FINDINGS, SUGGESTION AND CONCLUSION

5.1: Finding

Varied disciplines have witnessed unique disciplinary approaches to the study of sustainable development in Chilika lake. Ecologists while bringing out the increased pollution level and decreasing loss of biodiversity cautioning the developers against unplanned development. Sociologists studied socio-cultural and economic life of the natives and have noted the growing conflict between diverse interest groups of fishing. Economists on the other hand, apart from justifying poverty with statistical parameters, observed variation in income level of masses. Ineffective functioning of Chilika Development Authority (CDA) and lack of coordinated efforts by all stakeholders poses a major obstacle in development as perceived by the political scientist. Geographers blame the factors such as natural calamity, and unequal distribution of income sources in the lake as the causes of underdevelopment. All these diverse disciplinary approaches help researchers in tourism to inquire about nature and level of sustainable tourism development given the bounty natural resources available in Chilika. Given the existing studies of diverse nature the basic question lies as to whether tourism in Chilika wetland is sustainable in its current form. To understand the issue in detail, the researcher studied select research questions; as What are the main motivational factors influencing the tourists to visit Chilika wetland, What is the perception of the tourists’ about the quality of infrastructure in the destination, What is the level of participation of stakeholders in sustainable development of tourism, and What are the underlying ecological, economic and socio-cultural issues of tourism development in Chilika? The study undertook a primary questionnaire survey with uniquely developed interview schedule. The research after a thorough analysis and procedures obtained the findings which are specific to the study area and help in advancing the tourism related research in Chilika. The findings are grouped under functional categories to help future researchers for an ease of reference.

5.1.1: Demographic profile of the tourist
The survey witnessed a total of 309 respondents 59 percent of which are male and 40.1 percent are female. Age of the tourist showed that 6.1 percent are less than 20 years, 37.2 percent are between 21-30 years, 27.2 percent are between 31-40 years, 17.5 percent are between 41-50 years whereas the respondents and those whose age are above 50 are found to be 12.00 percent. Educational qualification wise, 8.7 percent are found to be High school pass, 11 percent are intermediate or diploma, 23.6 percent are graduate 35 percent are post graduate and 21.7 are to be a professional degree or PhD. The distribution of annual income of respondents explain; 48.2 percent are to be below 2.5 lakhs, 27.5 are between 2.5 to 5 lakhs, 13.3 are between 5 to 7 lakhs and 11 percent respondent’s annual income is more than 7 lakhs.

5.1.2: Tripographic profile –

Tripographic profile of the tourist revealed that 57 percent are native to Odisha, 39.8 percent belong to states outside Odisha but from within India and only 3.2 percent respondents are from outside India. The pattern of the travelling revealed that 16.5 percent preferred to visit the lake alone, 13.3 percent of the respondents have chosen to visiting the lake as couple, 36.2 percent have visited the lake with their friends whereas 34 percent have visited the lake with their families. The duration of stay revealed that 39.8 percent of the respondents preferred to visit the lake for 1 day, 39.5 respondents have visited the lake for 2-4 days, and 11.3 percent of the respondents have visited the lake for 5-10 days, whereas 9.4 percent of the tourists have visited the lake for more than 10 days. It is very much evident from the data that Chilika receives good number of day visitors and followed by the tourists who have visited the place for 2 to 4 days. However Chilika is mostly considered as a day visitor’s destination. The ‘primary reason of visit’ revealed that 44.3 percent respondents are found to have main purpose of visit as leisure, 17.5 percent respondent visited the lake for ‘religious purpose’ 9.7 percent respondents’ reason of visit was ‘visiting friends and relatives’ 11.7 percent respondents’ prime reason of visiting the lake was ‘research’ whereas 16.8 percent respondents visited the lake for other purposes. ‘Sources of information’ for the respondents was examined by a question ‘Source of knowing the place’ and it was found that 5.2 percent of the respondents have visited the place based on the information given by the ‘Radio’ 19.4 percent respondents got to know the place through ‘television’ 17.5 percent of the
tourists knew the place through newspapers, 11.3 tourists knew the place, 10.4 percent of the respondents knew the place through tour operators whereas 36.2 percent of the respondents knew the place through word of mouth. Thus the majority of respondents found to have visited the lake through the ‘Word of mouth’. The ‘mode of travelling’ showed that 14.6 percent respondents visited the lake by their personal car, 26.2 percent have visited the lake by tourist couch, 12.9 percent have chosen the motorbike as their main mode of travel, 22.0 percent respondents have travelled to the lake by the rented taxi whereas 24.3 percent have visited the lake by other mode of travel like train and buses. So it can be summarised as the majority of respondents to have visited the lake by tourist couch.

