

Full Length Research Paper**Tourism and Lake Sustainability: A Case Study of Dal Lake****Shamim A. Shah***Senior Assistant Professor, Department of Geography and Regional Development University of Kashmir, Hazratbal, Srinagar, 190006***ABSTRACT**

Dal is a Himalayan urban lake which is mainly used for tourism. Fishery and agriculture is of secondary importance. It is one of the most beautiful lakes of India and the second largest lake in the State of Jammu and Kashmir. Dal Lake is unique in having hundreds of house boats which afford an opportunity to tourists to reside on the lake in an atmosphere of peace and tranquility. Besides the Moguls gardens and campus of the University of Kashmir is also located along the shores of the lake. Overlooking the lake are two hillocks which house the famous temples of Shankaracharya and Hari Parbat. A perennial inflow channel enters the lake from the north and supplies about 80% of the water. Towards the southwest side an outflow channel drains the lake water into a tributary of the River Jhelum. Parallel to this exit is a stone-lined canal which connects the lake with the tributary. This channel is used for movement of boats in and out of the lake and prevents inundation of floating gardens during high floods. The author intends to give an insight in to the spatiotemporal trends in the tourist flow and changes in the ecology and environment of the lake. The sustainability of the Dal Lake depends on the management and environmental management; therefore, the author analyses and compares both sides of the utilization of the lake: the demand and the offer.

Key words: Dal Lake, Houseboat, tourism, sustainability. Spatio-temporal

Introduction

The concept of intergenerational equity deals with creating or strengthening opportunity, equalizing income or redistributing power within the host population where tourism is occurring. A condition necessary for sustainable tourism development is that "tourism should be developed that contributes to creating equality and economic and social welfare for the local community" [1]. In order for tourism development to be truly sustainable it must "meet the needs of the host population in terms of improved living standards both in the short and long term" [2]. Tourism development should include monitoring, evaluating, and improving host community quality of life as a condition for sustainability [3]. While concern for the host population must be an important consideration, impacts to surrounding communities, regions and countries need to be addressed as well. Another aspect of sustainability is the concept of intergenerational equity. However, concerns about intergenerational equity do not typify much of the tourism sustainability literature. With the exception of a few authors, the literature tends to focus more on the need to preserve natural resources for future generations rather than considering

how tourism development may affect those living in the future [1]. In order to help society translate sustainability from theory into practice, we need tools that can help to define and track progress towards social, environmental and economic goals and priorities. In many destinations, sustainability indicators are becoming an integral part of the policy agenda, often developed through participatory processes involving both specialists and non-specialists and drawing from the knowledge possessed by each group [4,5,6]. Sustainability

indicators are key levers not only in the sense that they help diagnose problems and understand their underlying causes, but also in that they help identify sustainable solutions, define goals for the future, help monitor progress to determine whether goals and targets are met, hold decision-makers accountable to their commitments, and motivate people to take action [7,8].

Study Area

Dal Lake is a natural lake situated in the north-east of Srinagar at an altitude of 1583m above the sea level. It lies between 34° 5'-34° 6' North latitude and 74° 8'-79° 9' East longitude. This beautiful lake is bounded on the east by Mahadev mountain range, on the south by kohi Suleiman and on the west by Hari Parbat Hill with old fort [9]. The Lake is multi basined with an average depth varying from 1.4 to 1.8 meters. The Dal Lake is being fed by a stream Telbal nalla from north which brings water from high altitude Marsar Lake. A small canal "Nalla Amir Khan" connects the Dal with Anchar Lake through Nagin and acts as an additional outflow channel. The total catchment area of the Dal Lake is about 317 km² and can be divided into five sub-catchments. The major one is Dachigam-Telbal which alone is spread over 228 km², constituting about 72% of the total area. The catchment area of the Dal Lake is more than twenty times the area of the lake.

