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CONCEPTUAL MODEL OF TRADEOFF BETWEEN TOURISM AND ENVIRONMENT

A CASE STUDY OF KASHMIR VALLEY

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ABSTRACT

The ecological balance is inherent in the very process of creation. Truly, the interrelationship between the two concepts – environment and tourism, has received some considerable attention owing to the facts that: (i) human interference with environment has resulted in an ecological imbalance that threatens the comfortable living as well as existence of not only the contemporary human beings but also of the future citizens of the world, and (ii) the placement of most of the emphasis on tourism development through the highest degree of exploitation of natural resources has resulted in eco - degradation. We are indeed a part of nature and depend on it for every big or small requirement. The exploitation of natural resources would mean exploitation of us. The Himalayas is unique and Kashmir being part of it inherent individuality. The tourism industry in Kashmir relies on natural resources but the same industry has the potential to impact its natural resources in adverse manner.

KEYWORDS: Ecological Balance, Tourism Influx, Depletion, Pilgrimage, Tradeoff

INTRODUCTION

Our nature is God's best creation and humans His vicegerents who hold trust, duty and moral responsibility to safeguard and to preserve the creator's creation, the oneness of flora and fauna. The Quran depicts nature as being ultimately a theophany, which both veils and reveals Allah.

The essence of an ecosystem and ecological balance are also beautifully described in Quran. "*And the earth, we have spread out, set therein mountains firm and immovable; and produced therein all kinds of things in due balance*" (15:19) Surat Al-Hijr. This Quranic verse and its commentary, in brief sums up the entire scope of ecology, food chains, food webs, trophic levels, community ecosystem, energy flow, bio-geo-chemical cycles etc. All things that Allah has created in this universe have been created; qualitatively and quantitatively; in due proportion and measure. Allah has declared in the Quran, "*Verily, all things have we created by measure*" (59:49) Surat Al-Hashr.

The ecological balance is inherent in the very process of creation. The relationship of environment with tourism industry is of main focus in this study. The mutually supportive role of all the living things is often mentioned as a crucial factor for a balanced social and harmonious existence[1].

Truly, the interrelationship between the two concepts – environment and tourism, has received some considerable

[1] (Environmental Perspective of Tourism Development: A Note).

attention owing to the facts that: (i) human interference with environment has resulted in an ecological imbalance that threatens the comfortable living as well as existence of not only the contemporary human beings but also of the future citizens of the world, and (ii) the placement of most of the emphasis on tourism development through the highest degree of exploitation of natural resources has resulted in eco - degradation. We are indeed a part of nature and depend on it for every big or small requirement. The exploitation of natural resources would mean exploitation of us.

In fact the valley Kashmir is very much dependent on tourism than any other region of India. The Himalayas is unique and Kashmir being part of it inherent individuality. It is a meeting point of many tourists from all over the world. The tourism industry in Kashmir relies on natural resources but the same industry has the potential to impact its natural resources in adverse manner. Tourism and the supporting infrastructure that it requires pose threat to the environment particularly forests, water resources and wild life. The aim of this study is to find trade-off solution that guarantees a flourishing tourism industry. Since polluted regions distract tourists, the tourism planner has to take care of the environment at the time of planning.

The attempt is made in this paper to address the issue of environmental quality affected by tourism influx. The focus is on tradeoff between environment and tourism though one being economic and other being social good. This will help us analyze and establish the necessary condition where attaining economic good will not hamper the social good, thus minimize the loss. The study reviews the impacts of tourism on the environment in the valley of Kashmir, which in comparison with its competing adjacent states is blessed with local attractions, natural beauty and sunshine that draw tourists from near and far.

The preservation of the natural environment, the prudent use of natural resources, disposal of solid waste and sewage, and the depletion and deterioration of groundwater—attributable to tourist inflows—are among others issues which the Valley of Kashmir faces. In Kashmir the growth of pilgrimage tourism has been rapid and uncontrolled. Such tourism development has resulted in the loss of biodiversity, erosion, and depletion of groundwater.

FACTOR ANALYSIS

In multivariate statistics, exploratory factor analysis (EFA) is a statistical method used to uncover the underlying structure of a relatively large set of variables as here in our study. EFA is a technique within factor analysis whose overarching goal is to identify the underlying relationships between measured variables, in the study I tried my level best to find the solution of the problem. It is commonly used by researchers when developing a scale (a scale is a collection of questions used to measure a particular research topic) and serves to identify a set of latent constructs underlying a battery of measured variables.