5.1.3: Motivation for travel

The Mean analysis used to examine the motivation for travel shows high and positive perception for the statements ‘opportunity for bird watching, to experience Chilikas’ attraction, opportunity to stay in pristine natural environment, visiting wetland for enjoyment, visiting wetland for relaxation, delicious local cuisine/drinks, opportunities for adventure/ sports activities, to be with a group in that order. Bird watching is found to be top attraction for the tourists. This is in line with Lee et, al (2010) claim that bird watching serves as a major attraction for a good number of tourists in Guandu wetland of Taiwan.

The Factor analysis result shows that five factors have been extracted after Varimax rotation of 13 statements. The first factor consists of three statements which are related to enjoyment and relaxations. Thus it is named as Rest & Relaxation (R&R). The second factor consists of four statements which are related to authenticity of the lake so this factor has been named as ‘Authenticity’. Participation in group events and religious practices can be termed as ‘Assimilation’. In the same line, the fourth and fifth factors are titled as ‘Research & learning’ and ‘Business Perspective’.

The result of Independent sample t-test shows that Rest & Relaxation, Business Perspective are the two of the important motivational factors that significantly differ across gender. Particularly, female are highly influenced by factor ‘R & R’ where as male are highly influenced by the ‘Business Perspective’ factor which motivate them to the Chilika lake. The result of t-test shows that there is no significant difference between married and unmarried tourist with respect to
motivational factors except for the ‘Assimilation’. Hence, it can be concluded that tourists are influenced by motivational factors irrespective of their marital status.

Analysis of Variance of motivation for travel with that of the demographic profile of the tourists was undertaken and the result shows that there is no significant difference among the different age groups of tourists regarding their perception about different motivational factors of visiting the lake, the different educationally qualified tourists are different in their perceptions about the factors Rest & relaxation, Authenticity and Assimilation on their decision for visiting the Chilika wetland, different annual income group of the tourist are influenced differently by the factor Rest & relaxation, Authenticity, Assimilation, research and learning for visiting the Chilika lake, Tourists with their different place of residence are influenced differently by the motivational factors Authenticity, Assimilation, Research and learning and Business Perspective of the lake, tourists with their different mode of travelling are similar with their perceptions about the about the different motivational factors of the lake, There is significant difference among the tourist with their duration of stay are different in their perception about the factor Rest & relaxation, Assimilation, Research and learning and Business Perspective. There is a significant difference among travelling patterns preferred by tourists with respect to their perception about motivational factors except the factor prospect for business.

Duncan analysis result shows tourists who are postgraduate and Ph.D. have strong opinion about authenticity factor and also more influenced by this factors. The tourist whose annual income is below 2.5 are influenced more the factor ‘Assimilation’, ‘Research and learning’. Tourist whose annual income is 2.5 to 5 lakhs have low perception for ‘Rest & Relaxation’, ‘Assimilation’, and ‘Research and learning’. The tourist whose annual income are 5-7 lakhs are highly influenced by the factor ‘Rest & Relaxation’ and those whose annual income are more than 7 lakhs are also highly influenced by R & R, Assimilation and Research and learning factors. Therefore, it can be concluded that the foreign tourists come to visit the Chilika lake mainly for research and learning and business perspective. However Indian tourists comes to visits the Chilika more for enjoyment.

5.1.4: Infrastructure at Chilika

The mean analysis is performed to measure the strength of each statement related to the tourist perceptions about the quality of infrastructure and facilities at
Chilika. The higher the mean value, higher is the impact observed by the tourists in Chilika lake and vice versa. Out of 17 variables in the category, the high mean score for the statements such as; friendliness of the people, convenience and access to local transport, and road condition indicates that tourists have positive perception about these statements whereas other statements whose mean values are less than 3.5 such as; drinking water quality, healthcare facilities, toilet facilities and hygiene, restaurant and eateries, ATM facilities, accommodation facilities, and affordability at the destination etc. tourists are found to be dissatisfied.

EFA analysis is performed in order to summarise the 17 variables into appropriate factors. The validity test of EFA comprised Kaiser-Meyer-Olkin (KMO) test and Bartlett’s Test of Sphericity. The KMO value and the Bartlett’s Test of Sphericity, are considered to be adequate. The five factors have been extracted from the 17 statements such as; Hygiene, Infrastructure, Friendliness, Communication & information and Accessibility.

Independent sample T-test was undertaken to find the differences of opinion of tourists across demography about varied constructs of infrastructure. It was found that there is no significant difference between male and female and married and unmarried respondents about the availability of infrastructure facilities in Chilika lake. It signifies that they have similar perception about availability of infrastructure of the lake.

