



The Relevance of Environmental Education and Green Governance in Contemporary World

¹Gaddeyya Gandipilli, ²Busi Ramesh and ³R.Ranganathan

¹Doctoral Research Fellow, Department of Education Andhra University, Visakhapatnam- 530003

²Lecturer in Biological Sciences, Sir CRR College of Education, Eluru, AP

³Professor, Department of Education Andhra University, Visakhapatnam- 530003

Corresponding Author Email: ggeducation.au@gmail.com

Abstract: *The concept of environmental protection in terms of the conservation of natural resources and biodiversity, the restoration of habitats, the sustainable use of energy resources, the recycling of minerals and natural products, and the maintenance of ecological balance through positive relation between man and the environment increases the importance of Environmental Education (EE) in contemporary world. With global perspective, the emerging trends and issues such as Education for the Sustainable Development (ESD), Environmental Education for the Sustainable Development (EESD), the Millennium Goals of the Sustainable development (MGSD), and the Green Governance for the Environmental Sustainability are integrated in Environmental Education (EE) which is a tool for social change. There are many stockholders or participants of Environmental Education, among them, school children and teachers are very essential to promote the goals and objectives of environmental education in terms of environmental awareness, sound knowledge on environment, positive attitudes on environmental issues and problems and the active participation in environmental related activities. The main concept of Environmental Education (EE) is to prepare suitable strategies for the conservation of natural resources and environment. The main goal of Environmental Education is to create knowledge, awareness, attitudes and understanding of physical and social environment as a whole with cultural, spiritual, and conservative aspects of natural resources for the sustainable development. Therefore, Environmental education is education 'about' the environment, 'from' the environment and 'for' the environment. Considering the active role of environmental education in contemporary world, a systematic review was attempted in view of conservational natural resources and environment.*

Keywords: *Environmental Education, Green Governance, IUCN, Tbilisi Declaration, UNEP.*

1. INTRODUCTION :

Environmental Education (EE) is a process that allows all individuals to explore environmental issues, problem solving, participation and decision making to improve environment. The paramount aim of environmental education is the protection of nature and natural resources. Education in the form of formal education or non-formal education or environmental education provides knowledge, awareness, attitudes, skills, appreciation, active participation, decision making and responsibility towards environmental protection. It moulds the mind of individuals and every citizens eco-friendly and environmentally sensitive and responsible towards the conservation of nature. In general, Environmental Education is a “Study of environment and its dynamics, and its various forms, factors degrading environment and its impact on man’s life”. According to the report of a conference of African Educators held at Nairobi (1968), “Environmental education is a process to promote the awareness and understanding of the environment, its relationship with man and his activities”. According to International Union for Conservation of Nature (IUCN,1970), Environmental Education is “The process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelatedness among man, his culture and his bio-physical surroundings”. The National Policy on Education (1986) India has laid great stress on the need for introducing environmental education at all educational levels. It states that, “There is a paramount need to create a consciousness of the environment. It must permit all the ages and all sections of the society”. The main concept of Environmental Education (EE) is to prepare suitable strategies for the conservation of natural resources and environment. The main goal of Environmental Education is to create knowledge, awareness, attitudes and understanding of physical and social environment as a whole with cultural, spiritual, and conservative aspects of natural resources for the sustainable



development. Therefore, Environment education is education ‘about’ the environment, ‘from’ the environment and ‘for’ the environment.

2. DEFINITIONS OF KEY TERMS:

2.1. Definition of Education

Oxford Learner’s Dictionary: “A process of teaching, training, and learning, especially in schools or colleges to improve knowledge and develop skills”.

Sri Aurobindo: “Education which will offer the tools whereby once can live for the divine, for the country, for oneself and for others”.

M.K. Gandhi: “Education is drawing out of the best in child-body, mind, and spirit”

Swami Vivekananda: “Education is the manifestation of the perfection that is already in man”.

Aristotle: “Education is the creation of a sound mind in a sound body. It develops man’s faculty especially his mind”.

John Ruskin: “Education is the leading of human souls to what is best, and making what is best of them, and the training which makes men happiest in themselves also makes them most serviceable to others”.

John Dewey: “Education is the development of all capacities of the individual”.

Alvin Toffer: “Education is life long process. The illiterate of the 21th Century will not be those cannot read and write, but who cannot learn, unlearn, and relearn”.

