

SKIING IN GULMARG: OPPORTUNITIES AND CHALLENGES

Shahnawaz A. Dar*

Abstract *Tourism provides various attractions for tourists in the form of natural spots, built places, sports and games. Skiing is one of the attractions that is basically done in snow slopes of various tourism destinations around the world. Gulmarg in Kashmir is an all season destination providing various attractions and scenic views throughout the year. In summers, it turns into a meadow of flowers and in winters into a white gold destination. Skiing in Gulmarg is one of the most important winter sports. Its natural slopes, powdery snow, easy accessibility, highest and natural ski slopes, etc, provide the conditions of an ideal ski destination for all types of skiers. It is in this connection the study has been done to analyze the flow of visitors and skiers to Gulmarg and to evaluate the related requisite infrastructure there. The various opportunities that are available to Gulmarg to emerge as an international ski destination and the various challenges that are in this regard are studied through this research work. The study is primarily based on primary data although secondary data have also been used to complete the study. The outcome of the study is that Gulmarg can emerge as a leading Ski destination of the world provided it keeps pace with the technology and keeps control on pollution.*

Keywords: *Skiing, Gulmarg, Slopes, Challenges, Opportunities*

INTRODUCTION

Throughout history, travelling for sport is evident whether it involved journeying to the next village to play a game of football or in recent times (as mountains became an attraction instead of an object of fear) to ski (Matley 1981). De Knop (1987) identified a sport tourist as an individual who participates in sport on holiday and he identified three types of active sport vacations: (1) the pure sport holiday, such as a dive trip (2) taking advantage of sports facilities at a holiday destination, where sport is not the primary purpose of the trip; and (3) the private sporting holiday, where the tourists takes part in non-organised sports activities such as volleyball on the sand or beach cricket.

Skiing would be seen as a pure sport holiday in most cases; however, there is an increasing market for the winter holiday, particularly amongst older groups, where sightseeing, spa and skiing all form equal parts of the same holiday where sports may not be the primary purpose. Schreiber (1976) was one of the first to develop a profile of the active sport tourist and found that “the sport traveller is more affluent, better educated and more active than other travellers”. This has been supported in further studies of the ski market, and it is indeed often the perception of skiing that you need to be affluent both to go skiing and to purchase all the equipment although this is not necessarily the case. Kaae and Lee (1996) conducted a study to compare alpine skiers with cross

country skiers and found that both groups were relatively affluent and well educated in comparison with other tourists. Redmond (1991) suggests that the development of sport tourism has been nurtured by the ascent of a highly specialised global leisure industry flooding the marketplace with high tech sports equipment and he argues that “modern technology has served to create an international sporting playground for the reasonably affluent athletic tourist”.

Over the years there has been a tremendous growth in skiing as a sport and most of the European ski resorts are getting over crowded. The Alps of the good old days are missing as the Ski stations at many places have been turned into ski factories with mile long queues on ski lifts. The snowline has also considerably receded forcing these people to go higher up to glaciers for skiing. This makes Kashmir the future ski area of the world and in many ways better than the European skiing resorts.

Different tourist spots like Pahalgam, Sonmarg etc., offer many opportunities for developing more skiing resorts in Kashmir. Powdery snow of Kashmir provides ideal conditions for having unique and ultimate skiing and snowboarding experience to the adventurers interested in this kind of adventure activity. As the focus of this study is Gulmarg, so the various opportunities available to Gulmarg as an international Ski destination and the challenges ahead in this aspect are the areas of concern of this paper.

* Assistant Professor (Tourism & Travel Management), The Business School, University of Kashmir, Jammu and Kashmir, India. Email:

Objectives

Gulmarg is a world famous tourist destination. It projects its various faces through the various seasons in a year. In winter, it emerges as the white gold destinations providing mesmerizing views before visitors. The study of Gulmarg regarding Skiing has been done with the following objectives in mind.