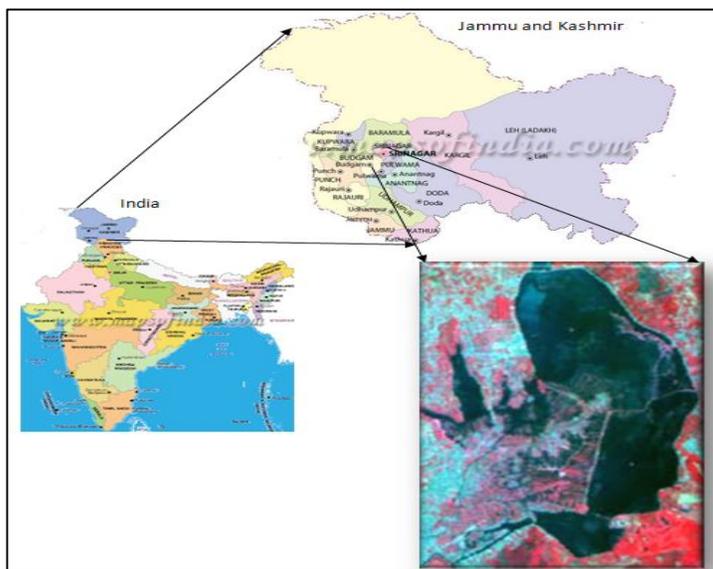


Fig.1: Map showing location of the study area

Data base and methodology

The data for the study has been obtained from both primary and secondary sources. The primary data has been collected by conducting a survey of the Dal area with the help of questionnaire and the secondary data has been obtained from

Table: 1.1 Tourist flow to Dal Lake (2000-2008)

Year	domestic	Index	% change	Foreign	Index	% change	Total	Index	% change
2000	41734	100	-	4923	100	-	46657	100	-
2001	26692	63	-36	3808	77	-22	30500	65	-34
2002	9868	23	-63	1745	35	-54	11613	24	-61
2003	72882	169	+638	3583	71	+105	76465	158	+558
2004	143238	332	+96	12112	240	+238	155350	321	+103
2005	234280	543	+63	12792	253	+6	247072	510	+59
2006	165151	382	-29	13005	257	+2	178156	367	-27
2007	146042	337	-11	14745	291	+13	160787	331	-10
2008	55104	127	-62	6476	127	-56	61580	126	-61

Source: Department Of Tourism Jammu and Kashmir, Srinagar.

The Table reveals that the foreign tourists visiting Dal Lake are less in number as compared to home tourists. The analysis of the table 1.1 indicate that the number of tourists, who visited the Dal Lake, decreased from 46657 in 2000 to 30500 in 2001 and in 2002 it further decreased to 11613. However, the tourists’ traffic to Dal Lake increased and reached to 76465 in 2003, 155350 in 2004 and 247072 in 2005. It again declined from 2006 onwards. The main reasons of the

various government departments such as Tourism Department, Lakes and Waterways Development Authority (LAWDA) Srinagar, Municipal Corporation Srinagar etc. some information has been acquired from Houseboat owners Association. Secondary information has also been called from various books, book-lets, magazines, journals, internet, survey reports and tourism literature published by various organizations. The data thus obtained has been compiled and analyzed with the help of various statistical and cartographic techniques in the form of tables, statistical figures, bar graphs, line graphs, pie-diagrams and maps. In addition geospatial tools have been use for mapping the tourist accommodation of Dal Lake.

Results and Discussion

Tourist flow to Dal Lake.

It has been observed that the proportionate share of the Dal Lake in terms of tourist flow to total Kashmir valley is about 60-65% in case of foreign tourists and 35-40% in case of home tourists. The tourist traffic to Dal Lake in 2000 was 46657 which rose to 247072 in 2005 and declined to 61580 in 2008. The magnitude and trend of tourist traffic to Dal Lake from 2000 to 2008 has been shown in the table 1.1.

declining tourist traffic to Dal Lake are political instability, militancy and also the environmental degradation of the lake.