National Education Commission (Kothari Commission), 1964-66: “Education ought to be related to the life, needs and aspiration of the people so as to be a powerful instrument of social, economic and cultural transformation”.

2.2. Definition of Environment

Boring: “Environment is the sum total of all the external forces, influences and conditions, which affect the life, nature, behaviour and the growth, development and maturation of living organisms”. Literally environment means the surrounding external conditions influencing development or growth of people, animal or plants. Environment is the representation of physical components of the earth where in man is an important factor affecting the environment. The environment can be defined as a sum of all the living and non living elements and their effects which influence human life.

2.3. Definition of Environmental Education

IUCN (1970): “The process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelatedness among man, his culture and his bio-physical surroundings”. Literally environmental education is a process that allows individuals to explore environmental issues, engage in problem solving and take action to improve the environment.

2.4. Definition of Sustainable Development

The Brundtland Commission (1987): “Sustainable Development is a development that meets the needs of present without compromising the ability of future generations to meet their own need”.

2.5. Definition of Education for Sustainable Development

Thakran (2015): “A learning that enhance the transition towards sustainability that meets the protection and management of natural resources, and education for sustainable consumption”.

2.6. Definition of Green Governance: “Green governance or Environmental governance is the term describes how we as humans exercise our authority over natural resources and natural systems”. Environmental governance is the whole range of rules, practices and institutional initiatives related to management of the environment in its different forms such as conservation, protection, exploitation of natural resources etc.

2.7. Definition of Environmental Sustainability: “Sustainable Environment or Environmental sustainability is the maintaining and conserving natural capital or ecological capital on which all life and economic production depends”.

3. CONCEPTUAL FRAME WORK OF THE STUDY:

Several environmental problems and challenges such as climate change, global warming, increase of green house gases, ozone depletion, over exploitation of natural resources, loss of biodiversity and extinction of species are emerging as global issues in contemporary world. The lack of environmental knowledge and awareness of human beings is the critical element that leads to environmental destruction. Education through teaching about the environment is the best tool for facing the future environmental challenges and crises. Educational institutions such as schools, colleges and universities are the first and best platforms for training of environmental concepts like conservation of environment, sustainable utilization of natural resources, recycling of minerals and mitigation of climate change etc. Education for sustainable development (ESD) is an integral element of quality of life and a key factor to enable sustainable development in terms of social sustainable development, economical sustainable development and environmental sustainable development or sustainable environment. The study was framed on the base of some important global environmental concepts (Fig.1) which are interlinked with school education, curriculum, teachers and students. They are:

1. Concept of Education and Objectives
2. The concept of Environment and Environmental Education
3. Goals and Objectives of Environmental Education
4. Green Governance-An overview
5. Sustainable Development-An overview
6. Millennium Development Goals and Sustainable Development Goals
7. Education for Sustainable Development (ESD)

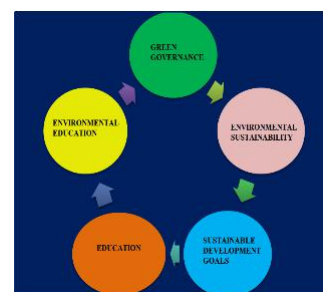


Figure 1: Conceptual frame work

4. CONCEPT OF EDUCATION :

Education is considered as social tool for the dynamic change of a nation in all aspects viz. social, economical, political, environmental, industrial, technological and global perspective. Etymologically, the word ‘Education’ is derived from the *Latin* word ‘*Educare*’ it indicates ‘to raise’ and ‘to bring up’. The word ‘Education’ has originated from another *Latin* term ‘*Educere*’ which means ‘to lead forth’ or ‘to come out’. These meanings indicate that education seeks to nourish the good qualities and draw out the best in every individual. The aim of education is to develop the inner potentialities of humans. Some other educationists believe that the word ‘Education’ has been derived from the *Latin* term ‘*Educatum*’, which means “the act of teaching or training”. According to Aristotle “Education is the creation of a sound mind in a sound body”. It develops man’s ability, especially his mind, so that it may be able to enjoy the contemplation of the supreme truth, goodness and beauty. The concept of education has been used in a variety of contexts with different meanings. **C.V. Good (1973)** defined the meaning of education as “the aggregate of all the processes by which a person develops abilities, attitudes, behaviour and practical values in the society.