The variables used are of several attributes like natural beauty,--etc. The analysis is accurate as each variable is measured in multiple forms and each variable has 3 to 5 measures.

Within the common factor model, measured variables are expressed as a function of common factors, unique factors, and errors of measurement. Common factors influence two or more measured variables, while each unique factor influences only one measured variable and does not explain correlations among measured variables.

Exploratory factor analysis (EFA), reduces the data to a smaller set of summary variables and helps us to explore the theoretical structure of the phenomena of trade off. In order to determine the underlying dimensions of multi-item

measurement scales used in this study, principal components analysis with varimax rotation using SPSS 16.0 was performed for all constructs in the analysis: activist, reflector, pragmatist and theorist. Its minimum Eigen values are 1.0. Initially, the factorability of 19 items was examined.

Table 1: Factor Analysis

Variables	Component					
	1	2	3	4	5	6
Tourism industry is beneficial for habitants, so to find out tradeoff is vain	.935	.029	-.059	.011	.121	-.001
The carrying capacity of tourism industry is immense in Kashmir so no compromise is required	.932	.030	-.060	.024	.123	-.005
Environmental havoc /degradation continues due to civil and civic temperament of people related to tourism	.784	.068	-.041	.030	.049	-.042
The tourism industry is having many linkages, which is putting tradeoff estimation at bay	.730	-.060	-.038	-.085	-.217	.096
Tourism industry is a smokeless industry, so no requirement of tradeoff	.677	-.043	.076	-.085	-.116	.023
Different novel ideas would be very effective in building vulnerable ecology of Kashmir	-.002	.914	.073	-.034	.099	-.094
Kashmir's ecology is its economy. Sound policies must be there to save its fragile environment	-.005	.911	.074	-.036	.097	-.095
Since ecology of Kashmir is quick to react to slight environmental changes. Some action with this regard must be taken into consideration	-.042	.678	.030	.036	-.218	.092
Ecology of Kashmir is delicate thus some fair policies with this regard must be taken into consideration	.062	.652	.038	-.001	-.086	.175
The valley of Kashmir is dependent on tourism in terms it provides direct and indirect employment, even though priority must be given to environment	-.060	.050	.873	.296	.061	.028
From the ecological point of view the valley of Kashmir is extremely brittle. Thereof synthetic impact has to be lessen even at the cost of economic prosperity	-.076	.093	.861	.202	.022	.043
Negative effects of tourism on environment must be curbed, even if tourism is backbone of economy	.041	.089	.768	-.067	-.011	.019
The lakes are on the verge of extinction, thus to move towards new and neo hangouts would help tourism	-.046	-.043	.181	.906	-.026	.021
Present scenario of picnic spots shows how badly they have been injured by excess flow, this can be definitely	-.017	.036	.059	.869	-.008	.005
Access to new tourism hangouts would certainly reduce the level of pollution at existing destinations	-.051	-.065	.561	.633	.028	.064
Deforestation in ecologically sensitive areas is caused on fake name of tourism development	-.062	.033	-.040	.025	.715	.147
Tourism is one of the cause of environmental havoc /degradation	-.032	.120	-.089	.040	-.665	.080
When it comes to environmental facelift, a great need is felt to stop the free growth of tourism industry	.040	.056	-.111	-.014	.042	.726
Tourism facilities like hotels in silent zone causes wide spread damage to ecology	.003	.017	.217	.060	.013	.690

Principal components are linearly uncorrelated variables obtained from a set of observations of possibly correlated variables. The number of components is less than or equal to the number of original variables.

The variables obtained from the study are six in number as:

- Trade-off requisition
- Ecological reactiveness
- Environmental disparity
- Novel terminuses
- Disguised development
- Unrestrained growth

The table presents the result of the factor analysis and a detailed description of each item for each of the main factors ranging from 0.935 to 0.003. The other related tables of factor analysis e.g. correlation matrix are in appendix.

