CHAPTER-V

SUMMARY, FINDINGS AND CONCLUSION
5.1: Summary

The present study is important for the awareness and protection of natural resources from manmade disaster. The youth have the strong will and stamina which emboldens them to accept new challenges. Therefore the youth of a country has a very vital role to play in protecting & safeguarding the environment. Both urban and rural youth can work as an instigator and initiator of various awareness program related to ‘Environmental Protection’.

In order to enrich the environment they need environmental awareness through education and training. Environmental education is never complete without application done in real life situation. A sense of responsibility is necessary from each student to contribute the eco-friendly environment.

During the last few decades the problems of environmental degradation have attracted the attention of a wide section people all over the globe. The fast depletion of forests, rapid population explosion, expanding industrialization, unplanned urbanization, soil erosion, natural hazards like flood, drought, landslide, earthquake etc. have created
ecological imbalances in recent years. World educators and environmental specialists have repeatedly pointed out that any solution to the environmental crisis will require environmental awareness and understanding to be deeply rooted in education systems at all levels.

Environmental education or study is a way of creating knowledge, understanding values, attitudes, skills abilities and awareness among individuals and social groups towards the environment and its protection.

On the basis of the need and significance of the study, the investigator intended to take up this study with an objective to find out the awareness and attitude among the urban and rural college students, Arts and Science college students and male and female college students under Gauhati University.

The limitation and delimitation of the study is among the college students from both urban and rural colleges under Gauhati University.

For this study random sampling technique was applied. On random selection of a college, it is also taken care of that entire District under Gauhati university area may consider. The universe of the study consists of 39 nos. of colleges, out of which 16 nos. are in urban area and 23 nos. are in rural area.
In order to minimize the inter sample and intra-sample variability between the Arts and Science students, male and female students in the comparison area, the college where both Science and Arts stream available are selected as far as practicable.

Though the nature of the study was only on college students, but it is differentiated by Urban & Rural, Arts & Science and male & female student.

For selection of sample, for the study, multistage sampling method has been used, where the first-stage sampling units are the rural and urban colleges and they differ in size, measured by streams (Arts and Science). In this situation, the first-stage sample is obtained by sampling method with probability proportional to size (PPS). From the selected colleges (first-stage sampling units) second-stage sampling units (students) are obtained by using the simple random sampling technique. A uniform sampling fraction of five male and five female students from each stream i.e Arts & Science are randomly selected from the selected colleges. Accordingly a total of 600 students have been considered as sample units for the study.

As per requirement of the objective of the study, Questionnaires were prepared on Environment related questions for urban and rural college students in order to see their knowledge and
consciousness on environment and a Likert type attitude scale was constructed by investigator herself to study the attitude of the urban and rural college students towards environment.

The investigator had collected the data from the 39 colleges, covering entire District, under Gauhati University from September, 2009 till October, 2011.

As the study is based on the criterion group design involving comparison of group performance, the statistical technique suited for the purpose was t-test. The computation of data was done through the most widely used computer package for analyzing quantitative data, known as the Statistical package for the social Science (SPSS).

**Result and discussions**

The No.-1 null hypothesis on environmental awareness 'no significant difference among the urban and rural college students' awareness towards environment' is rejected because the result from table 4.3.1 shows that calculated value of $|t|$ is found to be 3.250 and the table value of $|t|$ for $(290+310-2) = 598$ degree of freedom at 5% level of significance is 1.96. Since our calculated value is greater than the table value so we reject the null hypothesis. Here Rural student had scored too some extent higher mean value than the Urban student on awareness towards environment.
The No.-1(a) null hypothesis on environmental awareness 'no significant difference among the Science stream and the Arts stream college students' awareness towards environment' is accepted because the result from table 4.3.2 shows that calculated value of \(|t|\) is found to be 1.496 and the table value of \(|t|\) for \((290+310-2) = 598\) degree of freedom at 5% level of significance is 1.96. Since our calculated value is smaller than the table value so we accept the null hypothesis. So, we conclude that there exists no significant difference among the opinion of Arts stream and Science stream college students' awareness towards environment.

