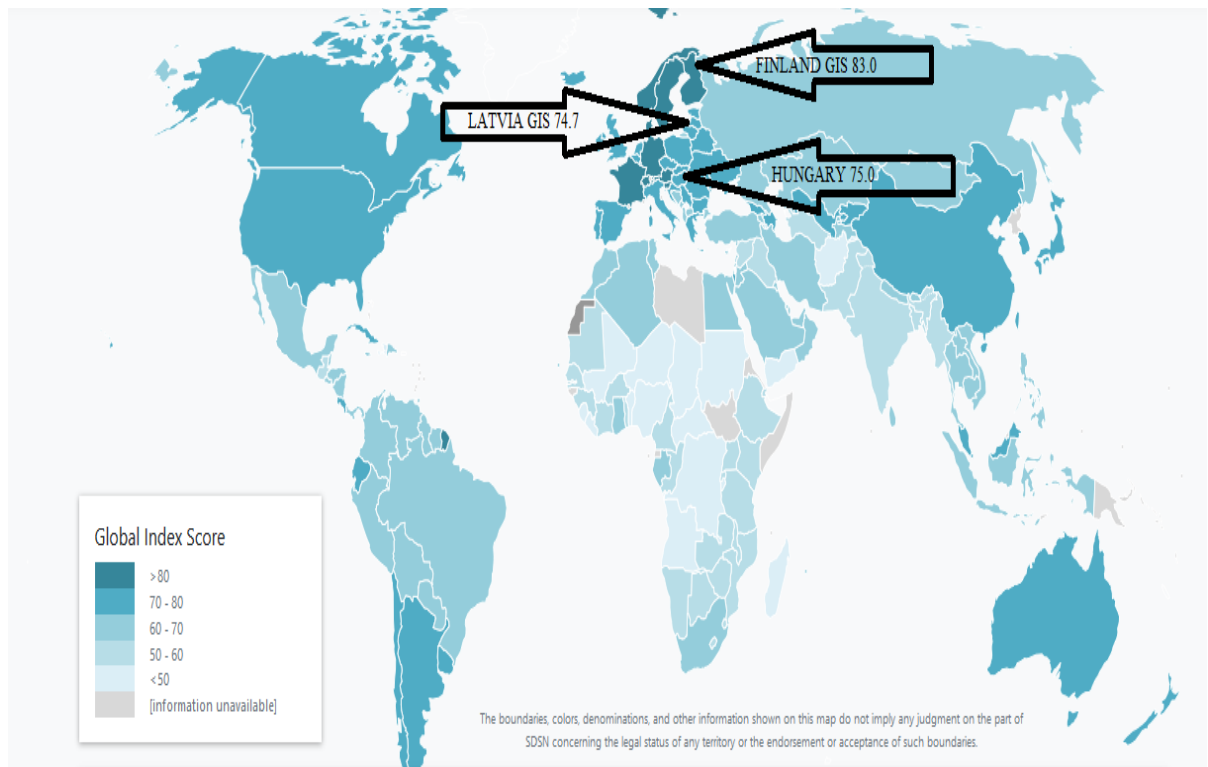


Figure 4: Global Index Score

The Global Index Score (GIS)¹ provides a graphical representation of countries' SDGs performance to help identify priorities required for action. It uses colour schemes to illustrate how far a country is faring from achieving a particular SDG goal of Agenda 2030. The deep blue colour represents countries with scores greater than 80% while light blue indicates countries performing between 70% and 80%. The three selected countries have scores above 70%, with Finland having the highest score of 83.3% followed by Hungary with 75% and Latvia 74.7 respectively.

¹ <https://dashboards.sdindex.org/#>

4 TABULAR DISCUSSIONS OF THE NSDS OF THE SELECTED COUNTRIES

This part of the research examines into details the various strategies that are being adopted by the selected countries to achieve sustainable development. This section basically is going to be focused on the three basic components (pillars or dimensions) of sustainable development. The thematic areas under this section are going to be drawn from the globally sustainable development goals of 2030.

Table 1: NSDS of Latvia, Hungary and Finland

SD Dimensions	Indicators	Programme being Implemented		
		Latvia	Hungary	Finland
Economic	Sustainable Consumption and Production (SCP)	Using Green Public Procurement (GPP) as a means of ensuring SCP	Reducing food loss and wastage. Educational campaigns for consumers to lead a sustainable lifestyle Education and awareness raising programme	Reducing the amount of food waste. Advertising and educating the populace the need to make sustainable purchasing choices.
	Partnership for goals	Collaborates with other nations at the EU level and bilaterally to promote sustainable development	Cooperation with local governments, higher education institutions and international institutions.	Civil society organisations (CSOs) participate in building society both nationally and in the world. Active citizenship participation in sustainable development issues. Finland supports sustainable development in developing countries

				through its trade and development policies.
	Productive employment and sustainable economic growth	<p>Industrial cooperation and research centres have been instituted for employees to build their knowledge on innovational practices. Market demand from both domestic and external, high production capacity, low-interest rates and private investment supported economic growth by 2% between 2013-2016 and 4.5% in 2017.</p> <p>More vocational training programmes at the high school level.</p>	<p>Reforms in tax administration have decreased the burdens on enterprises. For example, the corporate income tax rate has been reduced. The government also supports enterprises by means of technological development to improve productivity. Employment of people with a reduced capacity to work.</p> <p>Creation of youth Initiatives programs, example: National Youth Strategy (NYS)</p>	<p>Industrial policy will be used to develop the quality operating environment for enterprises and create an atmosphere that favours entrepreneurship.</p> <p>Promoting employee well-being at work and incentives for the growth of human capital and innovation activities.</p>
	Sustainable industrialization and fostering innovation	<p>Provisioning of high-quality public services and support for start-ups.</p> <p>Supporting research and development (R&D)</p>	<p>The use of research, development and innovation (RDI) and science and technology are the focus of sustainable industrialisation .</p>	<p>Increasing access to small-scale industries and other enterprises. Enhance scientific research, upgrade the existing technological capabilities</p>

		investments in environmentally friendly, resource efficient technology development and manufacturing and the modernization of manufacturing processes and the availability of infrastructure.	The use of residual waste from recycling for energy production. Company self-compliance by recycling of waste. Integration of renewable energy sources in the energy sector.	
Social	Global citizenship education	Universities have aligned their activities to SDGs and organise programmes, seminars and research on the SDGs.	Supporting dual education. Development of training systems. Supporting adult education.	Introduction of environmental Education at all educational levels
	Peace, Justice and Strong institutions	Efficient public participation in decision-making Efficient whistle-blowing Mechanism Transparency and accountability in the governance of state-owned enterprises	Compliance and whistle-blower policy	Providing access to justice for all and putting in place an effective, accountable and inclusive institutions at all levels.
	Ending poverty and ensuring zero hunger	A household with low income is supported through the social Programme.	Encouraging the employment of people from poor backgrounds and introducing tax breaks, raising the	Encouraging small-scale mining using sustainable development methods.

