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## A STUDY ON ENVIRONMENTAL EDUCATION AND AWARENESS AMONG HIGH SCHOOL TEACHERS WITH SPECIAL REFERENCE TO GOALPARA DISTRICT OF ASSAM.

**Mantu Kalita**

Assistant Professor (P/T) , Department of Education ,  
Dudhnoi College, Dudhnoi .

### ABSTRACT

**E**nvironmental Education refers to Organized effort to teach how natural environments functions, and particularly, how human being can manage behavior and ecosystem to live sustainably. Environmental education is the teaching of individuals and communities, in transitioning to a society that is knowledgeable of the environment and its associate problems, aware of the solutions to these problems and motivated to solve them. The study which involves the various things in our surroundings is Environmental Education. Environmental Education informs us in great detail about that. It teaches us about the life of other creations and how they manage to survive. Environmental Education gives us an idea about the balance in the ecosystem which is being disturbed due to human interference.

Today, we are faced with a major threat called Global warming. The climate of various places in the earth is going through a major change. The heat level is rising with every passing day. One of the major factors that contributed for this impending disaster pollution which is essential man made. All the smokes from the factories and cars are rising the

pollution level. The wastes from the factories which are being dumped in the rivers and slowly depleting the life of our friends who thrive in water. One of the Seven Wonders of the World, the Taj Mahal faces a major threat today because of pollution. Environmental Education is being pushed so that people become aware of this harm they causing to mother Earth. This is a desperate call for awareness and save our abode. The various resources on the Earth is also being depleted which needs to be checked as well. Environmental Education is basically an awareness program in which participation is

compulsory for every one for their own sake. This paper is specially emphasis regarding Environmental Education and awareness among High School Teachers.

**KEYWORDS:**Environmental Education ,natural environments functions,teaching of individuals and communities.

### INTRODUCTION:

Environmental Education refers to organized efforts to teach how natural environments functions, and particularly, how human being can manage behavior and ecosystems to live sustainably. Environmental Education is the teaching of individuals, and communities, in transitioning to a society that is knowledgeable of the environment and its associate problems, aware of



the solutions to these problems, and motivated to solve them. Awareness of environmental protection improvement is not a recent idea. Since the dawn of civilization man has become a part of his environment. Now-a-days in the industrialization and urbanization our eco-system is under constant pressure. Large scale production and use of synthetic chemicals, pesticides, insecticides etc. led to the generation of wastes that could not be easily degraded by natural processes. Due to increase of population, more natural system was converted to croplands and human settlements. All this indiscriminate activities entered a tremendous pressure on the environment, thereby crossing the natural threshold and carrying capacity of natural system. In the present country, the situation deteriorated from bad to worse at the turn of almost every year focusing our major concern for protection the natural environment.

### 1.1 MEANING OF ENVIRONMENT:

Stated in a very simple manner, our environment is our surrounding. It is the sum total of all the external conditions and influences acting on us. The word 'Environment' has been derived from the Latin word 'Environ' meaning encircling the surrounding. It is the natural situation around living beings, which affects the existence, growth, development and activities of living beings.

### 1.2 TYPES OF ENVIRONMENT:

**Broadly classified there may be three types of environment:**

1. Natural Environment 2. Man Made Environment. 3. Social Environment.

### 1.3 SOME SERIOUS ENVIRONMENTAL PROBLEMS:

**i) Greenhouse Effect:** The increase in carbon dioxide (CO<sub>2</sub>) in the atmosphere due to burning of fossil fuels and massive deforestation has resulted in the warming of the earth. This warming is referred to as greenhouse effect, which has become a major environment concern.

**ii) Ozone layer depletion:** Ozone is a minor constituent of the atmosphere, which provides a protective screen against deadly ultraviolet (UV) radiation. In recent years, a hole in the ozone shield has been detected. The reason for ozone depletion is use of chemicals called chlorofluoro carbons (CFCs) in aerosol spray cans, refrigerators, metal cleaning and drying.

**iii) Acid rain:** When rain or snow, sleet or fog has a PH less than 4, it is termed as acid rain. They are formed when sulphur dioxide from coal burning plants, industrial boilers and smelters and nitrogen dioxide from automobile exhaust come in contact with air.

**iv) Pollution:** Pollution may be defined as an undesirable change in the physical, chemical or biological characteristics of air, land and water that harmfully affect human life and that of other species-living conditions and raw material resources.

**v) Deforestation:** Deforestation refers to the removal of forest cover. Shifting or slash-and-burn or Sweden cultivation, development projects, industrial and commercial demands are the main cause of deforestation.

**vi) Soil erosion:** Soil erosion induced by human activities like deforestation, defective agricultural practices like 'Jhum' has aroused great environmental concern throughout the world.