The No.-1(b) null hypothesis on environmental awareness 'no significant difference among the male and female college students' awareness towards environment' is accepted because the result from table 4.3.3 shows that calculated value of \(|t|\) is found to be 0.468 and the table value of \(|t|\) for \((290+310-2) = 598\) degree of freedom at 5% level of significance is 1.96. Since our calculated value is smaller than the table value so we accepted the null hypothesis, and we may conclude that there exists no significant difference among the male and female college students’ awareness towards environment.

The No.-2 null hypothesis on attitude in relation to environmental awareness 'no significant difference among the attitude of the urban and rural college students in relation to environment' is
accepted because the result from table 4.3.4 shows that calculated value of $|t|$ is found to be 1.730 and the table value of $|t|$ for $(290+310-2) = 598$ degree of freedom at 5% level of significance is 1.96. Since our calculated value is smaller than the table value so we accept the null hypothesis. So, we conclude that there exists no significant difference among the attitude of the urban college students and the rural college students in relation to environment.

The No.-2(a) null hypothesis on attitude in relation to environmental awareness 'no significant difference among the attitude of the Science stream and Arts stream college students in relation to environment' is accepted because the result from table 4.3.5 shows that calculated value of $|t|$ is found to be 1.332 and the table value of $|t|$ for $(290+310-2) = 598$ degree of freedom at 5% level of significance is 1.96. Since our calculated value is smaller than the table value so we accept the null hypothesis. So, we conclude that there exists no significant difference among the attitude of the Arts college students and the Science college students in relation to environment.

The No.-2(b) null hypothesis on attitude in relation to environmental awareness 'no significant difference among the attitude of the male and female college students in relation to environment' is rejected because the result from table 4.3.6 shows that calculated value
of $|t|$ is found to be 2.280 and the table value of $|t|$ for $(290+310-2) = 598$ degree of freedom at 5% level of significance is 1.96. Since our calculated value is greater than the table value so we reject the null hypothesis. Here female college student had scored too some extent higher mean value than the male college student. So, we conclude that the attitude of the female college students is more positive than the male college students in relation to environment.

5.2: Findings

Major Findings from the student’s questionnaires

(1) In case of area wise environmental awareness, it shows that awareness of urban college students about environment is 56.3%. Whereas, in case of rural college students, awareness is 59.1%. It means that the rural college students are more aware than their urban counterparts about the environment. (Table no.-4.1.21 and Fig.no.-4.1.21)

(2) In case of stream wise environmental awareness it shows that awareness of Arts College students about environment is 57.3%, whereas, in case of Science College students, awareness is 58.6%. It means that both Arts and Science college students are equally aware about the environment. (Table no.-4.1a.21 and Fig.no.-4.1a.21)
In case of sex wise environmental awareness it shows that awareness of male College students about environment is 58%, whereas, in case of female college students, awareness is 57.55%. It means that both male students and female students are equally aware about the environment. (Table no.-4.1b.21 and Fig.no.-4.1b.21)

**Major Findings from the Attitude Scale of Students**

(A) Environmental education

1) Regarding area-wise attitude of the college students in relation to environmental education, it shows that, attitude of the urban college student in relation to environmental education is 54.28%, whereas, in case of rural college students is 56.41%. It means that attitude of the rural College students in relation to environmental education is too some extent more positive than that of the urban college students. (Table no.- 4.2.2 and fig.no.-4.2.1)

2) In case of stream-wise attitude of the college students in relation to environmental education, it shows that, attitude of the Arts college student in relation to environmental education is 56.07%, whereas, in case of Science college students is 54.08%. It means that attitude of the Arts College students in relation to environmental education is too some extent more positive than that of the Science college students. (Table no.- 4.2a.2 and fig.no-4.2a.1)
3) Regarding sex-wise attitude of the college students in relation to environmental education, it shows that, attitude of the male college student in relation to environmental education is 55.34%, whereas in case of female college students is 55.41%. It shows that there is no significant difference in the attitude of the male and female college students in relation to Environmental Education. *(Table no.- 4.2b.2 and fig.no-4.2b.10)*

(B) **Environmental Degradation**

4) In case of area-wise attitude of the college students in relation to environmental degradation it shows that, attitude of the urban college student in relation to environmental degradation is 62.84%, whereas, in case of rural college students is 62.71%. It shows that there is no significant difference in the attitude of the urban and rural college students in relation to the Environmental Degradation. *(Table no.-4.2.4 and fig. no.-4.2.2)*