Test of Analysis of variance was performed on tourists’ opinion about infrastructure constructs across aspects of demography. Accordingly, the age of the tourists was found to be influencing tourists’ perception about the factor; Infrastructure and Friendliness. Educational qualification of the tourists influences tourists’ perception about infrastructure. There is no significant difference found between income of the tourist and infrastructure. Place of residence of the tourists does not influence their perception about infrastructure. Aspects such as; Sources of information, Reason of travelling, Pattern of travelling and Mode of travelling of the tourists found to have influenced tourists’ perception about the factors of infrastructure and communication and information of Chilika lake. Duration of stay has an impact on tourists’ perception about the factor Infrastructure.

To know more about the relationship between motivational factors and demographic and tripographic profile of the tourists, Post-hoc analysis is used with
the help of Duncan test. Here Duncan analysis is performed only for those motivational factors that are significant in ANOVA. The Duncan with age shows that tourists who are above 40 years have better perception about the factor infrastructure than other age groups, likewise tourists who are above 20 years have better positive perception about the factor communication and information than the tourist who are below 20 years. Low educated tourists have high perception about the factor infrastructure of the lake. Tourists who obtained the information form word of mouth have better perception about the factors infrastructure and communication and information. Because word of mouth is the most authentic source of information and Gartner (1993) has considered it as organic agent information.

Duncan with purpose of visit: shows that tourists whose prime purpose is to visit the lake for research, spending leisure times, religious purpose and come to the lake for meeting the friends and relatives have high perception about the infrastructure factor than tourists who come to visit the lake for other purposes. Similarly the tourists whose prime purpose is to visit the lake for spending leisure times, religious purpose, come to the lake for meeting the friends and relatives have high perception about the communication and information factor. Duncan with pattern of travel: shows that the tourists who have come to the lake alone and family have high perception about the factors infrastructure, communication and information of the lake. Duncan with mode of transportation: tourists who have travelled by rented taxi to Chilka lake have low perception about the factors “infrastructure”, “communication and information” whereas tourists who have preferred other modes of travel like motorbike and personal car, tourist coach have high positive perception about “infrastructure”, “communication and information” factors of the lake. Duncan with duration of stay: tourists whose duration of stay is more than 10 days have good perception about the factor infrastructure. So it can be told that longest the duration of stay highest the degree of perception about infrastructure.

5.1.5: Ecological impact

Statements under ecological impact were analysed for their mean ranks and the highest mean value (4.06) was obtained for the statement “there is congestion during peak periods in Chilika lake” followed by the statement “Tourism is an integral part of the locality” with mean value of 4.02. The mean value (2.88) lowest for the statement “Chilika tourism creates more traffic accidents” which indicates that
tourists were neutral with the statement that they have no idea about whether tourism creates any traffic accidents or not. Apart from this the mean value is more than 3 for rest of the statements which indicates that tourism influences the lake ecologically.

Independent sample t-test conducted on opinions of respondents across demography about aspects of ecological impact. Results of the analysis are as follows. The degree of perception in context of conservation and primacy of tourism differs with respect to their gender difference. Male and female have different opinion about the factors tourism increases the population and Traffic conjunction and littering in Chilika lake.

EFA analysis is performed in order to compress the 17 variables into appropriate factors. The validity test of EFA comprised Kaiser-Meyer-Olkin (KMO) test and Bartlett’s Test of Sphericity. The KMO value and the Bartlett’s Test of Sphericity are found to be satisfied. The five factors extracted from the 17 statements are Loss of habitat, Conservation, pollution, Congestion & littering and fifth factor being Primacy of tourism.

Analysis of variance performed on opinions of respondents across demography about the arrived constructs obtained results as follows. Age of tourists has influenced tourists’ perception about the factors “Tourism increases pollution and Traffic congestion and littering. The qualification of the tourists influenced their perception about Congestion & Littering and Primacy of Tourism. Annual income influenced factors such as; tourism increases pollution and loss of habitats in Chilika lake. Place of residence and reasons of visiting influenced the opinion of the tourist about the factors such as; Loss of habitat, Conservation and Primacy of tourism. Mode of travel of the tourists determines their opinion about the factor Primacy of tourism in Chilika lake. Duration of stay of the tourists has influenced their opinion about the conservation factor of ecological impact in Chilika lake.