- i. To study the emergence of Gulmarg as a National Ski destination.
- ii. To study the state of infrastructure available in Gulmarg for Skiing.
- iii. To analyze the flow of visitors to Gulmarg and the requisite facilities available for accommodating them.
- iv. To look into the opportunities available to Gulmarg as an International Ski Destination.
- v. To highlight the challenges before Gulmarg to emerge as an International Ski Destination and the suggestions to tackle them.

Methodology

The study has been done through an intensive study by the use of both primary and secondary data. Primary data collection was done by having various discussions with locals, tourists and officials and the field surveys were done before during and after the winter tourism activities at Gulmarg. Discussions regarding Skiing in Gulmarg which were done with the stakeholders figured around infrastructure and future development of Skiing in Gulmarg. Various field surveys were conducted to assess the preparedness of government for winter sports particularly Skiing, state of infrastructure for skiing during the winters, involvement of public and private players for skiing in Gulmarg. Numerous interviews were done with locals, service providers, and government officials. Interviews and feedback was taken from skiers, local, domestic and international. Experience and suggestions of foreign skiers were also incorporated in various parts of this study. After completion of primary study, the data was analyzed and evaluated before incorporating it in various parts of this study. Secondary data used for this study comprises of the study material and data given by J&K Tourism Department, J&K Cable Car Corporation, websites of countries having skiing as a major sports attractions, world ski federation, and information from magazines, journals and books on winter sports and Skiing.

HISTORICAL BACKGROUND OF SKIING

The birth of skiing is commonly associated with the Norwegians. Rock carvings of two skiers have been found

in Norway that dates back to 2000 B.C. Modern Skiing is said to have been started in 1820 by Sondre Nordheim, a Norwegian from Telemark (McLennan, 2000). Later in the century, the first winter mountain holidays started in St. Moritz, Switzerland (Cockerell, 1988), and the British upper classes swiftly made skiing a fashionable winter pursuit. In 1905, Skiing was included in the Olympic Games although not as a recognized event. This inclusion was in response to a growing interest in skiing as a sport, and a desire on the part of destination managers and developers to keep ski sites operational for the winter season. In the process of developing this strategy, the concept of a broader set of physical facilities and a more sustainable market base for skiing is believed to have originated (Williams, 1993).

In 1924, skiing was introduced as a formal event at the Olympics in Chamonix, France. It was highlighted again at the 1932 Olympic Winter Games in Lake Placid, New York. These two occurrences helped to place skiing at the forefront of winter recreational activity on both continents and gave a push to its development as a major contributor to winter-based tourism (Liebers, 1963).

EMERGENCE OF GULMARG AS A NATIONAL SKI DESTINATION

Skiing at Gulmarg had become very popular during the pre-independence years. The resort used to host two major skiing events, one each during Christmas and Easter. In 1938-39, about 500 skiers are said to have participated in Christmas and Easter ski races. Gulmarg's atmosphere was identified with European ski resorts of the 1940's and 50's - the 'Alps of good old days'. It has good sunshine as well as good snow. The Ski Club of India was established by Major Metcarp and Major Hadow, two British Army Officers, in 1927 at Gulmarg. Mr. B. N. Pestonji was its first Secretary. During those days, the famous British Sports Equipment Firm, the 'Lilywhites' introduced some trophies for various ski competitions. One of the ski slopes above Khilnarmarg is still called the 'Lilywhite Slope'. Gulmarg had at that time two hotels and some chalets. There was a Cinema and a Golf Club House with two eighteen hole courses. One could get everything aristocratic and fashionable in the Bazaar of Gulmarg directly imported from all parts of Europe. Families of some of the British Army Officers would come to Gulmarg simply to buy these goods. Marion Doughty in her travelogue, "A foot through Kashmir Valley" makes a special mention of the 'Gulmarg Tea Dance' and the preparations she had to undergo at the British Residency in Srinagar for participating in the event. The departure of British in 1947 threw the resort into total oblivion. Skiing completely vanished from Gulmarg.