In Indian context, the main aim of education is to train the minds of individuals to gain knowledge and consciousness intellectually and make as sound instruments for leading a good life (**Kabir, 1961**). According to Mahatma Gandhi, “Education not only moulds the new generation, but reflects society’s fundamental assumptions”. His concept of “Basic education” is a unique method in Indian Education System where “learning by doing” encourages. According to Gandhi, education should aim to character building, social change and all round development of individuals (physical, mental, social, moral, aesthetic, and religious). Mahatma Gandhi, the Father of Indian Nation is a great philosopher and world's early environmentalist in vision and practice. Gandhi was the first man to introduce the concept of service to nature in order to enrich nature. Gandhi said a visionary thought that “the earth provides enough to satisfy every man’s need but not for every man’s greed.” The environmental wisdom of Gandhi is embedded in this mantra. His life reflects the harmony with environment, love for nature, care of environment and all that exists. *Gandhian Philosophy* provides a sustainable development paradigm which is a symbiotic relation of mankind with nature and ecosystem (**Joseph, 2006**).

5. CONCEPT OF ENVIRONMENT AND ENVIRONMENTAL EDUCATION

Etymologically the term “*Environment*” has been derived from *French* words “*Environner*” which means “to surround” and “*Environ*” which means “around”. Carlyle coined the term ‘Environment’ in the South of Scotland in



1828. The term environment reflects its abiotic (physical or non-living things) and biotic (living organisms) environment. Literally environment is “an aggregate of conditions or surroundings in which living beings such as humans, animals, and plants survive and non-living things exist”. The term environment is derived from the French word “*environ*” meaning around, encircle or encompass. Environment reflects the totality of all the externalities that affect human life. In broader perspective environment consists of human, social, political, economic and physical environment. *The Encyclopedia Britannica* defines environment as the entire range of external influence acting on an organism both physical and biological”. In nutshell environment comprises of all the biotic, abiotic, natural and human components in an ecosystem. According to **Park, C.C (1980)** Environment refers to “*the sum of the total conditions which surrounds man at a given space and time*”. The environment in fact is composed of all physical biological and cultural elements which are constantly and systematically interacting with each other. The physical elements including space, landforms, water bodies, climate, soil, minerals, rocks etc., determine the complex character of human habitat. Whereas the biosphere is constituted of plants, animals, microorganism and human beings. Barring these, the cultural elements (economic, social, and political) are essentially man made features constituting the cultural environment.

5.1. Genesis of Environmental Education

Environmental concerns with global perspective are emerging in the contemporary world due to the ecological imbalance and anthropogenic activities of mankind threaten to the plant Earth. Global efforts were started for the cooperation and sharing of information technology in view of environmental protection and climate change. The first international summit “*The United Nations Conference on Human Environment*” held at Stockholm in June 1972 is a milestone for the Environmental awareness. Consequently, *United Nations Environmental Programme* (UNEP) and *International Programme in Environmental Education* (IIEP) was launched by UNESCO and UNEP in January 1975. Environmental Education became centre of focus after the *Inter-Governmental Conference on Environmental Education* held at Tbilis in 1977. “*The world conservation strategy* (1980)” was drawn up by the IUCN, UNEP and the WWF in collaboration with UNESCO and FAO. Another important document explores the significant of EE is ‘*North-South – A Programme for Survival*’. The Report of “*The Independent Commission on International Development Issues* (Brundtland 1987)” had great impact on environmental Education globally.

The Agenda 21, the report of the *United Nations Conference on Environment and Development* (UNCED) held in Rio-de-Janeiro, Brazil (1992) recommended the member states to raise public awareness, education, participation and training related to environmental governance or green governance. With the inspiration of Stockholm summit 1972, India incorporated environmental concern issues in the constitution through 42nd Amendment in 1976. India also established a nodal agency the *Ministry of Environment and forests* (MoEF), now the *Ministry of Environment, Forest and Climate Change* (MoEFCC) in 1980 to coordinate Environmental Education (EE) by various institutional initiatives including schools, colleges and universities. Constitutional amendments, National Environmental, wild life and forest policies, National Action Plans, State government initiatives, National Green Corps (Eco-clubs) and many central and state government schemes successfully launched for the conservation and management of natural recourses in India.