The results of Duncan analysis are as follows. Tourists who are above 50 years were less agreeing with the factor tourism increases pollution, whereas tourists whose age are below 31 years were less agreeing with the factor congestion and littering. Respondents of other age groups were agreeing with the select factors. Tourists who have qualification of intermediate, diploma, post graduate, professional or Ph.D. have high degree of agreement about the Congestion & Littering and Primacy of tourism. Highly educated tourists have strong agreement that Chilika tourism create Congestion & littering and Primacy of tourism. High income group tourists have high
perception about Chilika tourism as the cause of loss of habitats and pollution around Chilika. Tourists who belong to Outside Odisha but from within India, have high perception about all the factors such as; Loss of habitat, Conservation and Primacy of tourism. The tourists who have visited the lake for research or other purposes have high perception about factors such as; Loss of habitat, Conservation and Primacy of tourism. Whereas tourists have come to visit the lake for meeting the friends and relatives have low perception about the above factors. The tourists who are coming to Chilika lake by tourist coach and personal car have strong and high perception about Primacy of tourism. Tourists who are day visitors have low perception about the factor conservation, whereas tourists who have stayed for longer period have agreed with factor conservation of the lake.

5.1.6: Economic impact

The Mean analysis result shows that the highest mean value for the statement ‘Chilika tourism gives hope to the youth for future opportunities’ followed by the statements Chilika tourism improves the standard of living of the local residents, Tourism generates employment opportunities for the community etc. Furthermore, the mean values of the statements except are more than 3 states that tourists have agreed with the other statements except “Tourism replaces the traditional forms of occupation”.

EFA analysis is performed in order to compress the 14 variables into appropriate factors can be performed as the values of KMO and the Bartlett’s test is satisfactorily significant. Total variance explained by six factors such as Economic wellbeing, Price rise, Standard of living, Induced opportunities, Economic diversification and sixth being Inequity.

Independent sample T-test on select variables obtained the following results. There is a significant difference between male and female tourists about their perception on economic factors such as Economic wellbeing, Price rise and Induced opportunities. Tourists have similar perception about economic impact irrespective of their marital status.

Age of the tourists found to have influencing tourists’ perception about economic factors such as Standard of living, Induced opportunities and Economic diversification. Educational qualification of tourists influences their perception about the factor Economic diversification of Economic impact. Income and Place of
residence of the tourists do not influence their perception about economic impacts of tourism in Chilika lake. Source of income has an effect on the perception of tourists about the factors Standard of living and Economic diversification. Reason of travelling affects the tourists’ perception about the factors Economic diversification and Inequity as economic impacts. Pattern of travelling of tourists influences the economic diversification as a factor of economic impact. Mode of travel of the tourists influences their perception about price-rise as a most important factor of economic impact. Duration of stay of tourists in Chilika affects their perception about factor diversification of economic impact.

Duncan analysis obtained the following results. Tourists above of age 31 have strongly agreed with economic factors standard of living, Induced opportunities and economic diversification of tourism but those who are less than 31 years have disagreed with standard of living, Induced opportunities and economic diversification factors of tourism. So it can be said that higher age group tourists have higher perception about the economic impacts of tourism and vice versa. Tourists who are post graduate and PhD have low perception about the factor Economic diversification. Therefore it can be assumed that higher the education level lower the perception and lower the education level higher the perception about tourism diversifies local economy. Tourists who have visited the lake based on information obtained from News paper and Tour operator have strongly agreed with the factor tourism enhances the standard of local people, whereas tourists who have relayed upon the information from newspaper have low perception about the factor Economic diversification of tourism. Tourists who have visited the lake for research purpose have low perception about the factor Economic diversification. Tourists who have visited the lake for visiting friends and relatives have low perception about the factor Inequity. Tourists who have visited the lake alone have disagreed with the factor economic diversification. Otherwise it can be said that tourists who have visited the lake alone were disagree that tourism diversified local economy. The tourists who travel to Chilika by rented taxi or personal cars have perception that Chilika tourism affects less the price of goods and services and land and property in that locality. Tourists who have spent long period(more than 10 days) in Chilika have negative perception about the impact of Chilika tourism with respect to economic diversification and those who spend less number of days or short period have positive opinion tourism diversifies local economy.
5.1.6: Socio-cultural impact

In order to summarise the aspects of socio-cultural impact mean-rank test was performed. The mean value is highest for the statement ‘wetland tourism is giving valuable exposure to the residents to meet with the tourists from different parts of India and the world’ it means most of the tourist highly agree with statement, whereas the lowest mean value is 2.84 for the statement Local residents have a lower quality of life as a results of living in a tourist area indicates that tourist did agree with this statement. Apart from this the mean values are greater than three for most the statements, which indicates that tourism influences the lake socio-culturally.

Factor analysis was performed as the KMO and the Bartlett’s test results were satisfactory. From the 18 variables, six factors have been extracted with the total variance of 60.851 explained such as; Harmony, Better facilities, Better opportunities Deculturation, Discontent and Preservation of culture.