The establishment of the high Altitude Warfare School of Indian Army revived the activities of winter sports

again. Gulmarg, along with Kovalam were the first ever projects selected by Government of India for integrated tourism development in the country. GOI made out a plan for converting Gulmarg into a Ski Resort of International standards as a result of which a National Ski School was set up and 'Gulmarg Winter Sports Project' was launched. Even UNDP had got interested and had donated ski lifts, equipment and assigned an Austrian Expert, Otto Santner, to render advice in the setting up of the resort. Dr. Jens Krause, an Austrian ski teacher was appointed the first Principal of the Ski School who trained the first batch of National Instructors in Gulmarg.

As per the Department of Tourism Government of J&K, a large number of skiers from Hong Kong (the British ex-pats) and Australia used to visit Gulmarg in 70s and 80s. There would always be few hundred foreigners on the slopes. The greatest attraction for them was to have a white Christmas and ski in the Himalayas. They would trek for 4 hours to reach to the top of the mountain, Apharwat and then take half an hour to ski down back into Gulmarg. They have written that the view of the Himalayas and even Karakorum Range including peaks of Nanga Parbat and K-2 while skiing down is unmatched anywhere in the world.

During 1998, Gulmarg hosted the first National Winter Games of India, for which the facilities were enormously improved and upgraded. The resort facilities were further improved and upgraded for the 4th National Winter Games, which were also held here during 2003-2004. Thereafter, every year National Winter Games are held at Gulmarg. Winter Games Federation of India has declared Gulmarg as the 'Winter Games Capital of India'.

Environment for Skiing at Gulmarg

Skiing is a charming and exciting sport. The skiing season in Gulmarg usually commences just before Christmas (mid December) and continues till ending March. Different types of skiing events are held in Gulmarg like, Alping, Nordic (Salalom, Giant Salalom, Super, Gaze, Tarbey, Bathalom, Cross Country).

Snow-cover in Gulmarg: Snow of Gulmarg is considered as the best for different types of skiing. It is powdery and that is considered as best snow for varying activities like alpine skiing, cross country skiing, etc, and is preferred by the expert skiers all around the world. Further, good quantity of snow fall is an additional benefit for skiing in Gulmarg which is an attraction for domestic and foreign skiers.

Skiing Slopes of Gulmarg: Gulmarg is well suited for learning skiing. It has some of the best slopes for beginners, intermediate and advanced skiers, almost all serviced by ski lifts and chair lifts. Most of the skiing activities are centered on these slopes, which have ski runs ranging from 200 to

900 metres (Department of Tourism, Government of J&K). Among the numerous slopes are some which are not serviced by ski lifts. These are quieter than those immensely popular with average skiers. Trained skiers take to these slopes and even trek in the snow for several hours to the top of the Apharwat Mountain to make a descent lasting no more than 30 minutes.

Lifts for Skiing: Four drag lifts and one T bar are available in Gulmarg for skiing. These are used by the skiers (domestic and international) and trainees undergoing training in basic, intermediate and advanced skiing courses. Recently a Chair lift upto Kongdoori mountain has also been made functional. In addition, Gulmarg Gondola service is also available for Skiers and tourists.

Gulmarg Gondola: With the setting up of the Gondola Cable Car, Gulmarg has become the highest lift-served ski resort in the world providing a downhill ski run of 5.2 km from a height of about 14,000 ft in the Apharwat range. The Project basically comprises of two phases, Phase- I is from Gulmarg to Kongdoori Mt. and Phase II from Kongdoori Mt. to Apharwat Mt. Phase I takes visitors to an altitude of 3099.60 meters atop Kongdoori mountain and Phase II takes visitors to an altitude of 3979.50 meters atop Apharwat mountain. After the completion of Phase II of the project, the Gulmarg Gondola become one of the highest and largest ropeways in Asia having a total aerial distance of 5 kms and the section is going to boost the winter tourism at Gulmarg.