		Children from a low-income family and from large families are fed in school.	minimum wage, tax reduction, financial backing for families with children and permanently decreasing the costs of utilities. Vocational courses have been introduced at the high school level.	Nutritional education in communities
	Good health and wellbeing	From 2019 individual contribution to social insurance will be used as health insurance. Financial assistance will be given to people with low income and a housing allowance based on individual needs assessment.	Maintaining health and safety protection Systems and provision of health screening programmes. Example, the introduction of compulsory vaccination against most common and childhood infections. Responsible alcohol consumption program. Modernized health equipment and renovation of health facilities in rural areas.	Equal prospects for well-being. Building a sustainable economy that creates quality lifestyle and wellbeing, while reducing environmental harms
	Inclusive and equitable quality education	Greater emphasis has been placed on vocational education, competency-based training and Information	Schools with higher drop-out rates are being supported with additional educational support to effectively	The project “ <i>Reform of vocational upper secondary education</i> ” is to encourage practical learning and

		<p>Technology (IT). Quiet several students with special needs were integrated into the general school system.</p>	<p>educate children with multiple disadvantages. Compulsory in-service training for employees. High schools and vocational schools have been turned into specialized high vocational schools. Digital Education Strategy of Hungary was launched in 2016 to cater for people with special needs.</p>	<p>apprenticeship-based training for the youth and adult Non-discrimination against people with disabilities and promoting their social inclusion</p>
	<p>Gender equality and women empowerment</p>	<p>Gender equality policy is being drafted. The policy is called Promotion of Equal Rights and Opportunities for Women and Men.</p>	<p>Supporting the career path of women. For example, parents are to be employed on a part-time basis until their children get to age three. The Workplace Protection Action Plan policy lays emphasis on the employment of the female labour force. Childcare Fee Extra policy of 2014 makes provision for mothers with children to be employed and parents who are students to receive childcare</p>	<p>Gender equality and the rights of women and girls. Participation of women in political decision-making and economic empowerment of women in entrepreneurship, leadership and the right to education.</p>

			benefit for two years.	
Environment	Sustainable management of water, sanitation and conservation of biodiversity	Cabinet Regulation has been instituted to check the sewage system at small and densely populated areas.	Advanced and efficient wastewater treatment. For instance, The National Water Strategy policy to improve the quality of water resources, maintenance of high-quality public water, management of rainfall runoff and sanitation has been implemented. Integration of ecosystem and biodiversity values into national and local policies	Water-saving devices and water meters in apartments have been introduced to decrease water consumption Strict forest protection and excluded from Commercial use. River basin management and water restoration projects to restore the natural state of small water bodies and their species have been implemented.
	Energy Consumption	Support is given to motivate the use of renewable energy sources for energy generation in public and private sectors and also in the transport sector.	Operational Programs to ensure energy consumption. They are programmes planned to support sectors of the economy that largely emphasis on the development of renewable energy sources, increasing energy efficiency, and cutting down Greenhouse gas (GHG) emissions	Encouraging the use of bioenergy, that is, to reduce oil dependency and increase the amount of renewable energy sources and biofuels.

	<p>Combating climate change</p>	<p>Climate change issues have been included in sectorial policies and currently working on a national climate strategy to reduce carbon emission and developing alternate fuels and more efficient energy policies.</p>	<p>Reducing emissions through technology Modifications. Carbon free printing Hungary is a member of major UN and EU climate change agreements. Example: United Nations Framework Convention on Climate Change in 1994, Kyoto Protocol in 2002, Paris Agreement in 2016. Member of NDC by EU and the EU Emission Trading System (EU ETS)</p>	<p>Introduction of cleantech businesses and modification of the existing technologies to become more efficient.</p> <p>Creating citizens' awareness of the effects of GHG.</p> <p>Increase in the use of bikes and walking.</p> <p>Sustainable use of natural capitals, nature tourism, promoting diversified rural entrepreneurship, without compromising environmental protection.</p>
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4.1 Discussions in the context of the table above

This section of the research work presents a critical analysis of the findings that were documented in this research based on the table above. This is going to be done based on the dimensions of sustainable development.

4.1.1 Economic sustainability policies in Latvia

There is a Green Public Procurement (GPP) in Latvia which is helping to progressively changeover to sustainable consumption and production. This is being done by promoting the efficient use of resources, that is, by changing from waste management to resource management, sustainable production and consumption as well as energy efficiency. To Latvians, ensuring sustainable production and consumption as well as energy efficiency will go a long way to reduce the export of raw materials.

Latvia has put in place great programmes to increase employment, but many people are leaving the shores of Latvia because of the free movement of labour in the EU with the motive of earning more abroad and others also leaving to the national capital-Riga. This has really reduced a large percentage of the labour force of the country. Latvia has shifted their attention on a polycentric development approach where nine urban municipalities are going to be developed to national development centres while 21 largest towns will be developed as national regional development centres that can serve as an alternative to emigration by improving economic activities in those areas as well as providing social amenities that can help maintain the people.

The SDG 8 is about ensuring decent work for all. The government of Latvia has dedicated itself to achieving this objective. Decent work is all about getting enough income for the work one does. The main objective of the government is to ensure economic growth, increase export and productivity and also improve the living standards of people. The government is doing this by supporting companies to use modernised processes in their activities. There is also in-service training for employees on innovation and special centre has been created for research and industrial cooperation. The government has introduced tax reforms to decrease the tax burden on labour since 2018. There is a steady increase in the minimum wage each year from 2013 to 2018 (countryeconomy.com, 2018).

To ensure sustainable industrialisation and improve innovation, the government of Latvia has placed the entrepreneur at the centre in the transition to the knowledge economy. One of the measures to fulfil this objective is the provision of support for start-ups, research and

development investment in an environmentally friendly atmosphere and providing motivation for people to use modern way of production.

4.1.2 Economic sustainability policies in Hungary

Tax reforms that were introduced some years back have been decreased to reduce tax the burden on entrepreneurs. This has improved productivity and added values to small and medium-sized enterprises. Although there are low levels of the labour force and high youth unemployment in Hungary despite government effort.

For the government to develop the direction of the youth of the country, National Youth Strategy (NYS) has been implemented. The main drive for creating this strategy is to:

1. create an enabling environment that aids to improve conditions of life.
2. anticipate proposals for transforming the lawmaking environment that impacts the lives of the young people.
3. equip the youth with creative minds to be abreast with modern innovative strategies.

There are other vocational training programmes for the youth to equip them with work experience to improve their employability skills to be able to fit into the job market. The trainees are also provided with start-up capitals for their businesses.

As part of an effort to improve the economy, the corporate tax rate was reduced in 2017 from 19% to 9% (Byrne, 2016). This was done to help small-scale business to grow and expand their business. The government also support SMEs by giving them some sizeable amount of domestic and EU funds as well as technical assistance for them to improve their productivity.

In the area of international development cooperation, Hungary supports sustainable development and economic growth by contributing to the programme a called EUTF that is European Union Emergency Trust Fund. The aim of this programme is to help find a solution to irregular migration in Africa and to prevent human trafficking.

To ensure SCP, the government has put in place Green Investment and Green Finance System to help improve the energy efficiency as well as bringing down CO₂ emissions of households. The country has pledged to maintain its Genetically Modified Organism (GMO) free agriculture

and food production which is one of the programmes of ensuring SCP. This programme was adopted unanimously by their parliament.