5) Regarding stream-wise attitude of the college students in relation to environmental degradation it shows that, attitude of the Arts college students, in relation to environmental degradation is 62.36%, whereas, in case of Science college students is 63.55%. It means that there is no significant difference in the attitude of the Arts and Science college students in relation to the Environmental Degradation. *(Table no.- 4.2a.4 and fig.no-4.2a.2)*
6) In case of sex-wise attitude of the college students in relation to environmental degradation it shows that, attitude of the male college student in relation to environmental degradation is 63.02%, whereas, in case of female college students is 62.53%. It means that there is no significant difference in the attitude of the male and female college students, both from urban and rural, in relation to the Environmental Degradation. (Table no.-4.2b.4 and fig.no-4.2b.2)

(C) Protection of Forest

7) Regarding area-wise attitude of the college students in relation to protection of forest it shows that, attitude of the urban college student towards protection of forest is 70.62%, whereas, in case of rural college students is 72.54%. It means that attitude of the rural College students in relation to protection of forest is too some extent more positive than that of the urban college students. (Table no.-4.2.6 and fig. no.-4.2.3)

8) In case of stream-wise attitude of the college students in relation to protection of forest it shows that, attitude of the Arts college student, in relation to protection of forest is 72.10%, whereas, in case of Science college students is 70.70%. It means that the attitude of the Arts College students is too some extent more positive than that of the Science college students in relation to the protection of forest. (Table no.- 4.2a.6 and fig.no-4.2a.3)
9) Regarding sex-wise attitude of the college students in relation to protection of forest it shows that, attitude of the male college student in relation to protection of forest is 71.84%, whereas, in case of female college students is 71.38%. It means that there is no significant difference in the attitude of the male and female college students, in relation to the protection of forest. *(Table no.- 4.2b.6 and fig.no-4.2b.3).*

(D) Hazardous Waste Disposal

10) In case of area-wise attitude of the college students in relation to Hazardous waste disposal it shows that, attitude of the urban college students in relation to hazardous waste disposal is 58.62%, whereas in case of rural college student is 59.21%. It shows that there is no significant difference in the attitude of the urban and rural college students in relation to the Hazardous waste Disposal. *(Table no.-4.2.8 and fig. no.-4.2.4).*

11) Regarding stream-wise attitude of the college students in relation to hazardous waste disposal it shows that, attitude of the Arts college student in relation to hazardous waste disposal is 59.06%, whereas, in case of Science college students is 58.67%, which shows that there is no significant difference in the attitude of the Arts and Science college students, in relation to the Hazardous waste Disposal. *(Table no.-4.2a.8 and fig.no-4.2a.4)*
12) In case of sex-wise attitude of the college students in relation to Hazardous waste Disposal it shows that, attitude of the male college student in relation to Hazardous waste Disposal is 59.05%, whereas, in case of female college students is 58.80%. It shows that there is no significant difference in the attitude of the male and female college students, in relation to the Hazardous waste Disposal. (Table no.- 4.2b.8 and fig. no.- 4.2b.4)

(E) Extinction of Species

13) Regarding area-wise attitude of the college students in relation to extinction of species it shows that, attitude of the urban college students towards extinction of species is 80.52%, whereas in case of rural college student is 76.13%. It shows that there is a significant difference in the attitude of the urban and rural college students in relation to the Extinction of Species. (Table no.- 4.2.10 and fig. no.- 4.2.5)

14) In case of stream-wise attitude of the college students in relation to extinction of species it shows that, attitude of the Arts college student, in relation to extinction of species is 77.08%, whereas, in case of Science college students, is 80.43%. It means that the attitude of the Science College students, is to some extent more positive than that of the Arts college students, in relation to the extinction of species. (Table no.- 4.2a.10 and fig. no- 4.2a.5)
15) Regarding sex-wise attitude of the college students in relation to extinction of species it shows that, attitude of the male college student in relation to extinction of species is 77.50%, whereas, in case of female college students is 79.00%. It means that the attitude of the female College students, is to some extent more positive than that of the male college students, in relation to the extinction of species. (Table no.- 4.2b.10 and fig.no-4.2b.5)