**vii) Desertification:** Desertification is a process of creation of desert like conditions due to various activities like indiscriminate agricultural activities without any planning, overgrazing by livestock etc.

**viii) Floods:** One of the most serious environmental backlashes resulting from unchecked deforestation, modification of natural drainage patterns and faulty agricultural settlement policies in the flood, the magnitude and frequency of which have increased during recent years, in the Brahmaputra and Barak valleys of Assam particularly.

**ix) Occupational health hazards:** Workers in mines, quarries and various industrial establishments constitute the 'high risk' group that are prone to suffer from various disease caused by environmental conditions in their work places. The above mentioned environmental problems make it necessary for every man to acquire knowledge about environment.

#### 1.4 MEANING OF ENVIRONMENTAL AWARENESS:

The term environmental education and environmental awareness are used interchangeably for the same meaning but there is significant difference in these two meanings. The study of physical and bio-science, geography, agriculture provides the environmental awareness. But the awareness does not help in developing skills and attitude for improving environment. Environmental awareness may be defined as to help the social groups and individuals to gain a variety of experience to acquire a basic understanding of environment and its associated problems.

#### 1.5 OBJECTIVES OF ENVIRONMENTAL AWARENESS:

\* **Awareness:** To help social group and individual acquire awareness and sensitivity to the total environment and its allied problems.

\* **Knowledge:** To help social group and individuals gain a variety of experience in and acquire a basic understanding of the environment and its associated problems.

\* **Attitude:** To help social group and individuals acquire a set of value and feelings of concern for the environment and the motivation for participating in environmental improvement and protection.

\* **Skills:** To help social group and individuals acquire the skill for identifying and solving environmental problems.

\* **Participation:** To provide social group and individuals with an opportunity to be actively and responsibly involved at all levels in working towards resolution of environmental problems.

#### 1.6 STATEMENT OF THE STUDY:

The investigator has undertaken the study title —

"A study on Environmental Education and Awareness among high school teachers' with special reference to Goalpara district of Assam".

#### 1.7 SIGNIFICANCE OF THE STUDY:

Awareness of environment is one of the vital issues, which should be looked after by each and every human being so that environment is well protected for the future. Bringing awareness among high school teachers' will certainly contribute to save the environment from destruction. Children should be made inquisitive, receptive, unbiased and open minded in environmental issues and problems through training at school level. Goalpara district is a major district of Assam. The waste management of this area is not at all satisfactory. Not a single study has been undertaken in this area. Realizing this aspect, and emotions attached to this place as it is the home district of the investigator, the study was undertaken in this district. It has been felt that the study would throw light on the importance environmental education and awareness in the secondary school curriculum.

#### 1.8 OBJECTIVES OF THE STUDY:

1. "To examine about environmental education and awareness among high school teachers".
2. "To make a comparison study between the views of male and female high school teachers regarding environmental education and awareness".

#### 1.9 HYPOTHESIS:

1. There is environmental education and awareness among high school teachers.
2. There is no difference between the views of male and female high school teachers regarding environmental education and awareness.

#### 1.10 DELIMITATION OF THE STUDY:

The study has been limited to the high school teachers of Goalpara district of Assam.



## 2. REVIEW OF RELATED LITERATURE:

Review of related literature implies; locating, studying and evaluating the reports of relevant research, journals, dissertations and other resources of information. It allows the investigator to acquaint him/her with the current knowledge in the field in which he is going to conduct the research. Through the review of related literature the investigator can avoid unintentional duplication of well established findings. It helps the investigator on understanding the research methodology which enables him to carry out the investigation work in promising way.

In this chapter an attempt has been made to study some of the works related to environmental awareness. But it is beyond the capacity of the investigator to gather all the related information about the works already done in the field in different parts of the world due to the lack of sufficient books, journals, thesis and very much shortage of time faced by the investigator, which he regrets a lot.

Some of the related literatures, which the investigator has reviewed, are discussed below :