5.2. Goals and Objectives of Environmental Education

Tbilisi Declaration

The world's first intergovernmental conference on Environmental Education was organized by the United Nations - Education, Scientific, and Cultural Organization (UNESCO) in collaboration with the United Nations Environment Programme (UNEP) at Tbilisi, Georgia (USSR) from October 14-26, 1977. The Tbilisi declaration is considered to be one of the most important seminal documents in Environmental Education. Delegates from 66 member states and two non-member states were participated. The Conference adopted a frame work for the goals, objectives and guiding principles for the environmental education.

The goals of environmental education:

- To foster clear awareness and concern about economic, social, political, and ecological interdependence in urban and rural areas.
- To provide opportunities to every citizen to acquire adequate knowledge, values, attitudes, commitments, and skills needed to environmental protection.
- To create new behavioral patterns of individuals, groups, and society as a whole towards the environmental protection.

The objectives of environmental education (Fig-2)

1. Awareness:

To help social groups and individuals acquire an environmental awareness and sensitivity to the total environment and its allied problems.

2. Knowledge

To help social groups and individuals gain a variety of experiences and understanding of environment and problems associated with environment.

3. Attitudes

To help social groups and individuals acquire a set of values and feelings of concern for the environment, and the motivation for active participation in environmental improvement and protection.

4. Skills

To help social groups and individuals acquire the skills for identifying and solving environmental problems.

5. Participation

To provide social groups and individuals with an opportunity to be actively involved at all levels in working toward resolution of environmental problems.



Figure 2: Universal Objectives of Environmental Education

Guiding principles of environmental education:

- Consider the environment in its totality- Natural, Social, Economical, Political, Cultural, Historical, Ethical, Esthetical and Technological.
- EE is a continuous lifelong process.
- EE is an interdisciplinary holistic approach.
- Outlook on environmental issues - local, national, regional, and international.
- Focus on current and potential environmental situations.
- Promote the value and necessity of local, national, and international cooperation to solve environmental problems.
- Environmental management, planning and policy making.
- Communicating environmental sensitivity, knowledge, problem-solving skills, and values to own community.
- Discovery of the symptoms and real causes of environmental problems.
- Development of critical thinking and problem-solving skills.

5.3. Global Significance of Environmental Education:

Socio-economic, political and cultural behaviour of mankind have a negative impact on nature, and the exploitation of many natural resources. They are responsible for current environmental problems such as pollution, deforestation, global warming and degradation of habitats. Furthermore, green planet 'Earth' facing serious and complex environmental problems such as climate change, air and water pollution, the loss of biodiversity, desertification, deforestation, over population, depletion of natural resources and the extinction of species since last few decades. Current environmental issues exist due to people's lack of environmental awareness, the absence of a holistic view about the inter-relationship between human and environment, and lack of understanding and irresponsibility. Several new challenges, problems and issues relevant to climate change and environmental protection increases the importance of education, particularly environmental education (EE), as an essential tool for the sustainable environment. The environment plays a gigantic role to maintain and support human growth, health and survival. Therefore, the protection and sustainable use of natural resources are the prime responsibility of each and every individual. Environmental Education as an effective social tool address many environmental issues and contribute to develop ability of individuals, students, teachers, social groups and industrialists to take positive actions towards sustainable environment. EE is a lifelong process that promotes people's critical thinking skills to recognise environmental issues, make decisions, and contribute to bring innovative methods and tools to protect the environment. The effective implementation of EE



enhances the environmental awareness and sensitivity, attitudes and motivation, and pro-environmental behaviour of people. Environmental educators have widely agreed that school students and teachers are an important group among whom EE needs to be implemented. The specific objectives of EE, resolute by the Tbilisi Declaration, could transform human minds environmentally sensitive by environmental knowledge and understanding, eco-friendly activities, positive decision making and participation in green governance, and skilful utilization of natural resources for the sustainable development.

5.4. Outcome of Environmental Education

- Development of environmentally aware and sensitive students.
- Development of positive attitudes and behaviour towards the environment.
- Development of young people as responsible citizens, leaders, and policy makers.
- Professional enrichment of teachers in terms of environmental awareness, attitudes, and behaviour for effective environmental management.
- Effective ecological balance and sustainable environment.
- Participation in green governance and policy making towards conservation.
- Institutional initiatives and action plans for environmental management.
- Mitigation of environmental restoration and climate change actions.