(F) Urban Environment

16) In case of area-wise attitude of the college students in relation to Urban environment it shows that, attitude of the urban college students in relation to Urban environment is 57.76%, whereas, in case of rural college student is 60.48%. It shows that there is a significant difference in the attitude of the urban and rural college students in relation to the Urban environment. (Table no.- 4.2.12 and fig. no.-4.2.6)

17) Regarding stream-wise attitude of the college students in relation to Urban environment it shows that, attitude of the Arts college student, in relation to Urban environment is 59.69%, whereas, in case of Science college students, is 58.19%. It means that the attitude of the Arts College students is to some extent more positive than that of the Science college students, in relation to the Urban environment. (Table no.- 4.2a.12 and fig.no-4.2a.6)
18) In case of sex-wise attitude of the college students in relation to Urban environment it shows that, attitude of the male college student in relation to Urban environment is 60.53%, whereas, in case of female college students is 58.00%. It means that the attitude of the male College students, is too some extent more positive than that of the female college students, in relation to the Urban environment. *(Table no.- 4.2b.12 and fig.no-4.2b.6)*

(G) **Rural Environment**

19) Regarding area-wise attitude of the college students in relation to Rural environment it shows that, attitude of the urban college students in relation to Rural environment is 54.53%, whereas, in case of rural college student is 54.69%. It shows that there is a significant difference in the attitude of the urban and rural college students in relation to the Rural Environment. *(Table no.- 4.2.14and fig.no-4.2.7)*

20) In case of stream-wise attitude of the college students in relation to Rural environment it shows that, attitude of the Arts college student, in relation to Rural environment is 55.03%, whereas, in case of Science college students, is 53.84%. It means that the attitude of the Arts College students, is too some extent more positive than that of the Science college students, in relation to the Urban environment. *(Table no.- 4.2a.14and fig.no-4.2a.7)*
21) Regarding sex-wise attitude of the college students in relation to Rural environment it shows that, attitude of the male college student in relation to Rural environment is 52.00%, whereas, in case of female college students is 57.00%. It means that the attitude of the female College students, is more positive than that of the male college students, in relation to the Rural environment. (*Table no.- 4.2b.14 and fig.no.-4.2b.7*)

(H) Traffic Hazard

22) In case of area-wise attitude of the college students in relation to traffic hazard it shows that, attitude of the urban college students in relation to traffic hazard is 79.48%, where as in case of rural college student is 77.06%. It shows that the attitude of the urban college students is more positive than that of the rural college students in relation to the traffic hazard. (*Table no.-4.2.16 and fig. no.-4.2.8*)

23) Regarding stream-wise attitude of the college students in relation to traffic hazard it shows that, attitude of the Arts college student, in relation to traffic hazard is 77.10%, whereas, in case of Science college students, is 80.33%. It means that the attitude of the Science College students is more positive than that of the Arts college students, in relation to the traffic hazard. (*Table no.- 4.2a.16 and fig.no.-4.2a.8*)

24) In case of sex-wise attitude of the college students in relation to Traffic hazard it shows that, attitude of the male college student from in
relation to traffic hazard is 78.43%, whereas, in case of female college students is 78.03%. So, it shows that there is no significant difference in the attitude of the male and female college students in relation to the Traffic Hazard. *(Table no.- 4.2b.16 and fig.no-4.2b.8)*

(1) **Environmental Law and Economy**

25) Regarding area-wise attitude of the college students in relation to environmental Law and economy it shows that, attitude of the urban college students in relation to environmental Law and economy is 47.17%, whereas in case of rural college student is 48.16%. It shows that the attitude of the rural College students is too some extent more positive than that of the urban college students in relation to the environmental Law and economy. *(Table no.-4.2.18 and fig. no.-4.2.9)*

26) In case of stream-wise attitude of the college students in relation to environmental Law and economy it shows that, attitude of the Arts college student, in relation to environmental Law and economy is 47.62%, whereas, in case of Science college students, is 47.81%. It means that there is no significant difference in the attitude of the Arts and Science college students in relation to the environmental Law and economy. *(Table no.- 4.2a.18 and fig.no-4.2a.9)*