Also, under the National Rural Development Programme, there is a sub programme called Short Food Supply Chain Program with the main aim of educating the rural farmers the need to apply fewer chemicals and artificial fertilizers in their farms.

There is another programme meant to boost the local economy. The name of the programme is National Park Product, which is a trademark given to local goods produced in the country. This programme contributes to the quality of eco-tourism by boosting the promotion of local products and given people employment in rural areas.

4.1.3 Economic sustainability policies in Finland

Finland is one of the richest countries in the world, but the question is the wealth of Finland evenly distributed? Maintaining equitable and sustainable wellbeing has become a major challenge for Finland under slow economic growth conditions. To achieve equitability, more employment avenues are going to be created. To achieve a more sustainable economy, more green jobs are going to be created to increase energy and resource efficiency and employment which will go a long way to enhance profitability, productivity and boost the economy. Another way Finland is planning to achieve sustainable economy is the creation of more jobs which are in line with sustainable development goals and to achieve this, current modernised methods of production are going to be adopted.

Finnish companies will be encouraged to undertake their activities in accordance with the principles of sustainable development and at the same time see to it that social standard is raised both at home and across their supply chains as well. The use of modernised environmentally friendly technologies will be encouraged and the existing one will be upgraded. In the service sector, there will be promotion of innovation and entrepreneurship. Industrial restructuring will be embarked upon to help create more jobs and improve productivity.

The educational and social system will be restructured to be able to provide the people with new skills and competencies to fit the labour market which will fetch the people with adequate incomes.

The Finnish labour market will promote equality by employing young, adult or people pending their retirement, people with limited working capacity as well as immigrants. There will be an improvement at workplaces, occupational safety will also be enhanced while ensuring quality working life by expanding opportunities for workers to upgrade themselves. This, to Finnish, will help to achieve the global efforts to promote decent work for all.

To prevent the loss of biodiversity, an awareness programme will be implemented to educate the people on the importance of respecting biodiversity and encouraging them to consider sustainability-related concerns into their programmes and actions. People will be encouraged to utilize scientific ideas to support their decisions.

To enhance resource efficiency in Finland, the government will promote a circular economy where business models that can help improve the productivity of natural resources are going to be employed. The people will also be motivated to do investments and experimentation in all the sectors of the economy.

Finland will create a conducive atmosphere for companies to get a competitive advantage. This is going to be done by offering a good market and operating environment for innovation and sustainable economy. Much investment will be done in clean technology, renewable energy, research, services and others. Government will also implement sustainable public procurement and the growth of sustainable food production, forestry and efficient water resources management.

4.2 Social Sustainability

For a socially sustainable society, the following measures cannot be left out in the decision-making process:

- a. all members of the society must be treated equally,
- b. strengthening and involving the people in the decision-making process
- c. equal access to health services by everyone
- d. provision of security for the members of the society
- e. equal opportunities to the labour market

4.2.1 Social Sustainability policies in Latvia

The government of Latvia has put in place social intervention programmes like social benefits, social insurance and other social assistance programmes to help reduce inequality.

Education is said to be the key to success, therefore Latvia has shown commitment to improving educational opportunity in their country. Educational opportunities have been redesigned in such a manner that young people will be equipped with competencies that will help them get better and high paid jobs.

In order to have active and healthy labour force to be fit for work, the Government of Latvia has increased the health care funding. Beginning from 2019 health care is going to be compulsory and it is going to be deducted from individual social insurance contributions. Effort is also being made to monitor and take care of those who cannot make this contribution due to certain conditions. Prevention is better than cure, therefore the citizenry are being educated to live a good lifestyle, for instance, to reduce or stop smoking.

Issues concerning gender equality have been given topmost attention in Latvia. Same rights and opportunities for women and men have been entrenched in the Constitution of the Republic of Latvia. There is a policy being drafted in Latvia with the aim of promoting equal rights and opportunities for women just as their men canter parts. As part of promoting gender equality in Latvia, the local government of Skrunda has agreed to the European Charter for Equality of Women and Men in Local Life, thereby showing commitment by given men and women same level of participation in the decision-making process. This agreement involves consulting and integrating the opinions of stakeholders of men and women in the national decision-making process. This will help factor both genders opinion into the governance process.

In Latvia, the government has shown commitment to end poverty as stated in Agenda 2030. In doing this, most of the local governments give free or discount to meals for children at Kindergarten level. This is one of the efforts to assist families, most importantly single-parents' families by the government through subsidies provided to the local governments. Aside from aiding children and families, local governments also support health delivery, housing to people with low-income levels and the aged people.

To reduce or avoid inequality in societies, social intervention programmes must be strengthened. Latvia has a lot of social security programmes like Maternity and Paternity benefit, Allowance for child care, Child Birth Benefit, Parents' Benefit, Disabled Child Care Benefit, Old Age Pension, Sickness Benefit, Unemployment Benefit and others.

4.2.2 Social Sustainability policies in Hungary

The Government of Hungary has made it a point to contribute their quota to the realization of Agenda 2030. It is the topmost priority of the government to eliminate all aspects and forms of poverty by creating all-encompassing and a lively society by ensuring sustained economic growth without harming biodiversity. To the Hungarians, this will boost the wellbeing of its people and ensure sustainable development. Sustainable development is not a one-man business therefore, the government considers it right to include all stakeholders concerned to come together to achieve sustainable development and eliminate poverty.

One of the government's topmost priorities as far as sustainable development is concerned is to eliminate poverty in all forms. "In 2016, 1 in every 4 people, forming 26.3% of the population, was identified to be living in poverty in Hungary". (UN, 2018). The Hungarian policy named National Social Inclusion Strategy II for the between 2011-2020 stipulates the policy framework for government intervention. The main objective of this policy is to ensure the following: improving all-inclusive education, increasing children's wellbeing, expanding employment opportunities for persons with low-level of educational experiences, promoting economic integration, access to good medical care by the citizenry, eradicating housing problems and reducing geographical disadvantages.

The poverty level has been declining in the last 4 to 5 years due to the government's social intervention programmes like:

- tax reduction and financial support for people with children,
- public employment, through job creation,
- child support programs,
- employing people with low educational background,
- reduction in the costs of utilities,
- increasing the minimum wage and ensuring economic growth,
- providing social security to people who are involuntarily unemployed

- offering training, quality healthcare, employment opportunities, and other social services for people living in a segregated area to advance their housing conditions and assist them to move into a sustainable housing environment

Hungary provides vaccinations for various childhood infectious diseases. This is a compulsory vaccination programme designed to eradicate diseases like tumours and severe early childhood diseases. There are other health-related programmes like:

- vaccination against human papillomavirus (HPV)
- breast screening programme against breast and cervical cancer
- public education on cardiovascular and tumorous diseases
- alcohol consumption prevention programs have been implemented in communities, schools and at workplaces to educate people the need to reduce excessive alcohol consumption.
- stricter measures have also been laid down to reduce smoking and protect non-smokers as well.
- existing health infrastructure in rural communities has been renovated and equipped with modernized infrastructure.

