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**GLOSSARY**

**Environmental Education:** A process of recognizing values and classifying concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelatedness among man, his culture and his biophysical surroundings. Environmental Education also entails practice in decision-making and self-formulating of a code of behavior about issues concerning environmental quality (IUCN, 1970).

**Education for sustainable development:** “Education for Sustainable Development (ESD) is a learning process (or approach to teaching) based on the ideals and principles that underlie sustainability and is concerned with all levels and types of learning to provide quality education and foster sustainable human development – learning to know, learning to be, learning to live together, learning to do and learning to transform oneself and society (UNESCO).”

**Sustainable Development:** Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987, p 43).

**Service-learning:** Service learning is a form of experiential education where learning occurs through action and reflection as students apply what they are learning in a classroom to community needs (Eyler and Giles 1999).

**Environmental education through Games:** Is a powerful technique to demonstrate and teach environmental concepts to both children and adults (Project WILD 2000). Games can energize a teaching environment, immerse learners in the material, promote collaboration with other players, and encourage students to learn from their mistakes (Teed 2004).

**Student-Active-teaching:** Student active teaching and learning involves student in the learning process. Certain cognitive research (Constructivism) suggests that genuine learning requires more than just passive listening- students must discuss, write, ask and answers questions, or otherwise engage in their own learning. These activities in turn require students to use critical thinking skills such as analysis and evaluation (Blooms taxonomy of higher order thinking). Faculty use a variety of approaches in student’s active-classrooms including cooperative group work, debate and discussion, and open ended problem solving. Formative evaluation-ongoing evaluation of course-is a critical aspect of student active teaching because this approach helps teachers be more reflective, effective teachers

**Service-Learning** is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities.
**Experiential Learning:** Constructivist form and philosophy of education in which students become actively and practically engaged, develop their own knowledge and skills, learn by doing and participating directly in activities typically outside the classroom.

**Environmental Literacy:** Environmental literacy should be defined in terms of observable behaviours. That is, people should be able to demonstrate in some observable form what they have learned their knowledge of key concepts, skills acquired, disposition toward issues, and the like.

**Out-Door Education:** Learning that occurs outside the classroom, that is in/about/for the out-of-doors, and that involves first-hand observations and direct experiences.

**Place-Based-Education:** Or ‘pedagogy of place’; form of education “founded” by Aldo Leopold and that involves direct observation and first-hand study of the land and quality environmental-learning experiences in local settings.

**Environmentally Responsible Behaviors**-active and considered participation aimed at solving problems and resolving issues. Categories of environmentally responsible actions include persuasion, consumer action, eco management, political action, and legal action.

Cognitive Skills-those abilities required to analyze, synthesize, and evaluate information about environmental problems/issues and to evaluate a select problem/issue on the basis of evidence and personal values. This category also includes those abilities necessary for selecting appropriate action strategies, and for creating, evaluating, and implementing an action plan.

Knowledge of Environmental Issues-understanding environmental problems and issues caused as the result of human interaction with the environment. Also included within this category is knowledge related to alternative solutions to issues.

**Attitude:** A pre-disposition or a tendency to respond positively or negatively towards a certain idea, object, person, or situation. Attitude influences an individual’s choice of action, and responses to challenge, incentives, and rewards(together called stimuli).Four major components of attitude are (1) Affective: emotions or feelings. (2) Cognitive: belief or opinions held consciously. (3) Conative: inclination for action. (4) Evaluative: positive or negative response to stimuli.

**Behaviour:** A response of an individual or group to an action, environment, person, or stimulus

**Skills:** An ability and capacity acquired through deliberate, systematic, and sustained effort to smoothly and adaptively carryout complex activities or job functions involving ideas (cognitive skills), things (technical skills), and/or people (interpersonal skills).
**Brainstorming**: process for generating creative ideas and solutions through intensive and freewheeling group discussion every participant is encouraged to think aloud and suggest as many ideas as possible, no matter seemingly how outlandish or bizarre. Analysis, discussion, or criticism of the aired ideas is allowed only when the brainstorming session is over and evaluation session begins. See also lateral thinking and nominal group technique.

**Biodiversity**: The variety of different living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the variety of different ecosystems that they form. This includes diversity within species, between species and of ecosystems, and the genetic variability of each species.

**Carbon dioxide**: A colourless, odourless, non-poisonous gas, which results from fossil fuel combustion and is normally a part of the air.

**Climate change**: The slow variations of climatic characteristics over time at a given place. Usually refers to the change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is, in addition to natural climate variability, observed over comparable periods.

**Ecosystem**: A dynamic and complex system of plant, animal and microorganism communities and their non-living environment all interacting as a functional unit within a defined physical location. The term may be applied to a unit as large as the entire ecosphere, but usually refers to a division thereof.

**Environment**: All of the external factors, conditions, and influences which affect an organism or a community, also, everything that surrounds an organism or organisms, including both natural and human-built elements.

**Groundwater**: The supply of fresh water found beneath the earth's surface (usually in aquifers) which is often accessed through wells and springs.

**Non-Governmental Organization (NGO)**: An organization centred on a cause or causes that works outside the sphere of governments. NGOs often lobby governments in an attempt to influence policy.