27) Regarding sex-wise attitude of the college students in relation to environmental Law and economy it shows that, attitude of the
male college student in relation to environmental Law and economy is 45.43%, whereas, in case of female college students is 49.43%. It means that the attitude of the female College students is more positive than that of the male college students, in relation to the environmental Law and economy. *(Table no.- 4.2b.18 and fig.no-4.2b.9)*

**Air Pollution**

28) In case of area-wise attitude of the college students in relation to air pollution it shows that, attitude of the urban college students towards air pollution is 50.66%, whereas in case of rural college student is 50.13%. It shows that there is no significant difference in the attitude of the urban and rural college students in relation to the Air Pollution. *(Table no.- 4.2.20 and fig. no.-4.2.10)*

29) Regarding stream-wise attitude of the college students in relation to air pollution it shows that, attitude of the Arts college student, in relation to air pollution is 51.21%, whereas, in case of Science college students is 48.86%. It means that the attitude of the Arts College students, from is more positive than that of the Science college students, in relation to the air pollution. *(Table no.- 4.2a.20 and fig.no-4.2a.10)*

30) In case of sex-wise attitude of the college students in relation to air pollution it shows that, attitude of the male college student in relation to air pollution is 49.57%, whereas, in case of female college students is
50.20%. It shows that there is no significant difference in the attitude of the male and female college students in relation to the Air Pollution. (Table no.- 4.2b.20 and fig. no.-4.2b.10)

**Area-wise total percentage distribution of Attitude towards Environment**

31) Regarding area-wise total percentage distribution of attitude of the college students in relation to environment, it shows that, attitude of the urban college students in relation to environment is 60.40%, whereas in case of rural college student is 60.91%. It shows that there is no significant difference in the attitude of the urban and rural college students in relation to the environment. (Table no.-4.2.21 and fig. no.-4.2.11)

**Stream-wise total percentage distribution of Attitude towards Environment**

32) Regarding stream-wise total percentage distribution of attitude of the college students in relation to environment it shows that, attitude of the Arts college student, in relation to environment is 60.81%, whereas, in case of Science college students, is 60.40%. It means that there is no significant difference among the Arts and Science college students about the attitude of the students in relation to environment. (Table no.-4.2a.21 and fig. no.-4.2a.11)
Sex-wise total percentage distribution of Attitude towards Environment

Regarding sex-wise attitude of the college students in relation to environment it shows that, attitude of the male college student in relation to environment is 60.33%, whereas, in case of female college students, is 61.00%. It means that there is no significant difference among the male and female college students about the attitude of the students in relation to environment. (Table no.-4.2b.21 and fig. no.-4.2b.11)
5.3: **Conclusion**

From the study the investigator has come to the conclusion that students from both urban as well as rural boys and girls, both from Arts and Science College have their environmental awareness. They have knowledge on global warming, ozone depletion, deforestation, acid rain, pollution, population explosion, traffic hazards etc. they even have knowledge about the bad impact of urbanisation, plastic bag hazards on environment etc. But it has been found that they are doing nothing for the improvement of environment of the society. Even some reputed colleges have dirty surroundings. In such colleges, when the investigator verbally interacted with them by asking some questions on eco-club, tree plantations etc., the answer from the students were not satisfactory. But they told the investigator that they are very much willing to take-part in all sorts of environmental programmes if somebody guides them properly.

Most of the students feel that they are not encouraged at the educational institute for some constructive works. Investigator felt that just as every college has their union body for students, they should have eco-club to monitor the ecological balance of their college surrounding as well as of the society. Such clubs can organize various types of environment related activities to make the students aware of their social obligation for
the environment.

Of course it is needless to say that environmental problem cannot be solved in a day. It requires constant efforts at all levels of education.

As the teacher is the role model for students, the investigator felt that teachers can drastically change the behaviour and the attitude of the students. Teacher can make the citizens aware and conscious about the vulnerable situation of environmental degradation, pollution etc. Then the students will be able to focus their attention towards significance of maintaining environmental and ecological balance.

This is a vital time to create an environmental friendly behaviour among masses, particularly among the young generations. For the awareness of the whole society, it should be kept in mind that environmental education based on life experiences must begin right from the grass root level. Emphasis should be more on practices rather than teaching.