In education, the government is supporting innovation and talent at all stages of public education with the view of equipping students inclusive and quality education which will provide the people with lifelong learning opportunities for them to fit into the job market. The Government has also developed a concept called ‘Vocational Training that Serves Economy’ with the focus of equipping people with practical skills.

Gender equality has not been the best in Hungary. According to the Global Gender Gap Report published in 2018 under the World Economic Forum, Hungary was positioned at 102 out of 149 countries examined. Hungary went below the global average level. Hungary had the poorest score among her European center parts. The Global Gender report considers the gender-based inequalities and tracks it over a period of time.

4.2.3 Social Sustainability Policies in Finland

The purpose of Finland Social strategy for sustainable development is to achieve a socially sustainable society where people are treated on an equal basis and given equal opportunity to participate in decision making and every person's health and functional capacity is supported.

To achieve social sustainability there is a requisite condition to reduce the welfare and health disparities among the citizenry and improve the living standard of the most vulnerable people of the society. The action plan of the government of Finland is to encourage gender equality between women and men. The main aim of this policy is to help fight against gender-based discrimination, reducing wage differences between men and women and to put a stop to domestic violence against women.

Since inequality has increased in Finland, the government has made it a point to reduce it by paying attention to the need to have adequate income, equal welfare and employment opportunities for everyone living in Finland. This is going to be achieved by given the education that will provide them with employable skills and competencies to fit well into sectors of the economy. Though the employment level is rising in Finland, much is still being done to reduce it to a minimum level. The aged has not also been left out in the plan to avoid inequality in society. To avoid discrimination, the aged will have equal access to services to ensure dignity in the old age.

In education, vocational education is still being revised to equip people with practical learning (employable skills) and apprenticeship-based training which will make the people self-employed after completion of their courses of study. In the area of pre-school, everyone has access to quality and affordable preschool teaching.

To promote sustainable development, the Finnish Government has made it a point to give the local communities the opportunity to partake in the decision-making process both at the national level and in an international context as well.

4.3. Environmental Sustainability

The critical threshold for the planet is its ability to absorb the earth's ecosystem. To be sustainable, the level and the amount of natural resources depletion and pollution emissions should not be more than the level of its renewal or absorption by the environmental systems.

4.3.1 Environmental Sustainability Policies in Latvia

Latvians are of the view that reduction in emissions will pave way for eco-efficiency in transportation, agriculture and energy sectors. Due to this, environmental adaptations have been made part of sectoral policies. There is also an ongoing national climate adaptation strategy and energy efficiency policies which are to ensure low carbon emission and substitute fuels.

When it comes to sustainable management of water and sanitation, Latvia is doing their best to ensure that its people get access to clean water and clean environment. Latvia's has a volume of freshwater of varying quality. Latvia provides centralized sewage and water supply systems for more than 90% of its inhabitants. To make sure that people use water efficiently, natural resource tax and water consumption recorder have been introduced. In the quest to provide the people with quality water, the existing water supply networks have been reconstructed and sewage systems have also been expanded and improved.

In combating climate change, Latvia's main objective is to stabilise the total GHG emissions by 2020 in order to have emissions level not exceeding 12.16 Mt CO₂ equivalent. Again, there is also an idea of ensuring that effective forest management will result in minimising of carbon dioxide emission. One of the means of decreasing emissions is to ensure maximisation of the use of local resources. Climate change issues have also been integrated into national policies in the area of health, forestry, land use, agriculture and other important policies. As part of saving the climate, the government of Latvia has approved an action plan called the Alternative Fuel Development Plan for the period of 2017-2020. The purpose is to encourage the usage of hydrogen, biofuel, electricity in transport and natural gas.

Latvia has a lot of vehicle charging station across the nation to reduce dependency on fossil fuels in the country. Motorcycle and automobile tax were introduced in 2016 to discourage people from fossil fuels. Again, low emissions vehicles (less than 50g/km) have been exempted from motorcycle and automobile tax. Again, electric cars have free parking and have the right to use public transport lanes.

Latvia encourages her people to make use of local energy resources in the energy generation process to help balance the structure of energy generation and energy importation. Assistance is given to motivate the utilisation of renewable energy sources for the energy generation process in both private and public sectors and in the transport industry.

Latvia has a very low population, which makes them one of the least urbanized European Union. Latvia's natural resources are its subterranean assets, soil, water, plants and different forest species. Maintaining the natural resources of the country is one of the main aims of the National Development Plan of Latvia as a means of achieving sustainable economic growth therefore effort is being made to promote efficient utilisation of it.

4.3.2. Environmental Sustainability Policies in Hungary

Hungarians are of the view that environmental issues cannot be handled in isolation because it is a cross-border phenomenon and therefore must be tackled international perspective. Hungary is a devoted member of the international community to fight climate change. Hungary has shown commitment to the fight against climate change by being a party to all the major UN climate change agreements, among them includes the United Nations Framework Convention on Climate Change in 1994, Kyoto Protocol in 2002, and the Paris Agreement in 2016.

National Climate Change Strategy (NCCS-1) for the period of 2008–2025 is first Hungary's first climate policy which is aimed at decreasing GHG emissions using renewable energy sources, energy efficiency in buildings, improved environmental sustainability of transport and afforestation. There is also NCCS-2 for 2030 - 2050, which is yet to be approved by parliament. The main idea elaborated in this policy is the National Decarbonisation Roadmap, National Adaptation Strategy and special attention on awareness-raising and monitoring.

One of the National Energy Strategy 2030 of Hungary is about the development of an action plan to educate the populace about the need to be aware of climate change and sustainable energy usage. This action plan, called Climate and Energy Awareness Raising Action Plan, was implemented in the year 2015 by the Government. This is Action Plan basically stipulates the kinds of governmental procedures, for instance, regulatory tools, public campaigns, and collaborative instruments to help augment climate and energy awareness.

Hungary also places greater attention on improving the quality of air to promote a healthy environment. From this perspective, an Intersectoral Action Program for the Reduction of Particulate Matter (PM10) has been implemented to reduce PM10 pollution between the period of 2011–2030.

Another policy called National Strategy for the Conservation of Biodiversity from 2015–2020 has been set up. The main aim of implementing this strategy is to assimilate the ecosystem and biodiversity values into national and local planning initiatives. The purpose of this strategy is to put a stop to the loss of biological diversity and the further decline of ecosystem services by the year 2020. To achieve these objectives, the conservation of biodiversity is going to be integrated into cross-sectoral policies, programme, strategies and also into their implementation as well.

There is also another policy on Aquaculture. This is a Multiannual National Strategy Plan on Aquaculture for the period 2014–2020. The purpose of this policy is to help to conserve and improve the natural values, particularly aquatic habitats. Another aim of this policy is to boost the production of safe and healthy food for people through the use of environmentally friendly practices and innovative technologies. To Hungarians, this policy will have positive effect by helping to preserve and maintain swamplands and biodiversity.

Currently, the Hungarian Government has shown commitment to reduce environmental pollution by engaging domestic and industrial companies, waste management companies, industrial composting companies, professional organizations and academicians through the Ministry of National Economy to find a lasting solution to minimizing the landfilling of waste.