Table 2: Reduced Rotated Matrix

Variables	Component					
	1	2	3	4	5	6
Tourism industry is beneficial for habitants, so to find out tradeoff is vain	.935					
The carrying capacity of tourism industry is immense in Kashmir so no compromise is required	.932					
Environmental havoc /degradation continues due to civil and civic temperament of people related to tourism	.784					
The tourism industry is having many linkages, which is putting trade off estimation at bay	.730					
Tourism industry is a smokeless industry, so no requirement of tradeoff	.677					
Different novel ideas would be very effective in building vulnerable ecology of Kashmir		.914				
Kashmir's ecology is its economy. Sound policies must be there to save its fragile environment		.911				
Since ecology of Kashmir is quick to react to slight environmental changes. Some action with this regard must be taken into consideration		.678				
Ecology of Kashmir is delicate thus some fair policies with this regard must be taken into consideration		.652				
The valley of Kashmir is dependent on tourism in terms it provides direct and indirect employment, even though priority must be given to environment			.873			
From the ecological point of view the valley of Kashmir is extremely brittle. Thereof synthetic impact has to be lessen even at the cost of economic prosperity			.861			
Negative effects of tourism on environment must be curbed, even if tourism is backbone of economy			.768			
The lakes are on the verge of extinction, thus to move towards new and neo hangouts would help tourism				.906		
Present scenario of picnic spots shows how badly they have been injured by excess flow, this can be definitely				.869		
Access to new tourism hangouts would certainly reduce the level of pollution at existing destinations				.633		
Deforestation in ecologically sensitive areas is caused on fake name of tourism development					.715	
Tourism is one of the cause of environmental havoc /degradation					-.066	
When it comes to environmental facelift, a great need is felt to stop the free growth of tourism industry						.726
Tourism facilities like hotels in silent zone causes wide spread damage to ecology						.690

Orthogonal Rotation with Varimax was run on the data for the determination of the said factors which are affecting the environment and ecology of Kashmir. Rotation converged in 25 iterations in the data. In orthogonal rotation, each factor is independent of, or orthogonal from, all other factors. The highly correlated variables are determined to be the factors of the study. All factor loadings greater than.60 (ignoring signs) have been considered for further analysis. The minimum Eigen value is 1.0. Initially, the factorability of 19 items was examined. Based on the values retrieved through SPSS, 6 factors based on groupings, were determined and are as under:

Trade off Requisite

As per the values in the rotated matrix table which are more than 0.6, following variables were used to determine the first factor which is affecting the environment and ecology of Kashmir. The variables in the first factor namely tradeoff requisite are as trade-off is vain with score of.935, no compromise requirement with score of.932, environmental temperament with score of.784, trade-off estimation at bay.730, no required trade-off with score of.677. All these statements/ variables point towards a certain direction that there is no need of making any trade-off between the tourism and environment with special attention towards ecology and the pollution created by it, as it is considered pointless and not worth, also perception of the authorities that tourism is smokeless industry and does not need any immediate attention and trade off.

Ecological Reactiveness

Second factor formed as per the scores in SPSS with 4 statements/ variables from the said table having scores more than 0.6. In the ecological reactiveness; novel idea for ecology with score of.914, sound policies for ecology with score of.911, highly reactive in need of attention with score of.678 and lastly delicate ecology in need of fair policies with score of.652; thus the factor formed from these statements is noticeably ecological reactiveness. Because the statements are having one part in common of Kashmir having delicate ecology and environment and thus are on dire need of immediate attention and conservation. And the concerned authorities need to make sound and viable policies and think of out of box ideas for conserving the environment and thus reducing the effects and damage caused to the environment by tourist industry and tourist inflow.

Environmental Disparity

According to the rotated matrix scores for the statements/ variables, the factor incorporates 3 variables. First tourism relation with environment and employment with score of.873, lessen synthetic impact with score of.861 and negative effects need to be curbed with score of.768. All these variables are incorporated to form the 3rd variable environmental disparity factor. The factor is named because of the primary reason because the statements indicate toward the difference and inequality between the importance of conservation of environment and its direct benefactor tourism. The authorities are not concerned with the impact of the tourism on the environment and the direct impact it has. Though tourism is very much the primary employment industry in Kashmir but still environment needs to have the priority among the people and authority. But in reality there occurs a lot of disparity among the people and the authorities about the tourism and environment conservation.