Independent sample T-test conducted on socio-cultural impact as opinions across demography, the results are detailed below. Male and female have different perceptions about Chilika tourism creates the harmony between residents and tourists, Chilika tourism creates better facilities and Chilika Tourism also impacts on local tradition and creates noise pollution. Tourists have a similar perception about Socio-cultural impact irrespective of marital status difference.


Duncan analysis performed on the summarised factors obtained results as below. High age (41-50 & above 50) groups of tourist have high perception about the factor Better opportunities of Socio-cultural impact. High educated (graduate, post-
graduate professional/PhD) tourists have high perception that the Chilika tourism enhances the cultural exchange and preserves the local culture. Higher income (5-7 lakh) group tourists have high perception about Preservation of culture, Better opportunities and Deculturation factors of socio-cultural impact. Tourists who belong to Outside Odisha but India and from Odisha have positive perception about the factor Deculturation. Tourists who know the destination from varied sources of information such as magazine, word of mouth, tour operator and television have high perception about the factor deculturation. Tourists who have visited the lake for the reasons other than research purpose have high perception that the Chilka tourism creates harmony, brings better opportunities for the residents and at the same time causes deculturation in the locality. Tourists who have visited the lake with friends, as a couple or alone have high perception that Chilika tourism results in deculturation in the locality. Tourists who have come by tourist couch and motor bike have comparatively high positive perception about the factor Harmony and the tourist who have come to the lake by personal car and motorbike have higher positive perception about the factor tourism brings Better opportunities. Tourists who have spent longer duration (5-10) have higher perception about the factors Harmony, Better facilities, Better opportunities and Preservation of culture.

5.1.7: Environmental cognition

Highest Mean value obtained for the statement “I support the tourism which does recognize the right of the future generation to enjoy the resources at the same level like the present generation” which indicates that this statement is highly supported by the tourists. This means tourists recognize the right of the future generation to enjoy the resources at the same level like the present tourists. In addition the mean values of the other statements have more than three which means that tourists agree and support the sustainable tourism development of Chilika. Therefore it can be concluded that tourists have awareness about the sustainable tourism.

The KMO value and Bartlett’s Test of Sphericity are significant, so the factor analysis was performed in order to reduce the number of variables. Three factors with total variance explained 66.071 percent have been extracted from the 11 variables such as; Concern, Sustainability awareness and Contributing tourist.
Independent sample T-test conducted on the opinions of respondents across gender obtained results as follows. There is a significant difference between the male and female towards Sustainability awareness. Marital status of the tourists influences their cognition about factor sustainable tourism awareness.

Age of tourists influences their degree of concern about environment of Chilika lake. Educational qualification of the tourists influences their degree of environmental cognition. Income of the tourists influences the degree of their environmental cognition. Place of residence of tourists does not influence their degree of cognition about environment. Modes of information influence tourists’ environmental cognition. Pattern of travelling to Chilika influence the environmental cognition of the tourists. Duration of stay of tourists influences their environmental awareness about the Chilika lake.

Tourists who are age of more than 20 years have high degree of environmental awareness. The high educated (graduate, post-graduate, professionals/PhD) tourists have higher degree of environmental cognition. High income (more than 7 lakhs) group tourists have high degree of environmental cognition. Tourists who have obtained the information about the destination of Chilika from Radio have lower degree of sustainability awareness whereas information obtained from Newspaper are more conscious about the factor Contributing to tourists. Tourists who have visited the lake for research purpose, for leisure and other purposes have higher degree of environmental cognition. Tourists who have visited the lake alone have higher level of environmental cognition. Tourists who have visited the lake by rented taxi have more awareness about the factor contributing to tourist. Tourists who have spent more number of days in Chilika have higher degree of environmental consciousness about the lake.

Canonical correlation between the responses across Demographic & tripographic profile obtains results as below. The demographic profile of tourists such as gender, age, education and income are having maximum influence on their environmental cognition. Tripographic profile of tourists such as mode of information, reasons for travelling to Chilika, pattern of travelling, mode of travelling and duration of stay are having maximum influence on their environmental awareness about Chilika lake.
5.1.8: Demographic distribution of residents