Month wise tourist flow to Dal Lake

The seasonal variations as observed from table 1.2 indicate that maximum number of tourists visit the Dal Lake during the months of May, June, July and October. While as during the months of December, January and February the tourist traffic to Dal Lake remains very low.

Table 1.2: Month wise tourist flow to Dal Lake (2005-2007)

Month	2005			2006			2007		
	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
Jan.	5662	380	6042	3134	699	3833	2464	733	3197
Feb	1850	1040	2890	4147	927	5074	2615	1326	3941
March	15024	703	15727	5615	984	6599	9038	865	9903
April	20334	858	21192	8582	1188	9770	9658	1241	10899
May	39354	970	40324	41830	1033	42863	25186	1254	26440
June	42870	1114	43984	40957	1024	41981	28695	1756	30451
July	35243	1766	36971	20766	1625	22391	21178	1662	22840
Aug.	17196	1183	18379	6411	1320	7731	11342	1114	12456
Sept.	16473	1372	17845	6000	1452	7452	10635	1017	11652
Oct.	21614	1784	23398	19787	1110	20897	13137	1291	14428
Nov.	12726	716	13442	4222	896	5118	8852	794	9646
Dec.	5934	906	6840	3700	747	4447	3242	1692	4934
Total.	234280	12792	247072	165151	13005	178156	146042	14745	160787

Source: Department Of Tourism Jammu and Kashmir, Srinagar.

Accommodation Capacity and Tariff of House-boat in Dal Lake

The principal economic factor, which influences the flow of both domestic and foreign tourists, is the availability of neat, comfortable and cheap accommodation facility. Tourist's first need on reaching the destination point is to find shelter. The valley of Kashmir offers a chain of magnificent accommodation, with its uniqueness of Houseboat accommodation, which is non-existent in other parts of the world. Houseboat is historic and the magnificent feature of Kashmir tourism. Houseboats for the first time were used for accommodating tourists during the reign of Akbar.

Many tourists are attracted to Dal Lake by the charm of staying on a houseboat, which provides the unique experience of living on the water in cedar-paneled elegant bedroom, with all the conveniences of a luxury hotel. The houseboats are decorated fancifully and named romantically and even whimsically. Like hotels, house-boats vary in degree of luxury and have been accordingly graded by the Department of Tourism. A luxury houseboat, like a luxury hotel has fine furniture, good carpets and modern bathroom fittings, while the 'D category' (the lowest category) of houseboat, like low budget hotels, is spartanly furnished. All houseboats, regardless of category, have highly personalized service. Not only is there always a "houseboy" for every boat, but owner and his family are never far away. The cost of per day of

hiring a house boat includes all meals and free rides from the house boat to the nearest jetty (Ghat) and back, as no houseboat in the lake is directly accessible from the banks. Each house boat having capacity of 2-5 bed rooms, with adjoining bath rooms, dressing rooms, a drawing room, dining room, a pantry and upper deck.

The State Tourism Department has classified houseboats into five categories- Deluxe, A, B, C and D, corresponding more or less to the degree of comfort and service. Table 1.3 makes it clear that like hotel industry house boats also grouped into various categories on the basis of services offered to the tourists. So far the tourist accommodation is concerned there are 881 house boats ,corresponding over 2281 rooms and with a bed capacity of 4562 distributed very unevenly in Dal lake, Nagin lake and Jhelum river. The concentration of house boats is significantly high in the Dal Lake, in which there are 634 units of the house boats, with a 1646 room's bed capacity of 3292. While as there are 171 units of house boats in the Nagin Lake making available 450 rooms with 900 bed capacity. However there are only 76 house boats in the Jhelum river offer 155 rooms with 370 bed capacities.