Another beneficial programme implemented by the Government of Hungary was the Integrated Pest Management (IPM) in 2016. The main aim of this programme was to protect crops and plant products from injurious organisms and to produce high quality and safe foods for the people. Also, the Homestead Development Program implemented in 2011 created an opportunity to protect and maintain indigenous animal and plant species.

4.3.3. Environmental Sustainability Policies in Finland

Finland is dedicated to the preservation and sustainable use of biodiversity and equitable distribution of benefits coming out of the use of inherited natural resources of the country. The country is committed to ensuring that the activities that contribute to the loss of biodiversity are halted. As part of measures to protect the environment, depleted ecosystems have been left so that it can be reverted to its natural condition through natural processes. Strict forest protection by-laws have been implemented to preserve certain areas from commercial use.

River basin management plans have been implemented and more inland water restoration projects have also been done to boost the restoration of small water bodies in Finland. Issues regarding biodiversity have been made fundamental. The Government has shown commitment to continue to implement solutions designed to preserve nature by seeing to it that forests are managed sustainably. These measures will be monitored to assess their impacts and find ways of improving upon them.

Agriculture is done for food production. Fertile farmlands are the basis for producing abundant food for people. It is very important to improve the preservation and management of farmland biodiversity, and this cause for the need to protect the abilities of agricultural environments to produce ecological services and other production goals. The intensity of agricultural land use has led to the loss of most habitat of many farmland species, but the increase in the use of strips and buffer zones in farmland and then cutting down fallow lands later have really enhanced the situation in some way.

In waste management, the effort is being made to recycle all waste products and those that cannot be recycled will be disposed to landfill sites. The priority of Finland regarding waste management states that *“If waste cannot be prevented, it must be prepared for re-use. If waste cannot be re-used, it is to be primarily recycled as material and secondarily recovered as energy”* (Ymparisto.fi, 2018)

Climate change is one of the major threats to sustainable development that affects man and its natural environment. To reduce greenhouse gas emissions and to increase the use of renewable energy, Finland is planning to put an end to the use of coal for energy. To achieve this, light fuel energy oil will be used in machinery and bioliquids will be used for heating systems. Usage of electric and gas-powered cars are going to be encouraged. Since climate issues are global in

nature, Finland also contributes to the Green Climate Fund (GCF) and this is to help underdeveloped countries to adopt practices to fight against climate change. Again, there is an initiative to lower the prices of environmentally friendly cleantech for developing countries to help save the climate. Although the loss of biodiversity, climate change and the unsustainable utilisation of natural resources are very complex issue but there is the need to find a solution to them, a thoughtful change in societies around the world is very important. Finns are very conscious when it comes to the protection of the environment, but the energy consumption and natural resources are at an unsustainable level.

To ensure carbon neutrality society, the government has pledged to adhere to the Paris Climate Change Agreement and implement its objectives. To achieve carbon neutrality society, there is a need to enhance energy efficiency. Again, environmental-friendly technologies must be produced to develop low carbon sectors of the economy. Another important area being considered by Finns is the promotion of the use of renewable energy sources in transportation and other related sectors and at the same time sensitizing people to reduce the rate of energy consumption. Attention will also be focused on the development of innovative energy friendly technologies and improvement of existing technologies.

Summary of chapter

This chapter basically concentrates on the various NSDS that have been formulated by the selected countries. The NSDS were analysed under the various dimensions of sustainable development, that is, economic, social and environment. The various policies being implemented and about to be implemented by these countries were also tabulated and discussed.

5. CONCLUSION

This chapter provides a summary of the research work, conclusion and provides recommendations of the entire work. The conclusions were drawn based on the research objectives and results of the study. The policy implications of this research and the subsequent recommendations will also be elaborated. The proposed recommendations were based on the conclusions and research objectives of the study. This final chapter is presented as follows:

- i. Summary of findings;
- ii. Recommendations;

5.1 Summary of findings

In this study it was discovered that several efforts have been made by Latvia, Hungary and Finland to improve the economy and the wellbeing of their people without overlooking the importance of preserving the natural environment. The people have been made part of the decision-making process and given them conducive atmosphere to operate. Countries like Hungary and Latvia have given companies some tax relief for business to improve their productivity. Research centres have also been established in Latvia for entrepreneurs to conduct research and use modern technology to improve their skills and their operations. Finland, for instance, provides start-ups for up and coming entrepreneurs. The people have been sensitized and encouraged to use modern technologies that are environmentally friendly. Latvia is facing problems of retaining her skilled labour due to migration due to the free movement of people across the European Union despite effort being put in place put to halt it.

Assessing closely the sustainable development strategies of the selected countries, it can be concluded that all the countries have put in place greater effort to save the environment by halting activities that lead to environmental degradation. The three countries have also displayed greater dedication to improve the wellbeing of her people by putting a lot of social intervention programmes to assist people like the aged, children, mothers et cetera. On the part of improving the economy, measures have been taken to provide the industries with the requisite assistance to help them use eco-friendly technologies in their activities to help achieve sustainable development.

From the study, it can be concluded that there is a great relationship between all the pillars of sustainability and sustainable development cannot be achieved without giving equal attention to all the dimensions. On this basis, it can be concluded that the main aim of the thesis which is to look at how sustainability concepts are being applied in the selected countries – Latvia, Hungary and Finland have been achieved.

The first specific objective outlined in this thesis aimed at assessing the various measures undertaken to ensure economic, social and environmental sustainability in the selected countries. We focused on Latvia, Hungary and Finland. This study found out that there is a high level of migration (rural-urban and emigration) from Latvia to other EU countries. So, the Latvian government implemented the polycentric development approach that focused on job creation. This has really reduced a large percentage of the labour force migration. Also, in Hungary, the government took a similar measure of creating direct jobs for the people by offering and emphasizing on vocational education to equip them with work experience to improve their employability skills and provided them with start-up capitals for their businesses. Finally, in Finland, we concluded that the government is committed to restructuring the educational and social system to provide people with new skills and competencies to fit the labour market.

For the social aspect, this study concluded that in Latvia, the government has shown commitment to end poverty as stated in Agenda 2030. The government does this by providing free or discounted meals for children from underprivileged backgrounds. The study also found that the Hungarian government implemented lots of social intervention programs aimed at reducing the rising poverty by employing people with low educational background. Finally, in Finland, more policy focus was placed on vocational education to equip people with practical learning (employable skills) and apprenticeship-based training that could make people self-employed after completing their course of study.

All the countries have shown commitments to improve the standards of living of their people by putting in place strategies to avoid income inequality in their communities, creating sustainable jobs for their people especially the youth, good pension schemes for the people, providing incentives for the aged and mothers with children, providing the people with the right type of education to fit into the job market, providing good health policies for their people both

in urban centres and rural communities. Policies have also been made to promote gender equality in various countries analysed.