Heli-Skiing: Heli-skiing was introduced in Gulmarg, for the first time in India during mid 1980s in collaboration with the world renowned French skier, Sylvain Saudan of Himalaya Heli-Ski Club of France. For this highly exciting sport, skiers are taken to the top of mountain ridges by helicopters from where they ski down the immense Himalayan slopes. Initially, the program was started at Apharwat in Gulmarg. Subsequently, other sites in the Kashmir Himalayas were also used for the purpose. The program was suspended during the 1990's but now it is being revived again in collaboration with Sylvain Saudan's Himalaya Heli Ski Club. Presently Heli skiing service of Gulmarg is run by a private firm located in Gulmarg.

Skiing Equipments: Good quality equipment including skis, boots, sticks, gloves and goggles, are all available on hire from the Government-run ski shop. Private ski shops also provide these skiing equipments on rent. Trained instructors (both government and private) are available at hand for guiding amateur skiers. Modern equipment like Kasse Bohrer Snow Beating Machines (for preparing skiing slopes) and snowmobiles have been imported for skiing purpose.

Recent Developments for Skiing at Gulmarg: The recent efforts of the State Tourism Department in promoting Skiing at Gulmarg is a very welcome step in tapping the extensive

potential we have for the development of Skiing in Gulmarg. Some of the recent developments in this regard are:

- State of the art 450 mtr long Drag Ski-lift with carrying capacity of 720 skiers per hour in eastern slopes of Gulmarg. The lift's naming after the historic Mount Harmukh is highly appreciable.
- Heli-Ski Port for development of Heli-Skiing.
- Ski Rescue Base with control room and eco-friendly Bio-digest toilet block at Kongdori.
- Repairing of the 30 year old Puma lifts and installing the lights on all ski-lifts for night skiing.
- Tourist Information Centre with modern amenities.

TOURIST ARRIVALS IN GULMARG

Gulmarg is a famous tourist spot of Kashmir. Tourists visit this place through out the year. In summers, Gulmarg turns into a meadow of varied colors of flowers which attract tourists from far and off. In winters, this white gold destination is a dream spot for every domestic and foreign tourist. It is the only tourist spot of Kashmir which has frequently received tourists even during the days when tourist movement to Kashmir was almost nil.

Table 8.1: Tourist Arrivals in Gulmarg 2006 – 2014

Year	Domestic	Foreign	Local
2006	390311	8101	104247
2007	330466	20109	268968
2008	422756	12991	287934
2009	308136	6003	270123
2010	319545	6773	262701
2011	990460	7282	425219
2012	1093140	7481	855034
2013	1896295	10964	943843
2014	1412472	5976	300220

Source: Tourist Information Office, DOT, J&K, Gulmarg

It can be gathered from the table that the tourist flow to Gulmarg has been steadily increasing. Domestic tourist flow has increased from 3 90 311 in 2006 to 14 12 472 in 2014. In the year 2013, Gulmarg has received the maximum number of domestic tourists i.e., 18 96 295. In case of foreign tourist, who mostly visit Gulmarg in winters for skiing and snowboarding, the figure has increased from 2 109 in 2007 to 9 053 in 2013. Foreign tourist arrivals during 2014 were 5376. Maximum foreign tourist arrivals have been recorded in 2008 with 12 991 foreign tourist arrivals. In case of local

tourists, the flow has increased from 1 04 247 in 2006 to 9 43 843 in 2013. Local tourist arrivals during 2014 were 3 00 220.

Most of the tourists who visit Gulmarg take a ride of Gandola. Gandola in Gulmarg is the highest cable car in the world. Tourist use Gondola either for the purpose of recreation or to reach the top of Agharwat or Kongdori mountains in order to ski or snowboard downhill. Gondola remains very busy through out the year by local, domestic and international tourists taking ride of this world famous cable car for enjoyment or sports.