6. GREEN GOVERNANCE: AN OVERVIEW

(Syn. Environmental Governance or Environmental Management)

Governance is a systematic process and policy implementation including service delivery, planning and, emergency management (**Biermann et al., 2009**). Usually, green governance reflects the education and environmental management of green resources or natural resources. According to **Ketfl (2000)**, the concept of green governance is one of the main trends of the 21st Century. The programs or activities relevant to green governance can mobilize the different groups of people, students, teachers, local community, and NGOs and change the consciousness and behaviour of the citizens towards environmental responsibility and, encourages local sustainability. Green Governance or Environmental Governance comprises of all rules, practices, policies and, institutional initiatives for the conservation of environmental resources and harmonized interaction of the humans with the environment and also make the fundamental decisions towards environmental problems. Green governance is a process that links individuals, social groups, institutions, NGOs, and local communities with harmonized policies and practices for environmental protection. The concept of green governance also covers the sustainable use of natural resources and the protection of the environment. Governing the planet “Earth” and its huge diversity and natural resources is an increasingly most complex challenge of the contemporary world.

Green governance is a process of environmental management including the conservation, protection, and judicial exploitation of natural resources etc. Good environmental governance in a school represents the responsibility and accountability of all administrators, teachers, students, parents, local people, institutions, and NGOs that impact the environment.

6.1. Environmental Education and Green Governance in Schools

The survival of human race is depends on their environment and there is a paramount need to increase the knowledge, attitude, awareness, skills and behavioural changes of humans to safeguard the natural resources (**Gupta et al., 2014**). Education brings a behavioural change of the children and improves their sensitivity towards several environmental problems such as exploitation of natural resources, the loss of biodiversity, degradation of forest area, environmental pollution and over exploitation of endangered species. Moreover, education plays a major role to develop environmental concern of students, teachers and public towards environmental sustainability (ES). Through environmental education, the budding minds of the students can expand the environmental consciousness and sensitivity towards threats of environment (**Dhavse, 2003**).

6.2. Goals of Green Governance

- Promoting environmental knowledge, attitude and awareness of environmental stockholders.
- Strengthening of school students and public in the field of Environmental Education Promoting conservation of natural resources and ecological heritage.
- Providing technical support, manpower and educational resources.

6.3. Environmental Governance for Sustainability

Environmental protection, utilization of natural resources, preventing pollution of natural habitats, and the conservation remedies are depends on the decision making and responsibility of various stockholders of the environment. A sustainable economic and social development depends on the relationship between the human and environment (Kulsum & Shankarappa, 2018). The environmental problems caused by human behaviour have become serious threat to environmental resources include soil, air, water, forests etc. Therefore, the global green governance or environmental governance or environmental administration becomes an important research agenda to all over the world. The proper design and mechanism of green governance can effectively coordinate the relationship between human and environment. Environmental governance is synonymous with interventions aiming at changes in environment-related incentives, knowledge, attitude, decision making and behaviours. Effective environmental governance at all levels is critical for finding solutions to these challenges. Environmental Governance comprises the rules, practices, policies and institutional initiatives for the sustainable environment. The International Environmental Governance as the continuous process focused the interactive decision making among the nations on global environmental issues. It includes institutions and organizations as well as binding agreements, policy instruments and procedures that regulate environmental protection at the international level. Environmental Governance focuses on strengthening global, regional, national and local environmental coordination to address agreed environmental priorities.

7. SUSTAINABLE DEVELOPMENT: AN OVER VIEW:

The concept of sustainable development emerged as a response of mankind concern about environment which impacted by many anthropological catastrophes. The concept of sustainable development was defined in 1987 by the Brundtland Commission (formally known as the World Commission on Environment and Development). The definition acknowledges that development may be necessary to meet human needs and quality of life, but it must happen without depleting the capacity of natural environment to meet present and future needs. According to Brundtland Commission(1987), “Sustainable Development is a development that meets the needs of present without compromising the ability of future generations to meet their own need”.

The concept of sustainable development emerged as a pioneer aspect for environmental sustainability and well-being of human life without damaging natural resources. The concept came to forefront due to the growing impact of human society on environment. Sustainable development has three components that are intertwined with each other (Fig: 3). They are: 1.Social, 2.Economical and 3.Environmental. According to Brundtland Report (1987), sustainable development can be associated with three categories of objectives: 1. Economical objectives, 2. Social objectives (welfare and equity) and 3. Ecological objectives (Biodiversity and Resources).