For the sake of our planet obviously environmental awareness is very much important. The young generation is full of curiosity to learn something new. So at a youthful stage environmental education will be more useful and enriching for them. Teachers should be highly specialized
to provide better environmental education to them.

The present mode of application of environmental education at undergraduate level should be reorganised in the light of recent developments in the educational and technological areas.

In order to make our higher education a truly empowering force, especially the youth of the country should be taking up leadership role in managing the degraded environment. Every educational institute especially colleges should provide for a comprehensive capacity building programme like youth manager for environmental development because there is an urgent need for capacity building programmes to meet the challenges of establishing green surrounding everywhere.

Today there is no peace in the whole world. Everyone is in search of love and peace. Even enough money and means cannot give real peace since poor or rich all are unhappy in their own way. All are in need of peace, as there is a rapid degradation of moral, social and human values, along with environmental problems everywhere in the world. Hence, to mitigate the environmental problems value based education has the utmost need in our educational institutions. Legendary musician from Assam, Dr. Bhupen Hazarika’s value based song “Manuhe Manuhar Babe, Jodihe Akonoo Nabhabe, Bhabio Kuneo Kua Samania........”is the best
example of his humanistic ideals. Hope, this song will definitely inspire the young generations to conserve natural resources which is not only the need of the hour but also the prime duty as a member of a decent society, as environment belongs to everyone of us and everybody has responsibility to contribute towards its conservation. At the end, we must always remember what Rousseau said, “everything is good in the hands of the creator and everything degenerates in the hands of man.” So everybody must take care of that, everything does not degenerate in the hands of man.
5.4: **Suggestions for further Research**

1. The present study conducted only with the 1\textsuperscript{st}, 2\textsuperscript{nd} and 3\textsuperscript{rd} year students of the degree colleges both arts and science students under Gauhati University. Comprehensive studied can be carried out by covering all the college students for the entire state of Assam.

2. Similar studies can be carried out to find out the environmental awareness and attitude towards environmental education among college teachers, school teachers, law college teachers, university teachers and professional training teachers in the entire state of Assam.

3. Another study can also be conducted by covering the university students from all departments in Assam with a view to find out their level of environmental awareness and attitude towards environmental education.

4. A study can be done to find out the relationship between environmental awareness and action related work to environmental conservation and protection.

5. Another important study can be undertaken for tribal students, agricultural students, home science students, commerce students, engineering students and medical students.

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Message for Today

OUR NEW GENERATION SHOULD
TAKE UP ENVIRONMENTAL
PROBLEMS AS A CHALLENGE FOR
THEIR OWN FUTURE.
Dr. Bhupen Hazarika’s value based Song

Manuhe Manuhar Babe
Jodihe Ekuke Nabhabe
Akanu Hahanubhutire
Bhabibo Kunenu Kua? Hamoniya...!

Manuhe Manuhar Babe
Jodihe Ekuke Nabhabe
Akanu Hahanubhutire
Bhabibo Kunenu Kua? Hamoniya...!

Manuhe Manuhar Babe!

Manuhe Manuhok Besibo Khuji
Manuhe Manuhok Kinibo Khuji
Purani Itihah Duharile
Bhool Janu Nohobo Kua?

Manuhe Manuhar Babe
Jodihe Ekuke Nabhabe
Akanu Hahanubhutire
Bhabibo Kunenu Kua? Hamoniya...!

Manuhe Manuhar Babe!

Durbai Manuhe Jodi
Jiwonor Kubal Nodi
Par Hoi Tuamre Hahot
Tumi Heruwabanu Ki?

Manuh Jodihe Nohoi Manuh
Danob Kahanioo Nohoi Manuh
Jodi Danob Kahaniba Hoi Manuh
Laaz Pabo Kunenu Kua ?Homoniya !

Manuhe Manuhar Babe
Jodihe Ekuke Nabhabe
Akanu Hahanubhutire
Bhabibo Kunenu Kua? Hamoniya...!
Manuhe Manuhar Babe  
Jodihe Ekuke Nabhabe  
Akanu Hahanubhutire  
Bhabibo Kunenu Kua? Hamoniya...!

Manuhe Manuhar Babe.!

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