Novel Terminuses

As per the rotated matrix table for the said study, in this particular factor 3 variable statement are incorporated;

neo hangouts would help tourism with the score of.906, damage to present picnic spots with the score of.869 and lastly access to new tourist places would reduce pollution with score of.633, thus forming the Novel terminuses factor of simple reason that the Kashmir tourism is in need of new and novel destinations. The existing destinations are on the verge of permanent damage and extinction of rare plants and animals is evident, thus making it of utmost importance to find new tourism destinations. These will not only help in reducing the pollution but also reduce the monotony among the tourists and local Kashmiris of visiting these places again and again.

Disguised Development

In this particular factor namely disguised development there are 2 statements incorporated; firstly deforestation in name of development with score of.715 and tourism as main cause of havoc to environment with score of.665. These two variables are in congruence to the fact that most of the environmental degradation and damage is caused in the name of development and face-lifting the tourism industry even at fragile destinations. The developmental changes in these places are done to cover up the mass destruction of forests, grasslands, rivers, meadows, and glaciers, and these injuries to the environment is foreseen by the government and people as well because the result will be development and so called modernization.

Unrestrained Growth

The sixth factor depicted through the analysis is unrestrained growth factor, this factor incorporates two variable statements firstly stop the free growth with score of.726 and facilities cause wide spread damage with score of.690 on the rotated matrix table. The factor is named is such way because both the variable statements are pointing towards the enchanted and unchecked growth and expansion happening in the tourist destinations which are creating damage and disparity in them. The facilities and the amenities are rising at an alarming rate thus making the trade-off very important.

CONCEPTUAL MODEL OF TRADE-OFF BETWEEN TOURISM AND ENVIONMENT

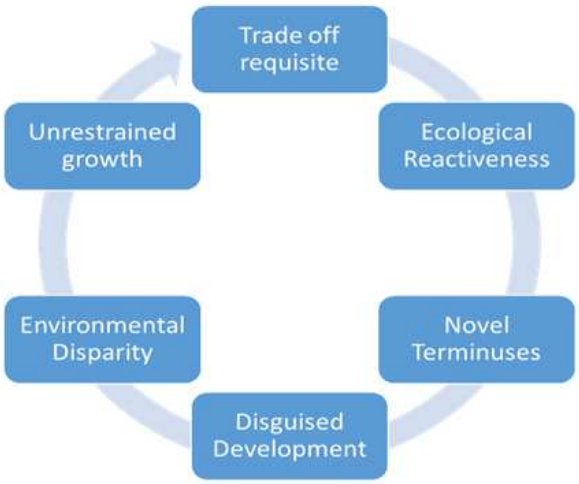

Figure 1

Figure 2

The above Conceptual Model of trade-off between tourism and environment, is based on the Porter five forces model which is a framework for industry analysis and business strategy. The model draws upon industrial organisation (IO) economics to derive the forces that determine the overall profitability of the tourism industry. As per the model, one must analyze the industry's underlying structure in terms of the five forces. If the forces are intense, almost no company earns attractive returns on investment and if the forces are benign, numerous companies are benifitted. Industry structure drives competition and profitability, independent of whether it produces a certain product or service, is emerging or mature, high tech or low tech or else regulated or unregulated. The forces that shape the competition and configuration of the five forces differ from industry to industry. The strongest competitive force or forces determine the profitability of an industry and become the most important for strategy formulation. The most salient force, however, is not always obvious. The forces in the above conceptual model are derived from the factor analysis of the data and six probable factors were created through the analysis using SPSS. Considering the importance of the trade off the following the six factors namely 1) trade off requisite 2) novel terminuses 3) disguised development 4) unrestrained growth 5) environmental disparity and 6) ecological reactiveness, were found primarily important for environmental and ecological shift and increase in the pollution in Kashmir at present which will be helpful to the local and higher authorities for keeping the check on it. All these factors have been identified to have an effect on the tourism, and vice versa, even though these factors can be used as predicting a model for future references and analyses.

The forces in the above modelare arranged in a wheel manner so as to depict the interdependent nature of one force to the other. All forces have a special and complex bearing on the other forces and especially the central force that is Trade-off requisite. As this study is particularly related to trade-off between tourism and environment, this specific factor is kept at the centre so as to depict the importance and relation of other forces with regard to this particular factor. This model will help us to understand the nature of relationship of the factors, their effect on the trade-off and the relation of the trade off with other factors as well. The arrangement of the forces is done using the reference from Porters 5 Forces model, where in all the forces interact in order to provide information regarding the industry and one central force has the maximum effect on the relational analysis. This particular model is also used to decide upon the attractiveness and possible failure points in a particular industry. Same is followed in this conceptual model, as these forces will determine the impact of tourism industry on environment and will also help us determine the need of trade-off for any tourism related issue, be it economic, social, cultural or ecological.