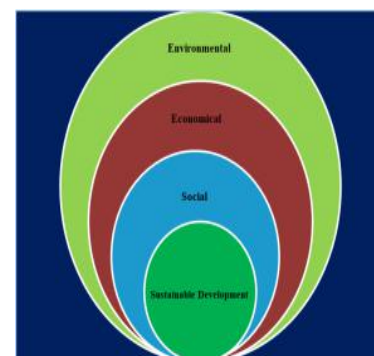


Figure 3: Components of Sustainable Development

7.1. Dimensions of Sustainable Development

There are five dimensions of sustainable development .They are:

1. Ecological sustainability - conserving ecological capital or natural resources
2. Economic sustainability - generating wealth and well-being of human life
3. Social Sustainability - meeting everyone’s needs and reducing inequalities
4. Cultural Sustainability - promoting cultural diversity
5. Personal sustainability - promoting people’s physical and mental health

8. MILLENNIUM DEVELOPMENT GOALS (MDGS) AND SUSTAINABLE DEVELOPMENT GOALS (SDGS)

Millennium Declaration and Millennium Development goals of the United Nations are an agenda of international community come in to force in 2000. The agenda constructed as a new global partnership to reduce extreme poverty and focused a series of targets with a deadline of 2015.This international development agenda has been actively led by the United Nations (UN) and MDGs represented the convergence of development agenda of United Nations Development Programme (UNDP), United Nations Environmental Programme (UNEP), World Health Organization (UNESCO) and other development agencies.

The Millennium Development Goals (MDGs): 8

- Goal 1:** Eradicate extreme Poverty and Hunger
- Goal 2:** Achieve Universal Primary Education
- Goal 3:** Promote gender equality and empower women
- Goal 4:** Reduce Child Mortality
- Goal 5:** Improve Maternal Health
- Goal 6:** Combat HIV/AIDS, Malaria and other diseases
- Goal 7:** Ensure Environmental Sustainability (Fig.4)
- Goal 8:** Develop a global partnership for development



Figure 4: Goal 7- Ensure Environmental Sustainability

Sustainable Development Goals (SDGs):

Recently adopted Sustainable Development Goals (SDGs) reflect further strengthening convergence of the development agenda. The SDGs also strengthen equity, human rights, and quality of life by protecting natural resources. The United Nations Development Programme (UNDP), an autonomous body of United Nations Organizations (UNO) is one of the leading organizations working to fulfil the SDGs by the year 2030 with the coordination of civil society organizations, citizens, scientists, academics, and the private sectors from around the world. Sustainable Development Goals (SDGs) represented extension of millennium development goals (MDGs) and a post-2015 agenda to fight poverty and hunger and ensuring inclusive and sustainable development through quality of life.

Sustainable Development Goals (SDGs):17

- Goal 1:** No poverty
- Goal 2:** Zero hunger
- Goal 3:** Good health and well-being
- Goal 4: Quality Education**
- Goal 5:** Gender equality
- Goal 6:** Clean water and Sanitation
- Goal 7:** Affordable and Clean energy
- Goal 8:** Decent work and economic growth
- Goal 9:** Industry, Innovation and Infrastructure
- Goal 10:** Reduce inequality
- Goal 11:** Sustainable cities and communities
- Goal 12:** Responsible consumption and Production
- Goal 13: Climate action**
- Goal 14:** Life under water
- Goal 15:** Life on land
- Goal 16:** Peace, Justice, and Strong institutions
- Goal 17:** Partnership for goals

9. EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD)

Education for sustainable development (ESD) is a social tool of nation to facilitate sustainability in the form of social, economical, cultural, economical and environmental. It empowers the people to change their attitude and behaviour towards sustainable future. The main aim of ESD is to transform society by training of individuals, teachers, students and groups in terms of skills, attitudes, values and behaviour needed for sustainable development. Education for sustainable development (ESD) is vital concept in contemporary world; it has roots in environmental education since 1960s. Environmental protection in terms of the improvement of quality life of people without damaging environment is the major concern of ESD. Education for sustainable development (ESD) is a global perspective builds the relationship between human society and environment with all aspects such as economic, social, cultural, political and ecological. Thakran (2015) emphasized the concept that Education for sustainable development (ESD) as a learning that enhance the transition towards sustainability that meets the protection and management of natural resources, and education for sustainable consumption.