1. Patel D.G. and Patel N.A.(1978), conducted a study about the environmental awareness of primary school teachers regarding the environmental education. The main objective of his study was to study about the environmental attitude and awareness of urban and rural primary school teachers. He was found the finding that there were some differences between the urban and rural primary school teachers.
2. Devi Mrs. Mandita (1998-90), made a study of knowledge of environmental education and awareness among secondary school students of greater Guwahati with special reference to the role of television and radio in creating environmental awareness. The main objectives of his study were to study about the environmental awareness of secondary school students and the effect of media, TV and radio in creating environmental awareness. The major findings of his study were environmental knowledge and education has of a limited section of students and mass media like TV and radio in creating environmental awareness does not have full impact on all secondary school students.
3. Sharma, Bidula (2001-2002), conducted a study on environmental education and environmental awareness among the secondary school students with special reference to Nagaon town as the dissertation for the master of education, department of education, Gauhati University. The main objectives of her study were to study about environmental awareness among secondary school students and to make a comparison between the view of the girls and boys regarding environmental education and awareness. The major findings of the study were knowledge of environmental awareness and environmental educations are confined to a small number of students and there is no significance difference between the views of boys and girls regarding environmental education and environmental awareness.
4. Sharma, Mrs. Rajashree, (2001-2002), a M. Ed. student of Gauhati University also try to find out the problems of environmental pollution in primary students in her study on 'A study on knowledge of environmental education and awareness among the primary students of Mangaldai town area. The major objectives of the study were to study awareness among the primary students about environment and its problems and to examine the skills among the students for evaluating environmental pollution control measures. The major findings of the study were there primary school students' consciousness about environment and their interest to learn about the skill of protection of environment.
5. Pradhan, Dr G.C-P.G (2002), Department of Education, Nirmala Institute of Education, Goa made a study on environmental awareness among secondary school teachers. The main objectives of the study were that to study the level of environmental awareness among secondary school teachers and variation if any in environmental awareness among social science, language and science teachers. The major findings of the study were teachers working in secondary schools had low awareness about environmental problems and teachers teaching science have more awareness about environment than the teachers teaching social science and language.
6. Kumari, Dr. P. Vasantha and Surendra, G.(2002), Department of adult education S.V. University, Tirupati studied the attitude of adult education organizer towards environmental awareness in the Nellore district. The major objectives of the study whether there exists any significance difference between male and female adult education organizers and to know whether work experience plays any significant role in determining

environmental awareness among the organizers. The major findings of the study were there exist no significant difference between male and female adult education organizers and educational qualification and experience also has a prominent role in determining the environmental awareness among the adult education organizers.

7. Ms. Devi, Pori (2002-2003), a student of M.Ed. classes of Gauhati University made her dissertation on "A study on the problems of pollution and its awareness among the secondary school students of Greater Guwahati area". The main objective of this study was to compare whether SEBA or CBSC school students are more conscious about environmental awareness and pollution. The major finding she found was that CBSC students are more conscious about environmental awareness and pollution than the SEBA students.

### 3. METHODOLOGY:

The instruments which help the investigator in collecting data or gathering devices can be called methodology. Research methods are at most importance in a research process. It is the way one goes about the investigation under question in solving his research problem. They describe steps of the plan to be adopted in solving a research such as the manner in which the problem are formulated, the definition of the term, the choice of the subject for investigation, validation of data gathering tools the collection, analysis and interpretation of data and conclusion.

The research methods are generally classified in three categories-

1) Descriptive method. 2) Historical method. 3) Experimental method.

### RESEARCH METHOD CONSIDERATION FOR THE PRESENT STUDY:

In the light of the above discussion in the present study descriptive survey method has been followed. The present based on the quantitative data analysis. It involves of interview of teachers and questionnaire technique used of high school teachers.

#### 3.1 METHOD OF THE STUDY:

**DESCRIPTIVE SURVEY METHOD:** Descriptive survey method had been applied in the present study. Descriptive survey method gathers data from a relatively large number of cases from a particular time. Through this method one can justify correct and actual condition of an institution or centre or a group or of an area. Descriptive survey methods are designed to obtain pertinent and practical information concerning the current status of phenomenon and whenever possible, to draw valid general conclusions from the facts discovered.

#### 3.2 TOOLS USED:

The selection of selective tools is vital important for successful investigation.

In the present study the following tools were constructed and used for data collection-1. Questionnaire,

2. Personal interview, when necessary. A self constructed questionnaire for distribution in school was used as tool of data collection.

#### 3.3 POPULATION:

Population has special significance in research. Population is the universe in a particular context or variable. Therefore, it refers to any collection of systematic group of human beings or non human entities such as, objectives, educational institutions etc. That has one or more characteristics in common that are of interest to the researcher.

The 'population' or 'universe' of the present study consists of all the high school teachers under Goalpara district of Assam, which is a finite population.

### 3.4 SAMPLES:

A sample constitutes a smaller representation of its large whole. So, it is a small proportion of a population selected for observation and analysis. By observing the characteristics of the sample, one can make certain inferences about the characteristics of the population from which it is drawn.

For the present study 30 high school teachers have been randomly selected, 15 from male teachers and 15 from female teachers as a sample for the study to collect the required data. Purposive sampling technique is used in selecting the students as sample.

### 4. ANALYSIS, INTERPRETATION AND FINDINGS:

Keeping in view the objectives of the study, the data collected was classified and tabulated.