Gulmarg Gondola Project comprises of two phases, Phase-I is from Gulmarg to Kongdori Mt. and Phase II from Kongdori Mt. to Agharwat Mt. Phase II is mostly used by skiers and snowboarders during the winter period for skiing and snowboarding and hence the below given table giving figures of visitors using second phase during the months of December to March is indicative of the movement of skiers and snowboarders (mostly foreigners) for downhill skiing and snowboarding. Month-wise breakup of the number of visitors who used Gandola during the year 2012 is given below in table 8.2.

Table 8.2: Number of Visitors who used Gondola service in Gulmarg during the year 2012

Month	Phase I	Phase II	Total Phase I & II
January	11016	0	11016
February	22468	0	22468
March	36938	5523	42461
April	68729	9659	78388
May	105109	31832	136941
June	140397	43247	183644
July	83092	26682	109774
August	37294	16928	54222
September	33609	13585	47194
October	57718	19076	76794
November	54020	18132	72152
December	24470	3968	28438
G. Total	674860	188632	863492

Source: J&K Cable Car Corporation, Gulmarg, J&K

From the table 8.2, it is evident that the number of visitors who used Gondola has been maximum during the months of April, May, June and July. The reason for it is that the local visitors visit Gulmarg during these months. During the winter period from December to March visitors to Gulmarg visit Gulmarg for winter tourism activities and mostly comprise of domestic and foreign tourists. Foreign tourists mostly visit Gulmarg during the winter period.

ACCOMMODATION UNITS IN GULMARG

Different types of accommodation options are available to tourists in Gulmarg ranging from Hotels to Guest Houses. Hotels are divided into three categories A, B and C. There is always shortage of rooms in Gulmarg when it comes to peak season of tourist arrivals. Table 9.1 gives the number of Hotels/Guest Houses along with number of rooms available as given below:

Table 9.1: Different Categories of Hotels/Guest Houses in Gulmarg

S. No.	Category	No. of Hotels	No. of Rooms	Bed Capacity
1	A	13	375	750
2	B	11	219	438
3	C	01	08	16
4	Guest Houses	-	31	62
	Total	25	633	1266

Source: Tourist Information Office, DOT, Gulmarg, J&K

From the above given table, it is evident that the accommodation scenario in Gulmarg is very poor. As per the record of Department of Tourism Government of Jammu and Kashmir, there are only 633 rooms with total bed capacity of 1206 available in A, B and C category hotels in Gulmarg registered with the department till May 2015. Guest houses provide only 31 rooms with total bed capacity of 62 rooms for the purpose of accommodation. JK TDC provides accommodation in Gulmarg through its 15 hutments. Further, there are 8 dormitories and 16 Paying-guest accommodations available for the purpose of accommodation in Gulmarg. There is only one star category accommodation that has been recently opened for tourists in Gulmarg that is The Khyber Himalayan Resort and Spa. Taking all these accommodation establishments into account, the accommodation scenario at Gulmarg can be termed to be very poor because these accommodation establishments can only cater to the demand of only few thousand tourists.

Due to the lack of accommodation during the peak season, most of the tourists have to either return back to their home or travel back to Srinagar for night staying. This in turn becomes an obstacle for more days spent at Gulmarg as well as turns to be an aspect of bad word of mouth publicity for accommodation scenario in Gulmarg. During summers tented accommodation provides an opportunity for changing the accommodation scenario of Gulmarg but during winters it becomes difficult to accommodate the winter tourism enthusiasts which becomes a reason for many problems.

MARKET SIZE OF SKIING:

According to the 2014 International Report on Snow & Mountain Tourism (Laurent Vanat), there are about 80 countries in the world where skiing is offered as a tourist activity. Among these, roughly 70 countries offer open-air ski areas, the balance having only indoor facilities. Even if snow fields are much more numerous, about 2'000 ski resorts have been identified worldwide. Besides the major ski destinations in terms of skier visits, there are a number of other, smaller destinations, where skiing has been an industry for a long time, or is currently developing. The total number of skiers worldwide was estimated based on both the number of skier visits in the various countries as well as on the national rates of participation. The figure is currently estimated to be at 115 million and seems to be growing over the long term.