Characteristics of Education for Sustainable Development

- The education based on the principles and values that underlie Sustainable development.
- It deals the three realms of Sustainable development –Environment, Society and Economy.
- It promotes lifelong learning and engages formal, non-formal and informal education.
- It builds civil capacity for community-based decision making, social tolerance, environmental stewardship, adaptable workforce and quality of life.
- It is based on local needs, perceptions and conditions of global issues.
- It uses a variety of pedagogical techniques that promote participatory learning and higher-order thinking skills.
- It is an interdisciplinary and holistic approach.

The goals and objectives of environmental education (EE), sustainable development (SD), and Education for sustainable development (ESD) declared at various world’s summits are promoted through schools by adapting various teaching and learning programmes, leadership management and new educational policies. Therefore, teacher’s knowledge, awareness, attitude, skills and participation towards environment are the key aspect to promote environmental education and green governance, and environmental sustainability in schools and society (Fig.5).

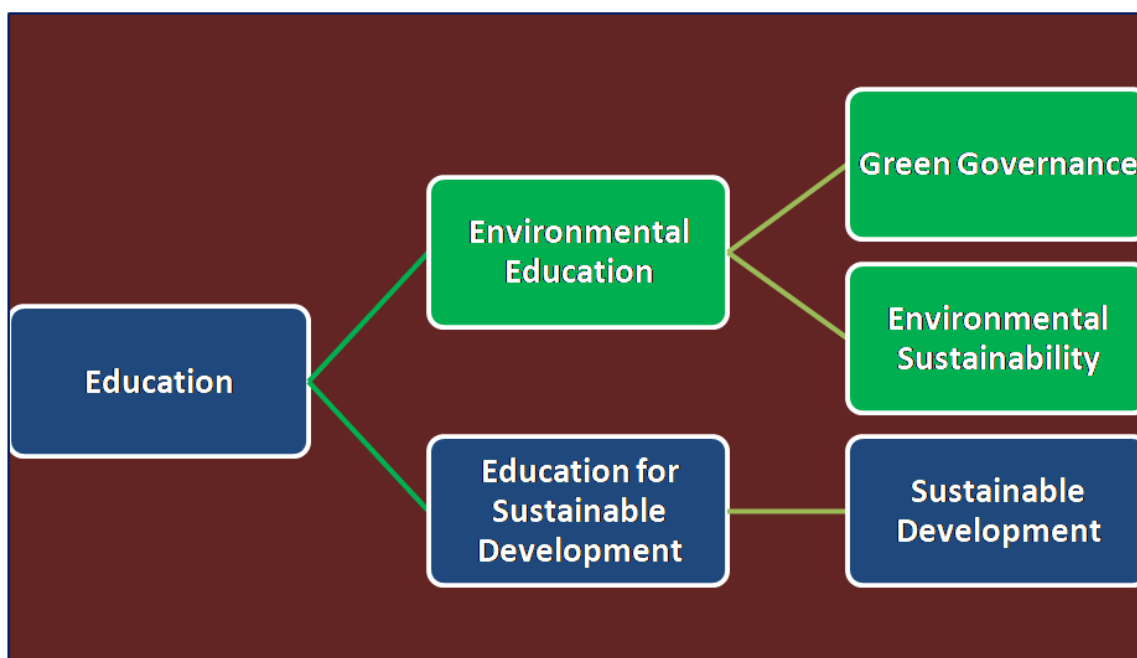


Figure 5: Dimensions of Education for Sustainable Development (ESD)

10. SCOPE OF THE STUDY:

Different concepts such as concept of education; goals and objectives of education; meaning and genesis of environmental education; and education for sustainable development are important global issues that enable suitable development strategies for conservation of natural resources and environment in contemporary world. The universal millennium goals for sustainable development, education for environmental sustainability and green governance for the conservation of natural resources, the active participation and policymaking of institutions or schools also integrated in green governance policies of developing world. The study influences individuals like teachers, students and school administrators and also different social groups like mass community or public, private organizations, government organizations, NGOs and different entrepreneurs and also create awareness and responsibility towards environmental protection and conservation of natural resources for future generations. The study may bring brief account of conservational aspects and protection of environment, forest, wildlife and natural resources with the aim of sustainability at school level. The study may enlighten the knowledge, awareness, attitude, skills and participation of students, teachers and administrators in the sense of environmental protection and sensitivity towards environmental issues.