Analysis and interpretation of data are studied according to the following objectives:

#### Objective-1:

“To examine about environmental education and awareness among high school teachers”.

The analysis was tabulated on the basis of the responses using simple percentages, which were given on the following tables.

**Table -1**

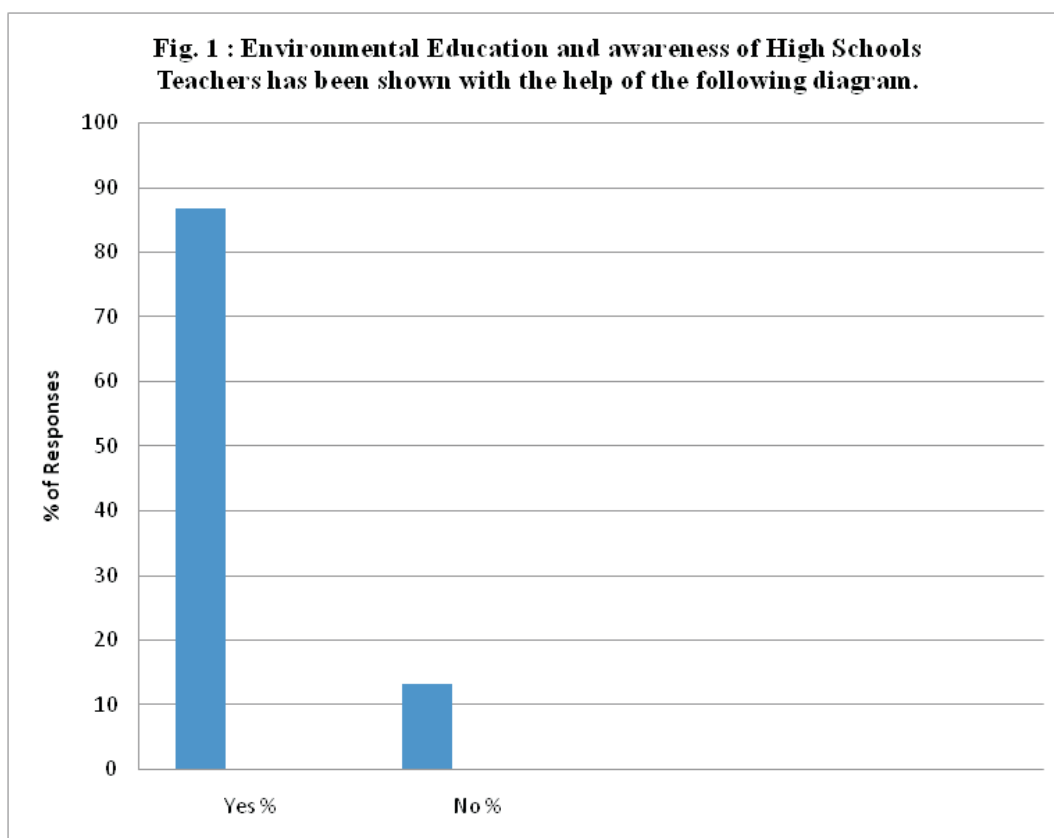
#### Item wise analysis of High school teachers responses regarding Environmental Education and Awareness

| Item No. | Particulars   | No. of Teachers | Yes | %     | No. | %     |
|----------|---|-----------------|-----|-------|-----|-------|
| 1        | Knowledge of World Environmental Day  | 30              | 30  | 100   | 0   | 0     |
| 2        | Information regarding Environmental Awareness                                 | 30              | 30  | 100   | 0   | 0     |
| 3        | Participation in Environmental Programme                                      | 30              | 8   | 26.67 | 22  | 73.33 |
| 4        | Involvement in Planting Trees   | 30              | 30  | 100   | 0   | 0     |
| 5        | Necessity of Environmental Awareness among students                           | 30              | 30  | 100   | 0   | 0     |
| 6        | Responsibility for Environmental pollution                                    | 30              | 30  | 100   | 0   | 0     |
| 7        | Environmental pollution in Development countries and Developed countries      | 30              | 30  | 100   | 0   | 0     |
| 8        | Necessity of Mass movement for conservation of Environment                    | 30              | 28  | 93.33 | 2   | 6.67  |
| 9        | Necessity of big dam for production of Hydro electricity                      | 30              | 23  | 86.67 | 7   | 23.33 |
| 10       | Importance of other type of conventional energy rather than Hydro Electricity | 30              | 29  | 96.67 | 1   | 3.33  |
| 11       | Use of fertilizer and pesticide   | 30              | 16  | 53.33 | 14  | 46.67 |
| 12       | Prohibition of smoking in public place  | 30              | 27  | 90    | 3   | 10    |
| 13       | Environmental pollution due to population Explosion                           | 30              | 24  | 80    | 6   | 20    |
| 14       | Effect of Green house on atmospheric temperature                              | 30              | 30  | 100   | 0   | 0     |
| 15       | Necessity of Forestation for the Maintenance of Atmospheric Temperature       | 30              | 21  | 70    | 9   | 30    |