Out of 106 respondents 88 are male comprising 83 percent and female are 18 in numbers contributing 17 percent of the total population. Among them 92(86.8%) are married and 14(13.2%) are unmarried. Among them age group of 31-40 years of the respondents have highest participation in tourism in Chilika lake followed by 21-30 years. The education qualification shows that 35.8 percent are HSC, Intermediary/Diploma holders comprise 22.6 percent, graduates are 29.2 percent and post graduate and professionals are 12.4 percent of the total respondents. Income distribution of the residents shows that 68.9 percent have the annual income below 2.5 lakhs, 23.6 percent have the annual income 2.5 to 5 lakhs, 0 percent of the respondents have the annual income of 5 to 7.5 lakhs, 3.8 percent have the annual income of 7.5 to 10 lakhs and 3.7 percent have the annual income more than 10 lakhs. The occupation of the residents shows 9.4 percent are farmers, 26.4 percent are businessmen, 3.8 percent are Government employee, 32.00 percent are private employee, 23.6 percent are fishermen 4.7 percent are professionals. The revenue collected from tourism shows that 36.8 percent are engaged in Guiding, 9.4 percent in selling souvenir products, 7.5 percent are working in restaurant/hotel/bar, 12.3 percent are working as travel agents, 7.5 percent are engaged in tourism by owning the shops and 26.4 percent are engaged in tourism by providing boat service in Chilika area.

5.1.9: Ecological impact as perceived by the residents

Among the 17 statements the mean value is highest for the statement ‘Tourism is an integral part of the locality’ and the lowest mean value is 2.58 for the statement ‘Chilika tourism creates more traffic accidents’. Apart from this most of the mean values are more than three for most of the statements it means that tourism influences the Chilika lake ecologically.

The KMO value and Bartlett’s Test Sphericity are found to be satisfactory so the factor analysis was undertaken to reduce 17 variables into meaningful factors. Four meaningful factors such as; Preservation, Habitat loss, Pollution, and Water pollution & accident have been extracted with the total variance of 68.620% explained by these factors.

Male and female respondents are found to have different views about ecological impact of tourism but married and unmarried respondents have similar
perception about ecological impacts of tourism in Chilika lake. Age of the residents influences their perception about the factor Preservation and habitat loss. Educational qualification of the residents influences the perception of the residents about the factor Water pollution and accident. Income of the residents influences their perception about the factor preservation as an ecological impact. Occupation of the residents influences their view about Pollution. Source of revenue from tourism influences the perception of residents about the factors Preservation and Habitat loss.

Residents who belonged to the age group of 41 to 50 years and 21 to 30 years have high perception about the factor Preservation and Habitat loss. The lowest educated (HSC) and highest educated (Postgraduate/Professional) group of residents have higher consciousness about the factor Water pollution and accident. The highest income (More than 10 lakhs) group of the residents have lowest perception whereas lowest and medium and higher income group of residents have highest perception about the factor preservation. Residents who are working as professional or in government sector have high perception about the factor ‘Pollution’. Residents who are working as professional or in government sector have high perception about the factor ‘Pollution’. Those who are engaged as travel agents, selling souvenir products and guiding have high perception about Preservation and low perception about Habitat loss except those who have collected their revenue from selling souvenir products.

5.1.10: Economic impact as perceived by the residents

High mean value was obtained for the statements ‘Tourism brings additional income for the community’ and ‘Tourism gives hope to the youth for future opportunities’ followed by the statement Tourism generates employment for the community. In addition, the mean values are more than three for all the statements expect ‘tourism replaces the traditional occupation’, which indicates that the residents have positive perception about such statements. The mean value is lowest and less than three for the statement Tourism replaces the traditional forms of occupation, which indicates that residents disagree that tourism replaces the traditional occupation. The KMO value and Bartlett’s Test of Sphericity are found to be satisfactory, so the factor analysis was performed. Five factors such as; Diversification of local economy, Tourism and price hike, Employment opportunity,
Future perspective of tourism and Imbalanced distribution of tourism revenue, have been extracted the total variance 71.067 percent explained.

There is no significant difference found between male and female regarding different economic impacts of tourism but there is a significant difference between the married and unmarried residents about the factor ‘Tourism increases the quality of life’ of economic impact. There is a significant difference between the different age group of the residents and their perception about the economic impacts of tourism except for the factor Employment opportunity. Education qualification, income and occupation of the residents influence their perception about the factor Imbalanced distribution of tourism revenue. Revenue from tourism influences the perception about the factor diversification of local economy as economic impact.

Residents who fall the age group of below 20 years have agreed that tourism is responsible for the price hike and also strongly acknowledged future prospective of tourism. Those who are above 50 years have strongly agreed on the future prospective of tourism. Those who fall into the age group of 13-40 have strongly agreed on the diversification of local economy and future prospective of tourism. Those who are 41-50 years have strongly agreed tourism diversifies local economy, hikes the price and encourages imbalanced distribution of revenue. Residents who are between the age group of 21-30 years have highly agreed that tourism diversifies local economy and future prospective of tourism. High educated (Graduate, Postgraduate/Professional) residents have highly agreed level of perception about the factor Imbalanced distribution of tourism revenue. Higher income (2.5-5 lakhs & 7.5-10 lakhs) group respondents have highly agreed that tourism creates an imbalanced distribution of revenue. Those who are professional, govt. employee and farmers have highly agreed that there is an imbalanced distribution of tourism revenue. Residents who have collected their revenue from working in restaurants/hotels/bar, selling souvenir products, working as a travel agents and Guiding have highly agreed there is an imbalanced distribution of tourism revenue.