The factors/forces interact not only individually with one another but also in a complex manner to determine the state of tourism especially with regards to development, growth and reactiveness of the environment. The model encompasses all the possible determining factors which will be the benchmark for the success or failure of the tourism industry in Kashmir. So this model is also a deterministic model for the performance of tourism industry and the performance of the authorities in developing and maintaining the tourist locations and also in creating full analytical approach in doing so. For example, the ecological reactiveness is a very important factor affecting the tourism and the environment of a place. The more a place is reactive or responsive to the changes in its topography, the more brittle and fragile is its ecology and greater is the need to keep it at check and stable. Thus making the trade-off between tourism and environment more important. It also will determine the trade-off requisite factor or whether trade-off is required or not and if it is, then how important would it be to make a trade off and what should be the acceptable level of the cost and benefit through any particular endeavour undertaken. And with the effect on the other forces like novel terminuses, disguised development etc. when the ecological scenario is very reactive or brittle, then no over burdening of the place should be done and it should always be kept under constant check.

RELIABILITY ANALYSIS

Table below presents the results of the reliability analysis along with the descriptive statistics for each variable. Overall, the study reports a strong reliability with coefficient alphas ranging from 0.655**.**

Table 3

Cronbach's Alpha Values	No. of Items
0.655	19

Table 4: Reliability Analysis Item-Total Statistics

Variables	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Tourism is one of the cause of environmentalhavoc /degradation	35.10	55.72	0.00	0.67
Environmental havoc /degradation continues due to civil and civic temperament of people related to tourism	34.80	50.35	0.34	0.63
When it comes to environmental facelift, a great need is felt to stop the free growth of tourism industry	34.94	54.40	0.05	0.67
Tourism facilities like hotels in silent zone causes wide spread damage to ecology	35.27	53.36	0.16	0.65
Deforestation in ecologically sensitive areas is caused on fake name of tourism development	34.33	55.45	-0.02	0.68
Kashmir's ecology is its economy. Sound policies must be there to save its fragile environment	35.12	50.58	0.32	0.63
Ecology of Kashmir is delicate thus some fair policies with this regard must be taken into consideration	35.15	51.58	0.28	0.64
Since ecology of Kashmir is quick to react to slight environmental changes. Some action with this regard must be taken into consideration	35.11	52.16	0.24	0.64
Different novel ideas would be very effective in building vulnerable ecology of Kashmir	35.12	50.52	0.32	0.63
From the ecological point of view the valley of Kashmir is extremely brittle. Thereof synthetic impact has to be lessen even at the cost of economic prosperity	35.18	50.80	0.35	0.63

Table 4: Cond.,				
Negative effects of tourism on environment must be curbed, even if tourism is backbone of economy	35.20	50.97	0.29	0.64
The valley of Kashmir is dependent on tourism in terms it provides direct and indirect employment, even though priority must be given to environment	35.15	50.80	0.37	0.63
Tourism industry is beneficial for habitants, so to find out trade off is vain	34.91	49.32	0.40	0.62
The tourism industry is having many linkages, which is putting tradeoff estimation at bay	35.07	51.22	0.24	0.64
Tourism industry is a smokeless industry, so no requirement of tradeoff	35.15	51.20	0.25	0.64
The carrying capacity of tourism industry is immense in Kashmir so no compromise is required	34.91	49.33	0.41	0.62
Access to new tourism hangouts would certainly reduce the level of pollution at existing destinations	35.20	52.01	0.30	0.64
Present scenario of picnic spots shows how badly they have been injured by excess flow, this can be definitely	35.42	53.16	0.23	0.64
The lakes are on the verge of extinction, thus to move towards new and neo hangouts would help tourism	35.31	53.02	0.22	0.64

As per the above mentioned table the cronchbach alpha value of abpve0.5 depicting that the data is reliable and can be used for further analysis. The 19 variables in the instrument have been suited for the study and all are reliable for the analysis. The individual values for the variables in the last column are all above 0.5 and lie in the range of 0.6-0.65, depicting that the variables have desired reliability and need not to be eliminated from the instrument and thus showing the values and scale used to measure the response is valid for our study.