Market share of worldwide skier visits: The Alps are the biggest ski destination in the world, capturing 45% of skier visits. The second biggest destination is America (mostly North America), accounting for 21% of skier visits worldwide. Asia & Pacific used to have the same market share as America. In the long term, countries such as India and Pakistan may join them and contribute to increasing the weight of Asia in the international spread of skier visits.

International Skier's flows: The international flow of skiers is primarily concentrated within Europe. The number of skiers using long haul flights to go skiing is rather limited. Ski is mostly based on the domestic markets and the national customer base is very strong in most of the big players.

Future trends in market share: The regions of Eastern Europe and Asia & Pacific provide for 36% of the skiers worldwide, but only produce, at this stage, 23% of skier visits. These regions clearly represent the future growth potential of the market. They may end up reaching the weight equivalent of the other major regions in terms of skiers by the year 2020.

As per the report, in India, "There are two major ski areas in the country. The largest one is Gulmarg, in the State of Jammu and Kashmir. It is one of the most famous in this region of Asia. Runs range from 2'600 to 3'200 meters long. The ski area got equipped a few years ago with a 2-section gondola, famous for carrying skiers to an altitude of nearly 4'000 meters above sea level at its top station, a world record. A quad chairlift at the same high-altitude was recently added, also making it the highest in the world. The area offers more than 1'000 meters of vertical drop, with pristine slopes. The village of Gulmarg lies at 2'500 meters above sea level. The ski area is dominated by the 4'124 meter Mount Apharwat. This gives the place a magical feel for skiers. The resort is one of the few places on Earth where there may be 2 continuous weeks of snowfall. Furthermore,

it offers a variety of runs: skiers will enjoy the high slopes of Aparwath, which offer magnificent views of K2 during good weather, or the runs in Kongdori. The best time to come to Gulmarg is from mid-January to mid-February, especially for skiers looking for a balance between a stable snowpack, combined with the powder snow down to Gulmarg, in the valley.”

OPPORTUNITIES AND CHALLENGES:

We have the possibility to set up over a dozen world class ski resorts in our mountain areas. The terrain, snow conditions, slopes and the climate are ideal and in some respects better

than the Alps. Even though there are many challenges confronting us which need to be addressed in right perspective and in time so as to provide global standards of skiing in Gulmarg and give competition to the leading ski destinations of the world. The various opportunities that are available to us for the development of Skiing at Gulmarg and the challenges in this regard are summarized below:

IMPACT OF CLIMATE CHANGE ON SKIING:

Mountain regions have been identified as especially vulnerable to climate change. The rapid retreat of glaciers, important changes in snowfall amount and frequency and