| Item No. | Particulars  | No. of Teachers | Yes | %            | No. | %           |
|----------|--|-----------------|-----|--------------|-----|-------------|
| 16       | Necessity of Ozone layer for our Existence                           | 30              | 30  | 100          | 0   | 0           |
| 17       | Harmful effect of Nuclear Experiment of Environment                  | 30              | 17  | 56.67        | 13  | 43.33       |
| 18       | Necessity of checking Traffic to get rid of our pollution            | 30              | 26  | 86.67        | 4   | 13.33       |
| 19       | Care for Disposal of Nuclear by-product                              | 30              | 30  | 100          | 0   | 0           |
| 20       | Necessity of Family Welfare Program                                  | 30              | 30  | 100          | 0   | 0           |
| 21       | Causes of Imbalance of rainfall and land erosion                     | 30              | 29  | 96.67        | 1   | 3.33        |
| 22       | Use of organic fertilizer to enhance fertility of soil               | 30              | 25  | 83.33        | 5   | 16.67       |
| 23       | Proper use of paper for conservation of forest                       | 30              | 27  | 90           | 3   | 10          |
| 24       | Necessity of mixed agriculture for fertility of forest               | 30              | 29  | 96.67        | 1   | 3.33        |
| 25       | Effect of sound pollution on health                                  | 30              | 24  | 80           | 6   | 20          |
| 26       | Caused of acid rain by the smoke emitted from vehicle and factory    | 30              | 30  | 100          | 0   | 0           |
| 27       | The level of DDT in the body of people of Indian and other countries | 30              | 18  | 60           | 12  | 40          |
| 28       | Effect of artificial satellite and rocket on atmosphere              | 30              | 23  | 76.67        | 7   | 23.33       |
| 29       | Misuse of plastic and polythene                                      | 30              | 27  | 90           | 3   | 10          |
| 30       | Prohibition of open dumping of solid wastes                          | 30              | 30  | 100          | 0   | 0           |
|          |  |                 |     | Avg.= 86.75% |     | Avg.=13.22% |

**Fig. 1 : Environmental Education and awareness of High Schools Teachers has been shown with the help of the following diagram.**



**FINDINGS:**

From the table-I, it has been found that out of 30 high school teachers 87.11% responded as 'Yes' and only 13.12% teachers responded as 'No' regarding the knowledge about environmental awareness. Among them, in item no's 1, 2, 4, 5, 6, 7, 14, 16, 19, 20, 26 and 30 regarding the knowledge related to world environment day, environmental pollution, planting trees, green house effect, social waste, conservation of forest etc. all responded as 'Yes' i.e. the percentage of 'Yes' response is 100%. Again in the items no 10, 21 and 24 regarding knowledge of use of solar energy, cause of acid rainfall and advantages of mixed agriculture out of 30 teachers, 29 teachers responded as 'Yes' i.e. the percentage of 'Yes' response is 96.6% and only one teacher was not aware about these problems i.e. 3.33% teachers were unconscious about these problems.

In item no 8 regarding the knowledge of necessity of mass movement for conservation of forest, out of 30 teachers, 28 teachers responded as 'Yes' i.e. 93.33% and 2 teachers responded as 'No', i.e. 6.67% of total teachers were not aware of the above mentioned problems. Again in the item no's 12, 23 and 29 regarding the problems of smoking in public place, proper use of papers and harmful effect of polythene bags, out of 30 teachers, 27 teachers responded as 'Yes' i.e. 90% and 3 teachers responded as 'No' i.e. 10% of teachers were not aware of the above mentioned problems. In item no. 18 a total of 26 teachers out of 30, i.e. 86.67% responded as 'Yes', in item no. 22 a total of 25 teachers out of 30 i.e. 83.33% responded as 'Yes'. In both items no. 13 and 25 out of 30 teachers, a total of 24 teachers responded as 'Yes' regarding the knowledge related to organic fertilizer, effect of population explosion, effect of sound pollution etc. On the other hand 13.33%, 16.67%, 20% and 20% respectively are not aware about the above mentioned problems. Again in the items no 9 and 28 out of 30 teachers, 23 students responded as 'Yes' i.e. 76.67% of teachers, regarding the knowledge of big dam and launching of artificial satellite and 23.33% of teachers are not aware about the above mentioned problems. Again in the items no 3, 11, 15, 17 and 27 respectively all out of 30, 8 teachers, i.e. 26.67%; 16 teachers i.e. 46.67%; 21 teachers, i.e. 30%; 17 teachers i.e. 43.33%; and 18 teachers, i.e. 40% respectively responded as 'Yes' regarding the knowledge related to chemical fertilizer, atmospheric temperature, nuclear experiment etc. On the other hand 73.33%, 53.33%, 70%, 56.67% and 60% respectively have no knowledge about the above mentioned problems.