Measures to protect the environment were also not left out in their strategies. An effort to save the environment has been clearly stipulated in their NSDS. Each of the selected countries is making an effort to reduce GHG to save the climate. However industrialised country like Finland is finding it difficult to reduce GHG. Tax incentives are also given to people who use electric cars. People are also encouraged to use the bicycle often and use the public transport system. Effort has also been made by the countries to reduce the usage of fossil fuels. Since biological diversity is the major basis for sustainable functions of the natural system, all the selected countries have clearly indicated their strategy to protect it. Finland has introduced programmes to save her forest by halting activities that contribute deforestation to restore its biodiversity. Recycling and management of waste have been given much attention in Finland. Hungary and Finland have also paid much attention to its water bodies. Different policies have been taken by Finland to protect her water bodies because their surface area of 338 thousand km², 74% of land area is covered with forest while water covers 32,000 km².

For the second objective which sort to assess how sustainable procedures are being applied to reduce or stop environmental degradation. This study found out that, in all the three countries considered for this study, stringent measures were taken to ensure especially in Finland by reducing excessive logging and taken measure to protect endangered species. Also, in Hungary, there is also the integration of ecosystem and biodiversity values into national and local policies and plans. Finally, in Latvia, lots of vehicle charging station have been established to reduce dependence on fossil fuels in the country and the motorcycle and automobile tax has been introduced to discourage people from fossil fuels. Again, electric cars have free parking and have the right to use public transport lanes.

5.2 Recommendations

As a fulfilment of specific objective three which sort to make recommendations on how these countries can ensure sustainable development. From the findings of this study, I, therefore, propose the following recommendations that might be helpful for governments and policymakers in the three countries considered for this study.

1. The study recommends policymakers to show greater commitment to fulfil or implement the sustainable development strategies that they have in place.
2. This study recommends Finland and Latvia to emulate having a special ombudsman office that ensures that all sustainable policies are in line with sustainable development strategies of the country as it is done in Hungary.
3. The study also recommends Latvia to focus on policies aimed at curbing the rapid rate of rural-urban and emigration which is a problem on sustainable development.
4. The study showed that Latvia has one of the lowest recycling rates among the three countries. The study, therefore, recommends Latvia to pay more attention and incentives to increase their recycling rate.
5. The government must support organizations devoted to sustainability such as non-profit organizations promoting awareness of sustainability and environmental locally and internationally.
6. International organisations such as the World Bank must also show greater commitment to ensuring the implementation of sustainable development strategies by regularly reviewing the progress of NSDS implementation by the countries.
7. The study recommends governments to support the decentralised approach to sustainable development by providing funds to the local governments and continuously monitor their efforts to ensure sustainable development.
8. There should be more sensitization of the citizenry to adopt good practices that could promote sustainable development.
9. Adoption of telecommunications systems like telework and teleshopping will also help to eliminate hydrocarbon-based energy.

To achieve the main aim of the thesis, the theoretical background of sustainable development was found out through different kinds of researches that have been done in the area. The strategies that have been adopted by the selected countries were also thoroughly and carefully studied. The study was conducted based on the three pillars of sustainable development. The measures that are being taken by the selected countries to ensure economic, social and environmental sustainability were also analysed. The indicators that were analysed in this study were drawn from agenda 2030 by the United Nation.

6. List of References

- Ahern, J. (2013). Urban landscape sustainability and resilience: the promise and challenges of integrating ecology with urban planning and design. *Landscape Ecology*, 28(6), 1203-1212.
- Aleixo, A. M., Leal, S., & Azeiteiro, U. M. (2018). Conceptualization of sustainable higher education institutions, roles, barriers, and challenges for sustainability: An exploratory study in Portugal. *Journal of Cleaner Production*, 172, 1664-1673.
- Arthur, W. B. (2009). *The nature of technology: What it is and how it evolves*. Simon and Schuster.
- Attride-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. *Qualitative research*, 1(3), 385-405.
- Barbier, E. B. (1987). The concept of sustainable economic development. *Environmental conservation*, 14(2), 101-110.
- Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The qualitative report*, 13(4), 544-559.
- Bergstrom, J. C., & Randall, A. (2016). *Resource economics: an economic approach to natural resource and environmental policy*. Edward Elgar Publishing.
- Black, W. R. (2004). Sustainable transport: definitions and responses. Integrating into the *Sustainability Transportation Planning Process*, 11-13.
- Bogdan, R. B. SN (2003) *Qualitative Research For Education; An Introduction to Theories and Methods*.
- Brand, F. (2009). Critical natural capital revisited: ecological resilience and sustainable development. *Ecological economics*, 68(3), 605-612.
- Brown, B. J., Hanson, M. E., Liverman, D. M., & Merideth, R. W. (1987). Global sustainability: toward definition. *Environmental management*, 11(6), 713-719.
- Brundtland, G. H. (1987). Our common future, world commission on environment and development (WCED).
- Burton, I. (1987). Report on reports: Our common future: The world commission on environment and development. *Environment: Science and Policy for Sustainable Development*, 29(5), 25-29.
- Buys, L., & Miller, E. (2012). Residential satisfaction in inner urban higher-density Brisbane, Australia: role of dwelling design, neighbourhood and neighbours. *Journal of Environmental Planning and Management*, 55(3), 319-338.Press.

- Byrne, A. (2016). *Hungary to offer EU's lowest corporate tax rate* | *Financial Times*. [online] Ft.com. Available at: <https://www.ft.com/content/302fa4b4-acda-11e6-9cb3-bb8207902122> [Accessed 31 Mar. 2019].
- Chee, Y. E. (2004). An ecological perspective on the valuation of ecosystem services. *Biological conservation*, 120(4), 549-565.
- Ciegis, R., Ramanauskiene, J., & Martinkus, B. (2009). The concept of sustainable development and its use for sustainability scenarios. *Engineering Economics*, 62(2).
- Clark, G. (2013). 5 Secondary data. *Methods in Human Geography*, 57.
- Countryeconomy.com. (2018). Latvia National Minimum Wage - NMW 2018. [online] Available at: <https://countryeconomy.com/national-minimum-wage/latvia> [Accessed 14 Jan. 2019].
- Crane, A., Matten, D., & Moon, J. (2008). Ecological citizenship and the corporation: Politicizing the new corporate environmentalism. *Organization & Environment*, 21(4), 371-389.
- Creswell, J. W., & Poth, C. N. (2017). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Daly, H. E. (2006). Sustainable development—definitions, principles, policies. In *The future of sustainability*, 39-53. Springer Netherlands.
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). *The Sage handbook of qualitative research*. Sage.
- Dewulf, J., Benini, L., Mancini, L., Sala, S., Blengini, G. A., Ardente, F., ... & Pennington, D. (2015). Rethinking the area of protection “natural resources” in life cycle assessment. *Environmental science & technology*, 49(9), 5310-5317.
- Dobson, A. (2007). Environmental citizenship: towards sustainable development. *Sustainable development*, 15(5), 276-285
- Dobson, A. (2009). 24| Ecological citizenship. *Research and Environmental Management (co-authored with Gerald Midgley)*, and contributed many book chapters, journal papers and policy briefings. *Chris Blackmore, a senior lecturer in Systems and Environment at The Open University, is a founding course team member for the*, 256.
- Düwell, M., Bos, G., & van Steenbergen, N. (2018). Political representation of future generations Danielle Zwarthoed. In *Towards the Ethics of a Green Future (Open Access)* (pp. 89-119). Routledge
- Elliott, J. A. (2012). *An introduction to sustainable development*. Routledge.
- Enoch, M. (2016). *Sustainable transport, mobility management and travel plans*. Routledge.