Opportunities	Challenges
<p>i) Easy accessibility: Gulmarg is probably the nearest resort of its type and size to a jet airport. No other resort in this part of the world is so easily accessible to the International tourist traffic. Even in the last century Gulmarg was considered by the British an important ski resort this side of Suez.</p>	<p>i) Poor Roads: Roads leading to and within the Gulmarg are very narrow. There is an urgent need to widen the roads in Gulmarg. Particularly in winters during the peak season of skiing, narrow roads pose many hardships to reach Gulmarg as well as move within the Gulmarg.</p>
<p>ii) Skiing types: The possibilities for winter sports in Gulmarg are immense. Apart from the normal piste skiing, the off piste domain for Ski-mountaineering, Cross Country skiing, downhill skiing and Biathlon is exhaustive.</p>	<p>ii) Expansion of Ski Area: Expansion of skiing area in Gulmarg is a case of Concern. In case more areas in Gulmarg are opened for different kinds of skiing there measures are to be taken to regulate and manage them properly. Further, Gulmarg lacks in the availability of well groomed slopes of standard width.</p>
<p>iii) Accommodation: With the upcoming four lane highway, Gulmarg would be less than an hour's drive hence the accommodation can be easily supplemented by putting up the prospective skiers in Srinagar itself. Building new accommodation should neither be supported nor allowed because that will pose danger to the mountainous area of Gulmarg and will also hinder its aesthetic carrying capacity.</p>	<p>iii) Shortage of Basic Amenities: Shortage of essential commodities during winter, like, water, wood, electricity, kerosene oil, etc, poses many challenges for living in Gulmarg during the harsh weather conditions.</p>
<p>iv) Powdery Snow: The snow in Gulmarg is of Powdery type which lasts for a longer period of winter which is not the case with the snow in European countries. Although snow at some European ski resorts is also powdery but it lasts for a very shorter period of time. Further Gulmarg receives a good quantity of snow fall, an estimated 42 feet (550 inch) during winters.</p>	<p>iv) Late snow fall: Due to the increasing pollution and illegal constructions, snow fall in and around the Gulmarg has also effected to a large extent. The result is that snow fall in Gulmarg occurs very late which survives for a shorter period of time.</p>
<p>v) Natural Ski slopes: Most of the ski destinations around the world are having the built slopes but slopes of Gulmarg are natural. These natural slopes of Gulmarg are suitable for different types of skiers ranging from beginners to expert skiers. The slopes of Gulmarg are of different gradient and hence are suitable for conducting different kinds of ski events. The slopes of Gulmarg pass through lush green forests of Himalayas such is not the case with slopes in Europe.</p>	<p>v) Concern for Carrying Capacity: The slopes in Gulmarg are becoming congested day by day as there is no concern for carrying capacity of the destination. Management of skiers at the slopes is a case of concern.</p>
<p>vi) Skiing in Himalayas from 14300 feet: Skiing in the mighty Himalayas is a unique experience in itself. Foreign skiers love to ski down from some of the world famous Himalayan Mountains. Skiers in Gulmarg can ski down from 14300 feet (Apharwat Mountain) where as skiers in European slopes can ski down at most from 13000 feet (Mount Alps) only. The passes in Gulmarg are situated at a height of 16000 feet which is also ideal for expert skiers and extreme skiing.</p>	<p>vi) Security for Skiers: Skiing from the highest mountains of Gulmarg and off piste/back country skiing requires proper management. Controlling skiing in areas which are dangerous and not under surveillance needs proper mechanism and surveillance.</p>

<p>vii) Lifts and Cable Car: As a ski resort, Gulmarg provides many facilities for skiers in terms of lifts. It has some of the best lifts right upto 4000 meters. Gulmarg Gondola service provides access to some of the top mountains in the world (Kangdoori and Apharwat). Skiers now in Gulmarg need not to spend hours to reach on the top of these mountains to ski downhill. They can avail the facility of this cable car to reach at the top of these mountains.</p>	<p>vii) Inadequacy of Ski Lifts: There is only one Cable car, one chair lift and some surface lifts for beginners. There is lot of rush at these lifts. Long lines of tourist skiers and training skiers can be seen at the lifts. There is a need to increase the number of lifts in Gulmarg for trainers, expert skiers and tourists.</p>
<p>viii) Ski equipments: Different types of ski equipments like, skies, sticks, ski boots, goggles, safety gadgets, snow boards, etc, available on hire both from government and private players.</p>	<p>viii) Old Ski Equipments: Most of the ski equipments available at Gulmarg for hire are very old and outdated. These equipments are changed after a long gap of time which makes these equipments very difficult and dangerous. Lack of technically and technologically sound equipments is an immediate area of concern.</p>
<p>ix) Best Accommodation: Night staying accommodation is available in Gulmarg from non-graded to star category hotels. Different kinds of accommodation facility is available in Gulmarg for different categories of tourists and skiers.</p>	<p>ix) New Constructions: New Hotels are coming up in the area around the Gulmarg bowl which puts excess pressure on the ecology and environment of this area. Esthetic carrying capacity is not considered for any kind of construction in Gulmarg. Management is least bothered about it.</p>
<p>x) Heli Skiing: Heli Skiing facility is available in Gulmarg from private operators. Skiers interesting in this adventure are taken to the top of mountains in Gulmarg and they ski downhill under proper surveillance provided by the same operators.</p>	<p>x) Heli Skiing operations: Heli Skiing operations in past have suffered due to lack of proper management and permission to the operators.</p>
<p>xi) Gulmarg Gondola: Gulmarg Gondola become one of the highest and largest ropeways in Asia having a total aerial distance of 5 kms. Skiing in Gulmarg is possible from about 14000 feet due to availability of Cable car.</p>	<p>xi) Technological Advancements: Technological advancement will continue to affect many areas of the ski industry. These include bigger and faster ski lifts and even centrally heated cabins. Equipment is improving all the time with shaped skis proving to be a great success, and designs are being developed for computerized bindings. Titanium is now being used to ensure lightweight skis, and advances in lightweight, waterproof and breathable fabrics are improving the performance of ski clothing. There are continuing technological breakthroughs in attempts to make artificial snow in temperatures upto 30 degree centigrade.</p>