**Phytoplankton**: Usually microscopic aquatic plants, sometimes consisting of only one cell.

**Pollution**: The contamination of a natural ecosystem, especially with reference to the activity of humans.

**Water Quality**: A term used to describe the chemical, physical, and biological characteristics of water with respect to its suitability for a particular use.
**Curriculum:** documents determining the list of subjects, the way and sequence of studying them, number of subject period including those that deal with the problems of the environment.

**Conservation:** management of the biosphere so that it may yield the greatest sustainable benefits to present generations while maintaining its potential to meet the needs and aspirations of future generations.

**Declaration-Belgrade:** (Declaration of the International Seminar on Environmental Education, Belgrade, 1975), the declarations on the goals, objectives and characteristics of environmental education and training in view of the promotion of new awareness and improvement of the environment.

**Declaration Human Environment:** (Declaration of the United nations Conference on the Human Environment, Stockholm, 1972), the declarations on the directions of improving the interrelations between people and the environment for the protection of the biosphere.

**Declaration Tbilisi:** (Declaration of the Intergovernmental Conference on Environmental education, Tbilisi, 1977), the declarations on the principles and strategies of environmental education in the contemporary world.

**Education Conservation:** the system and process of education pertaining to the protection, improvement, management, and wise use of natural resources for living in harmony with environment and for having concerns for future generations. Includes the teaching and learning of knowledge, understanding, skills, attitudes, and responsibilities for integrating conservation with human society and development.

**Education, Informal (Non-formal):** education generally not conducted through formal educational intuitions and presented through mass media, private and public organisations, community intuitions, and associations, etc., Informal education is widely used in the dissemination of environmental knowledge and understanding to the general public, particularly adult population.

**Education, Outdoor:** Activities and projects, including field trips which take place outdoors for educational purpose. Involve firsthand experiences and direct inquiries/observations for the participants in an outdoor setting and are often associated with environmental education.

**Education learner cantered:** an educational approach which cantered on the student/participant in the learning process for development of knowledge, understanding, and attitudes through the personal experiences, inquiries, and thinking of the learner.

**Education, problem-oriented:** various forms and methods of focusing on definite problems in the educational processes for student learning through inquiries, analysis, and
solutions for the problems. The problem-oriented approach is often used in the environmental education and contributes to the understanding and attitudes of students.

**Environmental Learning:** plots, trails, area and natural complexes selected specifically to study the natural and/or built environment, including the effects of human influences. Observation, inquiry and investigation are basis orientations for learning environments.

**Environmental Attitude:** A state of mind or feeling which represents a behavioural predisposition toward a given environmental object. Attitudes are produced by groups of beliefs which collectively cluster around objects/environments e.g., attitudes of concern, apathy, etc.

**Environmental Awareness:** The growth and development of awareness, understanding and consciousness toward the biophysical environment and its problems, including human interactions and effects.

**Environmental Conservation:** Efforts and activities to maintain and sustain those attributes in natural and urban environments which are essential both to human physical and mental health and to enjoyment of life.

**Environmental Education Curriculum:** The programmes, courses, and instructional materials on environmental education which are offered through educational Institutions. Environmental education curricula can be included both as an integrated/infused part within traditional school subjects and as a separate subject which utilizes an interdisciplinary approach.

**Environmental Education, evaluation:** (Assessment) Determination and assessment of the quality and effectiveness of a teaching/learning process, course, or programme in environmental education in terms of stated goals and objectives. Evaluation forms can consist of initial assessment, effort/inputs, process/approach, and impact/effects.

**Environmental Education through Gaming:** A teaching/learning technique which utilizes a particular type of simulation involving the use of human decision-makers in the simulation of a real-life situation which concerns conflicting interest. Involves personal participation of students in simulations of how real-world systems and interrelations function.

**Environmental Skills:** Developed thinking and action skills for using knowledge and abilities effectively in performance for the study, understanding, correction, and prevention of environmental problems. Skills include observation, inquiry, problem-solving, value clarification, etc.

**Flora:** All plant life and lower taxons associated with a given habitat, area, country, or period.
**Learning by doing:** The process of acquiring understanding, knowledge, skills, and attitudes through practical and applied learning activities. A relatively permanent change in the behaviour and attitudes as a result of the individual's experience in doing involves observation, investigation, inquiry, problem-solving, and value clarification which are effective learning methods in environmental education and field situations.

**Environmental Policy:** Official statements of principles, intentions, values, and objectives which are based on legislation and the governing authority of a state and which serve as a guide for the operations of governmental and private activities environmental affairs.

**Stewardship** (Environmental stewardship): The wise use and management of the environment and its resources in terms of the recognition of living relationships of and responsibilities for the environment and for future generations of all forms of life. Stewardship implies that humankind respect, oversee, and conserve the environment for present and future considerations for all life through individual and collective efforts and responsibilities.

**Teacher Education:** Various educational programmes and courses, including environmental education, by universities and colleges which provide knowledge, understanding, skills, and methods for teachers, particularly students studying to be teachers, for utilization in their teaching careers. Environmental education, as a specific development, is relatively new in teacher education.