- Epstein, M. J., & Buhovac, A. R. (2014). *Making sustainability work: Best practices in managing and measuring corporate social, environmental, and economic impacts*. Berrett-Koehler Publishers.
- Fifka, M. S., & Drabble, M. (2012). Focus and standardization of sustainability reporting—a comparative study of the United Kingdom and Finland. *Business Strategy and the Environment*, 21(7), 455-474.
- Flaherty, T. B., Honeycutt, E. D., & Powers, D. (2015). Exploring text-based electronic mail surveys as a means of primary data collection. In *Proceedings of the 1998 Academy of Marketing Science (AMS) Annual Conference* (pp. 260-264). Springer, Cham.
- Foxon, T., & Pearson, P. (2008). Overcoming barriers to innovation and diffusion of cleaner technologies: some features of a sustainable innovation policy regime. *Journal of cleaner production*, 16(1), S148-S161.
- Garren, S. J., & Brinkmann, R. (2018). Sustainability Definitions, Historical Context, and Frameworks. In *The Palgrave Handbook of Sustainability* (pp. 1-18). Palgrave Macmillan, Cham.
- Ghosh, N. (2008). The Road from Economic Growth to Sustainable Development: How was it traversed?
- Gibson, R.B. (2001). *Specification of Sustainability-based Environmental Assessment Decision Criteria and Implications for Determining "Significance" in Environmental Assessment*; Paper prepared under a contribution agreement with the Canadian Environmental Assessment Agency Research and Development Programme, Ottawa, Canada.
- Giddings, B., Hopwood, B., & O'brien, G. (2002). Environment, economy and society: fitting them together into sustainable development. *Sustainable development*, 10(4), 187-196.
- Gilbert, A. (1996). Criteria for sustainability in the development of indicators for sustainable development. *Chemosphere*, 33(9), 1739-1748.
- Gilbert, R., Stevenson, D., Girardet, H., & Stren, R. (2013). *Making cities work: Role of local authorities in the urban environment*. Routledge.
- Gray, R., & Milne, M. (2002). Sustainability reporting: who's kidding whom? *Chartered Accountants Journal of New Zealand*, 81(6), 66-70.
- Gülseçen, S., & Kubat, A. (2006). Teaching ICT to teacher candidates using PBL: A qualitative and quantitative evaluation. *Journal of Educational Technology & Society*, 9(2).
- Halonen, M., Persson, Å., Sepponen, S., Siebert, C. K., Bröckl, M., Vaahtera, A., ... & Isokangas, A. (2017). *Sustainable Development Action—the Nordic Way: Implementation*

- of the Global 2030 Agenda for Sustainable Development in Nordic Cooperation*. Nordic Council of Ministers.
- Hammond, A., & World Resources Institute. (1995). *Environmental indicators: a systematic approach to measuring and reporting on environmental policy performance in the context of sustainable development* (Vol. 36). Washington, DC: World Resources Institute.
- Haughton, G. (2012). *Regional development and spatial planning in an enlarged European Union*. Ashgate Publishing, Ltd.
- Hegyes, É. G., Csapó, I., & Farkas, M. F. (2017). Some aspects of digitalization and sustainability in the European Union. *Journal of Management*, 36(2), 37-46.
- Hellström, T. (2007). Dimensions of environmentally sustainable innovation: the structure of eco-innovation concepts. *Sustainable Development*, 15(3), 148-159.
- Hobson, K. (2013). On the making of the environmental citizen. *Environmental Politics*, 22(1), 56-72.
- Horton, D. (2006). Demonstrating environmental citizenship? A study of everyday life among green activists. *Environmental citizenship*, 127-150.
- Huang, S. L., Yeh, C. T., & Chang, L. F. (2010). The transition to an urbanizing world and the demand for natural resources. *Current Opinion in Environmental Sustainability*, 2(3), 136-143.
- Hunter, C. (1997). Sustainable tourism as an adaptive paradigm. *Annals of tourism research*, 24(4), 850-867.
- Ihlen, O. (2008). Talking green: The rhetoric of good corporate environmental citizens. *Proceedings of the international communication association*.
implementation for novice researchers. *The qualitative report*, 13(4), 544-559.
- Jackson, T. (2005). Motivating sustainable consumption. *Sustainable Development Research Network*, 29, 30.
- Jagers, S. C. (2009). In search of the ecological citizen. *Environmental politics*, 18(1), 18-36.
- Jones, R., & Ross, A. (2016). National sustainabilities. *Political Geography*, 51, 53-62.
- Jordan, A. J., & Lenschow, A. (2008). Integrating the environment for sustainable development: an introduction.
- Kavaliauskas, P. (2008). A concept of sustainable development for regional land use planning: Lithuanian experience. *Technological and economic development of economy*, 14(1), 51-63.

- Kemp, R. (1994). Technology and the transition to environmental sustainability: the problem of technological regime shifts. *Futures*, 26(10), 1023-1046.
- Kloas, W., Groß, R., Baganz, D., Graupner, J., Monsees, H., Schmidt, U., ... & Wuertz, S. (2015). A new concept for aquaponic systems to improve sustainability, increase productivity, and reduce environmental impacts. *Aquaculture Environment Interactions*, 7(2), 179-192.
- Kula, E. (2012). *Economics of natural resources, the environment and policies*. Springer Science & Business Media.
- Landrum, N. E., & Edwards, S. (2009). *Sustainable Business: An Executive's Primer*. Business Expert Press.
- Latta, P. A. (2007). Locating democratic politics in ecological citizenship. *Environmental politics*, 16(3), 377-393.
- Leal Filho, W., Manolas, E., & Pace, P. (2009). Education for sustainable development: current discourses and practices and their relevance to technology education. *International Journal of Technology and Design Education*, 19(2), 149-165.
- Liu, J., & Diamond, J. (2005). China's environment in a globalizing world. *Nature*, 435(7046), 1179-1186.
- Ljungberg, L. Y. (2007). Materials selection and design for development of sustainable products. *Materials & Design*, 28(2), 466-479.
- MacGregor, S. (2011). *Beyond mothering earth: Ecological citizenship and the politics of care*. UBC Press
- Marsden, G., Kimble, M., Nellthorp, J., & Kelly, C. (2010). Sustainability assessment: the definition deficit. *International Journal of Sustainable Transportation*, 4(4), 189-211.
- Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research*. Sage publications.
- Maxwell, J. A. (2012). The importance of qualitative research for causal explanation in education. *Qualitative Inquiry*, 18(8), 655-661.
- Meadowcroft, J. (2007). National sustainable development strategies: features, challenges and reflexivity. *Environmental Policy and Governance*, 17(3), 152-163.
- Mebratu, D. (1998). Sustainability and sustainable development: historical and conceptual review. *Environmental impact assessment review*, 18(6), 493-520.
- Melo-Escrihuela, C. (2008). Promoting ecological citizenship: Rights, duties and political agency. *ACME: An International Journal for Critical Geographies*, 7(2), 113-134.
- Mol, A. P., Sonnenfeld, D. A., & Spaargaren, G. (Eds.). (2009). *The ecological modernisation reader: environmental reform in theory and practice* (p. 17). London: Routledge.