**HYPOTHESIS-1:**

"There is environmental education and awareness among high school teachers'."

After the analysis of the data it has been found that there is Environmental Education and Awareness among the high school teachers of Goalpara district of Assam. So, our hypothesis is accepted.

**Objective-2:**

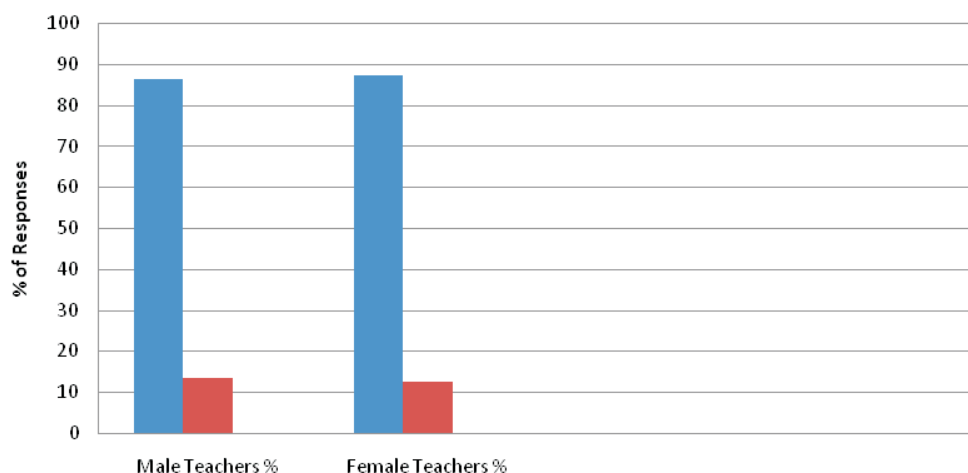
"To make a comparison study between the views of male and female high school teachers regarding environmental education and awareness."

This comparison is shown by the Table-2 in the next page.

**Table – 2**  
**Showing the difference between Male Teachers and Female Teachers regarding Environmental Education and awareness**

| Item No. | No. of Male Teachers | Yes   | %     | No   | %     | No of Female Teachers | Yes  | %     | No. | %     |
|----------|----------------------|-------|-------|------|-------|-----------------------|------|-------|-----|-------|
| 1        | 15                   | 15    | 100   | 0    | 0     | 15                    | 15   | 100   | 0   | 0     |
| 2        | 15                   | 15    | 100   | 0    | 0     | 15                    | 15   | 100   | 0   | 0     |
| 3        | 15                   | 6     | 40    | 9    | 60    | 15                    | 3    | 20    | 12  | 80    |
| 4        | 15                   | 15    | 100   | 0    | 0     | 15                    | 15   | 100   | 0   | 0     |
| 5        | 15                   | 15    | 100   | 0    | 0     | 15                    | 15   | 100   | 0   | 0     |
| 6        | 15                   | 15    | 100   | 0    | 0     | 15                    | 15   | 100   | 0   | 0     |
| 7        | 15                   | 15    | 100   | 0    | 0     | 15                    | 15   | 100   | 0   | 0     |
| 8        | 15                   | 14    | 93.33 | 1    | 6.67  | 15                    | 14   | 93.33 | 1   | 6.67  |
| 9        | 15                   | 10    | 66.67 | 5    | 33.33 | 15                    | 13   | 86.67 | 2   | 13.33 |
| 10       | 15                   | 14    | 93.33 | 1    | 6.67  | 15                    | 15   | 100   | 0   | 0     |
| 11       | 15                   | 9     | 60    | 6    | 40    | 15                    | 7    | 46.67 | 8   | 53.33 |
| 12       | 15                   | 13    | 86.67 | 2    | 13.33 | 15                    | 14   | 93.33 | 1   | 6.67  |
| 13       | 15                   | 11    | 73.33 | 4    | 26.67 | 15                    | 13   | 86.67 | 2   | 13.33 |
| 14       | 15                   | 15    | 100   | 0    | 0     | 15                    | 15   | 100   | 0   | 0     |
| 15       | 15                   | 10    | 66.67 | 5    | 33.33 | 15                    | 11   | 73.33 | 4   | 26.67 |
| 16       | 15                   | 15    | 100   | 0    | 0     | 15                    | 15   | 100   | 0   | 0     |
| 17       | 15                   | 7     | 46.67 | 8    | 53.33 | 15                    | 10   | 66.67 | 5   | 33.33 |
| 18       | 15                   | 12    | 80    | 3    | 20    | 15                    | 14   | 93.33 | 1   | 6.67  |
| 19       | 15                   | 15    | 100   | 0    | 0     | 15                    | 15   | 100   | 0   | 0     |
| 20       | 15                   | 15    | 100   | 0    | 0     | 15                    | 15   | 100   | 0   | 0     |
| 21       | 15                   | 15    | 100   | 0    | 0     | 15                    | 14   | 93.33 | 1   | 6.67  |
| 22       | 15                   | 15    | 100   | 0    | 0     | 15                    | 10   | 66.67 | 5   | 33.33 |
| 23       | 15                   | 14    | 93.33 | 1    | 6.67  | 15                    | 13   | 86.67 | 2   | 13.33 |
| 24       | 15                   | 15    | 100   | 0    | 0     | 15                    | 14   | 93.33 | 1   | 6.67  |
| 25       | 15                   | 11    | 73.33 | 4    | 26.67 | 15                    | 13   | 86.67 | 2   | 13.33 |
| 26       | 15                   | 15    | 100   | 0    | 0     | 15                    | 15   | 100   | 0   | 0     |
| 27       | 15                   | 9     | 60    | 6    | 40    | 15                    | 9    | 60    | 6   | 40    |
| 28       | 15                   | 11    | 73.33 | 4    | 26.67 | 15                    | 12   | 80    | 3   | 20    |
| 29       | 15                   | 13    | 86.67 | 2    | 13.33 | 15                    | 14   | 93.33 | 1   | 6.67  |
| 30       | 15                   | 15    | 100   | 0    | 0     | 15                    | 15   | 100   | 0   | 0     |
| Average  | 15                   | 12.97 | 86.44 | 2.03 | 13.56 | 15                    | 13.1 | 87.33 | 1.9 | 12.67 |