5.1.11: Socio-cultural impact as perceived by residents

The highest mean value is obtained for the statement ‘Wetland tourism is giving valuable exposure to residents to meet with the tourists from different parts of
India and world’, followed by ‘Tourism provides diverse cultural experiences’. The lowest mean value for the ‘Local residents have a lower quality of life as a result of living in a tourist area’ followed by Local tradition are paid less attention due to the development of Chilika tourism. The higher mean values of the statements indicate that residents have positive perception about socio-cultural impact of tourism.

The KMO value and Bartlett's Test of Sphericity are found to be above the threshold level. Hence the factor analysis was employed. In total five factors are obtained with the explanation of 68.621 percent cumulative. Such factors are titled as Quality of life, Cultural exchange, Change of tradition, Degradation of the quality of life and Education opportunity.

Variance was analysed across demography. It was found that there is no significant difference between married and unmarried with respect to their perception about Socio-cultural impact of tourism in Chilika Lake. There is a significant difference between married and unmarried with respect to their perception about Socio-cultural impact of tourism in Chilika Lake. Education qualification influences the factor Quality of life, Loss of tradition and Education opportunity. Annual income influences the perception of the residents about tourism enhances the quality of life, loss of tradition and degradation of quality of life. Revenue from tourism influences the socio-cultural impacts of tourism.

Higher the education (Graduate & Postgraduate/Professional) level better the perception about the factor Tourism enhances the quality of life, Loss of tradition and Education opportunity. High income (7.5 to 10 lakhs) group of the residents have strongly agreed tourism enhances the quality of life of the local residents; tourism is responsible for Loss of tradition and degradation of quality of life... Residents who are collecting their revenue from tourism having engaged in different services like Owning the shop for the tourists, Selling souvenir products, Working as a travel agent have strongly agreed that tourism enhances the quality of life, tourism improves the cultural exchange, loss of tradition whereas those who are Working in restaurant/hotel/bar have strongly agreed Tourism enhances the quality of life, tourism improves the cultural exchange and tourism enhances educational opportunity.

5.1.12: Awareness about sustainable tourism development
Higher mean values were obtained for the statements ‘I support tourism development which cares natural, social and economical sustainability of the local community and all other statements which signifies the concern of the residents about sustainable tourism development in Chilika lake. The satisfactory KMO value and Bartlett’s test of Sphericity explained adequacy for factor analysis. Thus two factors such as Individual contribution and awareness have been extracted with the total variance 66.113 percent.

Analysing the variance across gender and other demography, we obtain the results as follows. Male and female and married and unmarried are equally interested to participate in sustainable tourism development in Chilika lake. Age, education, annual income, occupation and revenue from tourism of residents influence their degree of awareness about sustainable tourism development. Residents whose age fall within the categories of 21-30, 31-40 and 41-50 years have high awareness about sustainable tourism development. Residents whose education qualification is Intermediary/ Diploma, Postgraduate/Professional and Graduate have more contribution to sustainable tourism development in Chilika lake. Those whose annual income are 2.5 to 5 lakhs, Below 2.5 lakhs and 7.5 to 10 lakhs have higher degree of awareness about sustainable tourism development and more contribution for sustainable tourism development. Residents who collected their revenue from tourism working as travel agent and guiding the tourists have higher degree of awareness about sustainable tourism development, whereas those who are working as travel agents, owning shop for the tourists and guiding have more contribution for sustainable tourism development.

5.1.13: Barriers of community participation

The mean value is highest for the statement ‘lack of a master plan for this area’ which signifies as the most important obstacle to community participation in Chilika lake. In addition, the mean values are more than three for all the statements except language barrier which is perceived as least important barriers of community participation in Chilika lake. The KMO value and Bartlett’s test of Sphericity results support the adequacy of data for factor analysis. Three factors are obtained such as; infrastructure, Funding and Collaboration with the total variance extracted of 61.809 percent.
Variance wise, it was found that there is no difference between male and female regarding their perception of barriers of community participation of tourism in Chilika lake but there is difference between married and unmarried about barriers of community participating of tourism in Chilika lake. Age, education, annual income, occupation, Revenue from tourism, of the residents influences their perception about the factors collaboration, Funding, infrastructure and funding, funding, infrastructure and collaboration and infrastructure respectively.