- Moldan, B., Janoušková, S., & Hák, T. (2012). How to understand and measure environmental sustainability: Indicators and targets. *Ecological Indicators*, 17, 4-13.
- Mori, K., & Yamashita, T. (2015). Methodological framework of sustainability assessment in City Sustainability Index (CSI): A concept of constraint and maximisation indicators. *Habitat International*, 45, 10-14.
- Mowforth, M., & Munt, I. (2009). *Tourism and sustainability: Development, globalisation and new tourism in the Third World (3rd)*. London & New York: Routledge.
- Mulligan, M., & Hill, S. (2001). *Ecological pioneers: a social history of Australian ecological thought and action*. Cambridge University Press.
- Murphy, K. (2012). The social pillar of sustainable development: a literature review and framework for policy analysis. *Sustainability: Science, Practice, & Policy*, 8(1).
- Nam, T., & Pardo, T. A. (2011, September). Smart city as urban innovation: Focusing on management, policy, and context. In *Proceedings of the 5th international conference on theory and practice of electronic governance* (pp. 185-194). ACM.
- natural resource and environmental policy*. Edward Elgar Publishing.
- NSDS (2006). *Towards sustainable choices A nationally and globally sustainable Finland*. [pdf] Available at: <http://www.ym.fi/download/noname/%7B5D1F24EE-27D0-4E07-BAFE.../97824> [Accessed 9 Oct. 2018].
- Panayotou, T. (2016). Economic growth and the environment. *The environment in anthropology*, 140-148.
- Park, J., & Seaton, R. A. F. (1996). Integrative research and sustainable agriculture. *Agricultural Systems*, 50(1), 81-100.
- Pelletier, N., Ustaoglu, E., Benoit, C., Norris, G., Rosenbaum, E., Vasta, A., & Sala, S. (2018). Social sustainability in trade and development policy. *The International Journal of Life Cycle Assessment*, 23(3), 629-639.
- Pintér, L., Hardi, P., Martinuzzi, A., & Hall, J. (2018). Bellagio STAMP: Principles for sustainability assessment and measurement. In *Routledge Handbook of Sustainability Indicators* (pp. 51-71). Routledge.
- Popescu, N. (2005). *The EU in Moldova: Settling conflicts in the neighbourhood*. Paris: EU Institute for Security Studies.
- Quental, N., Lourenço, J. M., & Da Silva, F. N. (2011). Sustainability: characteristics and scientific roots. *Environment, Development and Sustainability*, 13(2), 257-276
- Radovanović, M., Popov, S., & Dodic, S. (2012). *Sustainable energy management*. Academic Press.

- Roberts, S., & Tribe, J. (2008). Sustainability indicators for small tourism enterprises-An exploratory perspective. *Journal of sustainable tourism*, 16(5), 575-594.
- Saunders, M. N. (2012). Choosing research participants. *Qualitative organizational research: Core methods and current challenges*, 35-52.
- Schrijver, N. (2008). *Sovereignty over natural resources: balancing rights and duties* (Vol. 4). Cambridge University Press.
- Senshaw, D. A., & Kim, J. W. (2018). Meeting conditional targets in nationally determined contributions of developing countries: Renewable energy targets and required investment of GGGI member and partner countries. *Energy policy*, 116, 433-443.
- Short, M., Baker, M., Carter, J., Jones, C., & Jay, S. (2013). *Strategic environmental assessment and land use planning: an international evaluation*. Routledge.
- Stern, P. C. (2000). New environmental theories: toward a coherent theory of environmentally significant behavior. *Journal of social issues*, 56(3), 407-424.
- Sutton, P. (2004). A perspective on environmental sustainability. Paper on the Victorian Commissioner for Environmental Sustainability, 1-32.
- Tellis, W. M. (1997). Application of a case study methodology. *The qualitative report*, 3(3), 1-19.
- Termorshuizen, J. W., & Opdam, P. (2009). Landscape services as a bridge between landscape ecology and sustainable development. *Landscape ecology*, 24(8), 1037-1052.
- Thin, N. (2002). *Social progress and sustainable development*. Bloomfield^ eCT CT: Kumarian Press.
- Tidball, K. G., & Krasny, M. E. (2011). Toward an ecology of environmental education and learning. *Ecosphere*, 2(2), 1-17.
- Tietenberg, T. H., & Lewis, L. (2016). *Environmental and natural resource economics*. Routledge.
- Torjman, S. (2000). *The social dimension of sustainable development* (pp. 1-11). Toronto: Caledon Institute of Social Policy.
- Tracey, S., & Anne, B. (2008). *OECD Insights Sustainable Development Linking Economy, Society, Environment: Linking Economy, Society, Environment*. OECD Publishing.
- Trzesniewski, K. H., Donnellan, M., & Lucas, R. E. (2011). *Secondary data analysis: An introduction for psychologists*. American Psychological Association.
- Tzoulas, K., Korpela, K., Venn, S., Yli-Pelkonen, V., Kaźmierczak, A., Niemela, J., & James, P. (2007). Promoting ecosystem and human health in urban areas using Green Infrastructure: A literature review. *Landscape and urban planning*, 81(3), 167-178.

- UNESCO (2012). *Latvia 2030 - Sustainable Development Strategy of Latvia*. [online] Diversity of Cultural Expressions. Available at: <https://en.unesco.org/creativity/policy-monitoring-platform/latvia-2030-sustainable> [Accessed 16 Oct. 2018].
- United Nations (1997). *Agenda for Development*; New York, USA,
- Van Zeijl-Rozema, A., Ferraguto, L., & Caratti, P. (2011). Comparing region-specific sustainability assessments through indicator systems: Feasible or not? *Ecological economics*, 70(3), 475-486.
- Vavik, T., & Keitsch, M. M. (2010). Exploring relationships between universal design and social sustainable development: some methodological aspects to the debate on the sciences of sustainability. *Sustainable Development*, 18(5), 295-305.
- Vifell, Å. C., & Soneryd, L. (2012). Organizing matters: how ‘the social dimension’ gets lost in sustainability projects. *Sustainable Development*, 20(1), 18-27.
- Weaver, P., Jansen, L., Van Grootveld, G., Van Spiegel, E., & Vergragt, P. (2017). *Sustainable technology development*. Routledge.
- Wiles, C., & Watts, P. (2014). Continuous process technology: a tool for sustainable production. *Green Chemistry*, 16(1), 55-62.
- XI, D. G. (1996). European Sustainable Cities.
- Yin, R. K. (2013). Validity and generalization in future case study evaluations. *Evaluation*, 19(3), 321-332.
- Yin, R. K. (2017). *Case study research and applications: Design and methods*. Sage publications.
- Ymparisto.fi. (2018). Environment > Waste – the aim is to reduce the quantity and. [online] Available at: http://www.ymparisto.fi/en-US/Consumption_and_production/Waste_and_waste_management [Accessed 6 Dec. 2018].
- Zainal, Z. (2007). Case study as a research method. *Jurnal Kemanusiaan*, (9), 1-6