**Fig. 2: Differences of opinion regarding Environmental Education and awareness between male and female teachers has been shown with the help of the following diagram.**



**FINDINGS:**

From the table 2, it has been found that out of 15 male teachers, 86.44% were responded as 'Yes' and 13.54% were responded as 'No' and on the other hand out of 15 female teachers, 87.43% were responded as 'Yes' and 12.67% were responded as 'No'. Among them, in item no's 1,2,4,5,6,7,14,16,19,20,26 and 30, 100% of both male and female teachers were responded as 'Yes' regarding the knowledge related to environmental day, necessity of Planting trees, Environmental Pollution, Effect of Green house, about ozone layer, Cause of acid rainfall etc. Again, in items no's 8, 10 and 23, out of 15 male teachers, 14 were responded as 'Yes' that means 93% of male teachers were responded as 'Yes' and 6.67% male teachers responded as 'No'. On the other hand out of 15 female teachers, the percentage of 'Yes' response is 93.33% for item no.1, 100% for item no. 10 and 86.67% for item no. 23 regarding the knowledge of relating mass movement for conservation of forest, Solar energy and Proper use of papers. In the items no's 12 and 29 out of 15 male teachers, 13 were responded as 'Yes' i.e. 86.67% teachers responded as 'Yes' and on the other hand out of 15 female teachers 14 were responded as 'Yes' that is 93.33% teachers were responded as 'Yes' relating the knowledge of harmful effect of plastic and polythene and smoking problem in public places. Again in item no's 13, 25 and 28 out of 15 male teachers, 73.33% responded as 'Yes' and 26.67% responded as 'No'. On the other hand out of the 15 female teachers 86.67%, 86.67% and 80% respectively were responded as 'Yes' for these items regarding the knowledge relating population explosion, effect of sound pollution and Launching of artificial Satellite and Rocket. In the item no's 9 and 15 out of 15 male teachers, 10 teachers responded as 'Yes' that means 66.67% responded as 'Yes' and 33.33% teachers responded as 'No'. On the other hand out of 15 female teachers 86.67% and 73.33% respectively were responded as 'Yes' and 13.33% and 26.67% respectively were responded as 'No' regarding the knowledge relating to possible harmful effect of big dam and about atmosphere temperature. Again in item numbers 11 and 27 out of 15 male teachers, 9 teachers were responded as 'Yes', that means 60% of teachers out of the 15 responded as 'Yes' and 40% teachers were responded as 'No'. On the other hand out 15 female teachers 46.67% and 60% respectively were responded as 'Yes' and 53.33% and 40% respectively were responded as 'No' regarding the knowledge related to the use of chemical fertilizer and pesticide and about the level of DTT in the body of human being.