5.2: Suggestion

Against the backdrop of above findings, specific suggestions are presented as below.

- Chilika attracts a good number tourist from the age group of 21-30 and 31-40 years, so necessary steps should be taken to bring more tourists having created better facilities and more activities for tourist which can attract heterogeneous tourists.

- The highest percentage of the tourists has annual income less than 2.5 lakhs. So the Ministry of tourism and OTDC should develop adequate tourism infrastructure in order to attract higher income tourists. When higher income tourist visit the lake the local people can get better economic profit out this, it not only improves the economic condition of the residents but also improves the quality of destination.

- Chilika receives the lion share of domestic tourists, whereas the percentage of foreign tourist is extremely low, More domestic tourists to a destination indicates the redistribution of the national income but more number of foreign tourists brings more foreign currency to the region So sophisticated infrastructure facilities along with better adventurous sport activities should be created in order to attract more number of foreign tourists.

- The tourists have spent a very short period in the destination. So the ministry of tourism along with OTDC are advised to take better steps in order to increase the duration of the stay of the tourists.
• The demographic profile of the residents shows that male population dominantly employed in the tourism sector. In order to achieve tourism development in Chilika lake participation of women should be encouraged.

• The education profile of the residents shows that the lowest educated group have highest participation in tourism in Chilika lake. The local government should take better initiative to improve the education qualification of local people. When more educated residents will be employed in tourism sector it not only improves tourism industry but also improves the standard of living of the local people who are staying in and around the Chilika lake.

• As Chilika is winter residence of migratory birds so bird watching is the major attraction of the lake. The Govt. of Odisha and forest department along with the OTDC are advised to construct more number of watch towers in Nalaban Island and Mangalajodi village.

• Most of the tourists were dissatisfied with the infrastructure facilities of the lake. So the Govt. of Odisha is advised to improve the tourism infrastructure facilities in the lake.

• The local government and forest department should take initiative to safeguard the destination from littering, garbages and pollution.

• As tourism is the major source of income for the local people more hotels and restaurant should come up with help public-private partnership though which more people can be engaged in tourism.

• The govt. along with OTDC should reduce the crime, alcoholism from the destination.

Without tourist there is no tourism attraction. So tourist plays a pivotal role in tourism. Being an import part of tourism industry tourist has much responsibility towards the destination. While travelling in the beautiful as well as the fragile environment of Chilika lake there should be awareness amongst the tourists to minimise individual waste such plastic bottles, polythene bags etc. and also not to
disturb the animals and birds. Awareness should also be done to promote cordial relationship between residents and tourists. There should be cooperation between the residents, tourists and the local government.

5.3: Conclusion

Wetlands are the most productive and the most fragile ecosystem of the world. It has fabulous contribution to the human society. But the commercialisation of wetlands for the tourism purposes invites a range of problems to destination. The literature review shows that there is a universal concern for the adaptation of sustainable tourism development for all the tourism destinations. So Chilika is not an exception of it. Chilika is the largest brackish water lagoon of Asia, providing livelihood to more than 200000 population is one of the major tourism attraction of Odisha as well as India. The tourism attraction of Chilika includes bird watching, dolphin cavorting, landscape viewing, visiting Goddess Kalijai, enjoying local cuisine and boating. Bird watching found to the top most attraction of the lake. However inadequate infrastructure for specific tourism activities unique to the lake cripples the growth of tourism. Resultant Chilika receives lowest percentage of foreign tourist. Both residents and tourists agreed that tourism influences the lake ecologically. Positive impact of tourism such as; making the area look better, tourism induced environmental awareness are evident in the destination. Socio-culturally tourism contributes to the quality of life of the local people, provides diverse cultural experience and also provides better public transport (bus, train) and improves the quality of life. However, the negative consequences such as congestion, noise pollution, disturbed habitat of the dolphins, increase in the littering and garbage, invites pollution to the lake. It also creates issues such as noise that disturbs the locality, changes local lifestyle and traditional habits, rise in crime rate, alcoholism and prostitution in the tourist region etc. The tourists as well as the residents have expressed higher degree of concern for sustainable tourism development.

An integrated model thus has been developed including the constructs such as infrastructure, motivation, environmental cognition, ecological impact, economic impact and socio-cultural impact. Infrastructure is determinant factor and influences the other factors directly or indirectly and ultimately leads to sustainable tourism development in the destination. These impeding issues as highlighted in the study if
are addressed can lead to effective community participation. Further effective community participation can result in broad basing the tourist clientele to include niche markets such as long-haul eco-tourists. Findings of the study as summarised issues can further be assessed for their interrelationship and relationship with managerial issues of wetland, thus extending the scope for further studies.