The guiding principles, goals, objectives and declarations of various World Summits organised and initiated by United Nations Organizations (UNO), UNESCO, UNDP, UNEP, MAB, and IUCN also recommended Environmental Education as the emerging issue of contemporary world for Environmental Sustainability. Considering the declarations of various world summits, the interdisciplinary science “Environmental Education” turned into centre of the educational curriculum. The principles and objectives of Sustainable Development may change into reality if the concept of



environmental education integrated into New Education Policy of different countries. The study covers the following broad areas:

- Nature, objectives, and guiding principles of Environmental Education
- Universal objectives of Environmental Education and their importance
- Overview of Green Governance and Sustainable Development
- Environmental Education and Sustainable Development
- Environmental activities and the role of teachers in Environmental protection
- Environmental governance for ecological sustainability.

11. SIGNIFICANCE OF THE STUDY:

The concept Environment Education (EE) represented a study of environment and its dynamics. The main concept of EE is to prepare suitable strategies for saving our environment. Environmental education is a process to promote the awareness and understanding of the environment, its relationship with man and his activities. Many environmental issues like the loss of forests, solid waste disposal and environmental pollution, degradation of habitats, global warming, the depletion of ozone layer and the loss of biodiversity demands the urgency of environmental education. The goals of environmental education were defined as creating environmental awareness; impart general knowledge for a basic understanding of environment, acquiring environmental friendly attitudes and values and to generate new patterns of behaviour towards environment. Green governance is an emerging field, attracting more and more attention of the scholars, educationists and scientists and gradually becoming focus of policy making of governments in different organizations including schools, colleges and universities. Present study attempted to strengthen the fundamental concepts of environmental education and enlighten the knowledge, awareness and attitude of school teachers, students and every citizen towards environmental education and environmental sustainability.

Acknowledgements:

Author profoundly conveys the gratitude to various subject experts and researchers for their outstanding guidance for the above concept.

Declaration of conflicting interests:

The author declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

REFERENCES

1. Biermann Frank., Philipp Pattberg., Harro van Asselt., and Fariborz Zelli(2009). The fragmentation of Global Governance Architectures: A Framework for Analysis. *Global Environmental Politics*, **9(4)**:14.
2. Conference of African Educators (1968). Report of conference of African Educators, EDC and CREDO on social Studies. Mombasa, Kenya, August 19-30.
3. Dhavse R (2003). Environmental Education-Revised Curricula. *India Together*. (www.indiatogether.org/2003/nov/edu-curricula.htm.)
4. Good, C.V (1973). Dictionary of Education (3rd edition). McGraw Hill, Michigan.
5. Gupta Vaishali., Sushma Goel., and T.G. Rupa (2014). Environmental Activities through Eco-Club activities in Schools: Relevance in Planning Modern India. *International Journal Home Science Extinction and Communication Management*, **1(2)**:152-158.
6. IUCN (1970). International Working Meeting on Environmental Education in the School Curriculum, Carson City, NV,US, 20 June -11 July 190, **p.40**.
7. Joseph, K (2006). The Principles of Gandhian Economy: Integrating Spirituality and Ecology. *Gandhi Marg*, **28(30)**: 309-320.
8. Kabir, Humayun (1961). Indian Philosophy of Education, Asia Publishing House, Bombay.
9. Kettle, F Donald (2000).The transformation of Governance: Globalization, Devolution, and the Role of Government. *Public Administration Reviews*, **60**:6.
10. National Education Commission (1967). Report of the Education Commission 1964-66. NCERT, New Delhi.
11. National Policy on Education (1986). National Policy on Education-1986. MHRD, Government of India, Department of Education, New Delhi.



12. Park C.C (1980). Ecological and Environmental Management, Butter worth, London, **p.28**.
13. Suman Thakran (2015). Education for Sustainable Development. *Educational Quest*: **6(1)**:55-60.
14. Umme Kulsum., and Shankarappa M (2018). Environmental ethics among secondary school students of Kolar District of Karnataka state. *International Journal of Current Research and Modern Education*, **3(1)**:334-337.
15. World Commission on Environment and Development (1987). World Commission on Environment and Development (The Brundtland Report): 1987. Our Common Future, Oxford: Oxford University Press.