In the items no's 3, 17 and 18 out of 15 male teachers 40%, 46.67%, and 80% respectively were responded as 'Yes' and 60%, 53.33% and 20% respectively were responded as 'No'. On the other hand out of 15 female teachers 20%, 66.67% and 93.33% respectively were responded as 'Yes', whereas 80%, 33.33% and 6.67% respectively were responded as 'No' regarding the knowledge related to the environmental awareness programme, effect of nuclear experiment and about traffic check. Again in the item no's 21, 22 and 24 out of 15 male teachers, 100% were responded as 'Yes'. On the other hand out of 15 female teachers 93.33%, 66.67% and 93.33% respectively were responded as 'Yes'. Whereas 6.67%, 33.33% and 6.67% respectively were responded as 'No' for these three items regarding the knowledge relating to causes of imbalance of rainfall and land erosion, benefit of organic fertilizer and about mixed agriculture.

**HYPOTHESIS-2:**

"There is no difference between the views of male and female high school teachers regarding environmental education and awareness".

After analysis the data it has been found that there is no significant difference between the views of male and female high school teachers regarding environmental education and awareness. Hence the hypothesis has been accepted.

**5. SUGGESTION:**

> Environmental awareness helps in creating conservation consciousness and protecting of our environment. Looking only at technological solutions cannot solve environmental problems. Consideration must also be given to the social and economic factors that lead to them. It is evident that there can be no hope of finding workable solutions to environmental problems until awareness is created to enable people from all works of life to comprehend the fundamental interaction between human and their environment.

> Environmental education and awareness can be made a separate subject in the secondary school curriculum.

But there is an apprehension that students may get over burdened with so many existing subjects and may be reluctant to accept it with heart. So it would be better if environmental education and awareness is integrated with other core subjects like General Science, Biology, Geography, History, Social Science, Health and Hygiene and even in languages. Environmental education and awareness may also be included as rapid readers in languages.

> School should organize more co-curricular activities in creating awareness among the children and extending it to the society as well. Plantations in and around school campus and campus-cleaning drive can be very fruitful in arousing interest in eco conservation.

> Schools should take the help from different NGOs working in this field to provide environmental education and awareness in non-formal way. These organizations can resort to use mimes, street play, folk dance and puppet shows for spreading environmental education and awareness.

> Teachers can take their students to local slum areas and make them get a horrifying glimpse of co-education. They can also visit the municipal boards and corporations and get an idea of domestic waste management. Schools can provide trips to zoos, sanctuaries and national parks as these attract people's attention to environment related issues.

> Training programmes should be organized for the teachers and students. Teacher education programmes should include environmental education so that these can help them to foster environmental education and awareness to the students.

> The government should encourage the schools to form eco-club and extend funds for their functions.

> All India Radio and Doordarshan can also play important roles in motivating, educating and sustaining interest among the students. The local Doordarshan channel can telecast programmes on local problems on environment.

## 6. SUMMARY AND CONCLUSION:

From the study the following major findings have been found and can be summarized as follows---

> It has been found that the school possesses environmental education and awareness as a core subject in the secondary school curriculum.

> It has also been found that the teachers provide necessary information in the classroom regarding environmental awareness and they also took part in environmental awareness programme with the students.

> It has been found that some male teachers and female teachers of the school were participated in environmental awareness program in the school and outside of the school.

> It has been found that regarding the activities on environmental education and awareness, the school celebrate "World Environment Day".

> From the study it has been found that students involve themselves in planting of trees, gardening and other competition in the area of environmental education and awareness.

> It has been found that the school has no facility to show any educational TV program/Video cassettes on environmental awareness.

> High school teachers are interested to know more about environment.

> From the study it has been found that comparatively female high school teachers are a little more conscious about environmental education and awareness programmes than male high school teachers, but that is not significant.

## CONCLUSION:

Environmental awareness is a new kind of integrative teaching characterised by encouraging inclusive thinking by a continuous training of habits in small steps and by the development of a general attitude of openness to new aspects. It has assumed great importance in recent times because many of the environmental issues are global in nature and require the understanding and co-operations of all the people.

The urgent need for the protection of the environment in order to maintain the quality of life has been identified by many countries in the world. The issue has been discussed at conferences and seminars including a



world conference sponsored by the United Nations in 1986.

Environmental protection starts by creating the awareness among the people so that it becomes part of people's life style. The key to achieve this goal lies in environmental education and its related programmes.

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**Mantu Kalita**

**Assistant Professor (P/T) , Department of Education ,  
Dudhnoi College, Dudhnoi .**

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