Distributional pattern of house boats in Dal Lake

Houseboats are important tourist attraction of Srinagar city, are distributed very unevenly. They are heavy concentrated in the Dal lake especially front end side facing to Dal gate and boulevard road as depicted in the **Fig. 1.2** House boats in Nigeen Lake are located around its banks covering the whole

lake. Some house boats are also situated in the Jhelum River around zero bridge.

Accommodation Industry confronts with the problem of seasonality of demand. This seasonality character of demand creates capacity shortage during the peak period and excess capacity during the lean period. Such a phenomenon inevitably contributes to high prices in peak season and low prices in off season. The same is true with houseboat occupancy in Dal Lake. The occupancy levels of houseboats in Dal Lake have been given in the table 1.4.

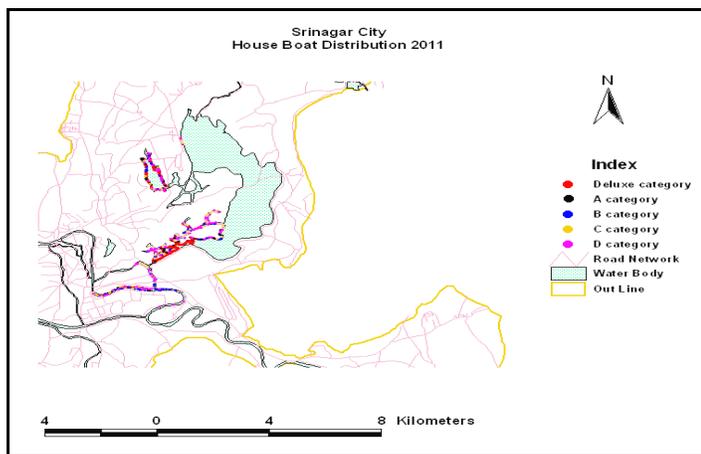


Fig. 1.2 Location of house boats in Dal Lake
Source: Field Survey.

Table 1.4: Room Occupancy Rate of Houseboats in Dal Lake

Month	Occupancy Rate (%)	month	Occupancy Rate (%)
January	05	July	70
February	05	August	55
March	40	September	50
April	55	October	75
May	80	November	15
June	60	December	05

Source: Field Survey

Room occupancy levels in hose boats of Dal Lake

From the table it is clear that in the months of May, June, July and October occupancy rate of houseboats in Dal Lake remains high. It can also be observed from the table that bed occupancy rate in the months of December, January and February is just not even sufficient to cover the maintenance cost of Houseboats.

CONCLUSION

In an increasingly urbanized world, lakes are primary tourist destinations not only because of their beauty and their natural and cultural diversity, but also because they provide opportunities to escape from the stresses of modern life. Successful management of tourism bring about enormous economic benefits including increased employment, improved per capita income, more business transactions, improved balance of payments and large foreign exchange earnings.

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While tourism development plans for Srinagar city have consistently advocated sustainable and systematic management of its tourist products particularly Dal lake. Perhaps more importantly, staying in a house boat is perceived as an important part of the cultural experience of visiting Kashmir, and this is a key draw card for foreign tourists particularly. There has been continuous increase in tourist traffic to Dal Lake and utilization of the lake as tourist product is subject to the seasonal variations as reflected in the pattern of room occupancy levels of house boat. In consideration of the problems of “peaking” and “off season” associated with the seasonal character of tourism, it is suggested that tourist service in the houseboats should be made available at concessional rates during the winter which will help to minimize the difficulties of seasonality. Increasing population pressure of Dal dwellers is the main problem in the deterioration of Dal Lake. This problem can be solved by rehabilitation of lake dwellers. The popularity of the lake as a tourist product could be enhanced by maintaining service and facilities provided by the lake for that purpose Certainly it is important that accommodation operators, local organizations and the Jammu and Kashmir Tourism Authority have to provide training, finance and other forms of support which are critical if lake tourism sustainable are to be ecologically and economically successful.

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