CONCLUSIONS

Tourists flocking in should not be the benchmark of the success, rather it should be kept at second priority and ecology should be given the highest prioroty which would result in ‘catch new places and spots’ in order to reduce the burden and tension in the existing ones particularly in places like Pahalgam and Gulmarg. Similarly there is a complex effect of other factors on each other and the main central force as well, maintaining the touristic, environmental and ecological footprint of Kashmir. For example, due to the disguised development done in the name of infrastructural upliftment and facelift, the natural habitats and the beauty of many places have been destroyed, which has culminated into taking certain measures like finding new destinations, stopping the unrestrained growth of tourism related activities etc. and making trade off even more important before starting the development of a certain place.

All these forces don’t follow any particular pattern like in “one follows the other” or so, but there is much more complex interaction among the factors. All affect one and one affects all, keeping the central trade-off factor in mind, this fator also determines and has an effect on all other 5 forces and affects them in a similar way. For example, if trade-off is done between economic prosperity and cultural disparity, then it will affect all five forces; thus enabling authorities to make priorities in finding new places and existing places, stopping the unlimited growth, no over development and reducing the ecological disparity amid the existing places like Pahalgam, Gulmarg and Sonamarg. Thus the conceptual model is just a depiction of the forces and the interaction among them and how they can be used to understand the performance of the tourism industry, helping the intellectuals, authorities and laymen as well to understand the relation and

the positives and negatives that are a part and parcel of tourism and may help us save the further damage caused to the ecology and environment of Kashmir in the name of development and tourism progress.

This model is conceptualised and developed so as it may help in lifting the veil from the eyes of the authorities and the local people as well: that tourism is only helping Kashmir and performing very progressively, but using this model we can analytically prove that there is much more to be done not only to make Kashmir a better tourist spot, more picturesque but also to keep it away from the very demage caused to it.

REFERENCES

1. Alan A. Lew, Allan M. Willaim and C. Micheal Hall. (2004). *A Comparison to Tourism* Publisher: Wiley Blackwell.
2. Balaguer J & Cantavella-Jorda M. (2002). *Tourism as a long-run economic growth factor*: *The Spanish case*`. Applied Economics, 34.
3. Bijendra K. Punia (2012). *"Tourism management–problems and prospects" Department of Geography and Environmental Studies*, Mekelle University, Ethiopia, IJRESS, vol. 2(1).
4. Bramwell B. (1991). *Tourism environments and management. Tourism Management*, 12(4), pp. 4.
5. Buckley. P.J. & Klemm, M. (1993). *The Decline of Tourism in Northern Ireland: The Causes. Tourism Management*, Vol. 14, No.3, pp.184-94.
6. Cabalios Lascurian, H. (1997)"Eco-Tourism. A Guide for Planners and Managers, "Vol 2 North Benaington, V.T, USA; pp7-10.
7. Cernat. Lucian and Gourdon. Julien,(2004). *Sustainable tourism – the need for a comprehensive methodological framework*, Institute for Development Policy and Management, University of Manchester
8. Chaurasia. B. P, (1992*). Environmental pollution –Consequences and measures*; Chaugh publications
9. David. Waiver, (2005). *Sustainable Tourism, Theory and Practices*, Kindle edition Elsevier.
10. Eber. S. (1992). *Beyond the Green Horizons: Principles for Sustainable Tourism*. London publications.
11. Farley Joshua & Daly E.H, (2004). *Ecological Economics, Principles and Applications*. Island Press
12. Goodstein S. Eban, (2010). *Economics and the Environment.* John Wiley & Sons, Sixth Edition.
13. Gordon Mills, (2000*). Optimization in economic analysis*, Cambridge Publications
14. Hall C. Micheal, (2000). *Tourism in South and South East Asia;* Butterworth Henemann Publication.
15. Stephanie Draper, (2009). *Travel and Tourism, Article in Travel Weekly*, University of Cambridge.
16. Terry Davies and Sarah Cahill (2003). *Environmental Implications of the Tourism Industry, Resources for the Future*, 1616 P Street, NW, Washington, DC
17. Pearson Charles. S (2000). *'Economics and the global environment'*, Published: Cambridge University Press, xxiv, 583 p.