shifts in biodiversity amount and distribution are some examples that demonstrate the sensitivity of mountain ecosystems (Beniston 2003, IPCC 2007). In recent years many studies have analyzed the impacts of climate change on the ski industry in regions e.g such as Sweden (Moen & Fredman 2007), Japan (Fukushima et al. 2003), Australia (Galloway 1988, Bicknell & McManus 2006), South Korea (Heo & Lee 2008), etc, indicate to a greater or lesser extent that climate change will lead to impacts such as ski season length reductions, loss of skiable areas and drop of visitors both in low altitude and low latitude ski resorts.

A major deterrent to the further development of the ski market comes in the form of growing environmental concerns about human pollution and traffic congestion in the mountains and the intensive use of natural resources by skiers (Hudson, 1995). The continual use of the same runs, together with the pressure to expand skiing areas, has brought skiers and conservationists into conflict. Another major challenge to future development of skiing is global warming. Temperatures in many ski resorts have risen by 1 degree Celsius over the past fifteen years, and with a predicted

continuation of rising global and regional temperatures, skiing destinations will experience less snowfall and shorter skiing seasons.

Climate change has taken its toll on Snow and Skiing activities at Gulmarg also. Snow fall which usually used to start from the month of November now takes place very late in the month of December or January. This late snow fall takes place in the form of watery type snow. Late snow fall is also subject to a different or a bit warmer temperature as a result of which the snow lasts for a shorter period. Snow in the months of November usually lasts for a longer period of time. Change in climate has also taken its toll on the glaciers of Gulmarg. They have started melting and are decreasing at a faster pace.

Different measures needs to be taken for regulating the activities in and around ski areas. All activities of the skiers and visitors should be monitored and fines should be imposed and enforced for any kind of pollution. Transportation should be restricted upto the entry point. Any expansion of the skiable area should be done under the impact analysis

studies and permission should be given if it is not putting any undesirable impacts on the environment of the area. Accommodation establishments should follow renewable and green practices in their operations. Skiing activities in Gulmarg needs to be regulated in terms of the carrying capacity of the area and any kind of development in the Gulmarg bowl so as to avoid the adverse impacts of climate change in this part of the world.

CONCLUSION AND SUGGESTIONS:

Gulmarg has been called as the heartland of winter sports in India and has been rated as the seventh best skiing destination of Asia. Diverse and extreme terrain provide a varied and great experience to skiers. We get a good amount of snow on our mountains. Apart from good snow, the most important infrastructure for a potential ski area is the infrastructure related to actual skiing. These would comprise long and good ski slopes of basic, intermediate, and advanced category; machinery for grooming the slopes; mechanical lifts enabling skiers to go to the top of the slopes, and avalanche controllers as well as ski patrollers for rescue. These are mandatory requirements for operating a safe world class ski resort. Some of the other steps that can be taken for making Gulmarg one of the leading ski destinations of the world are:

(i) Ski Patrolling: Security is one of the most important aspects when it comes to skiing particularly Off Piste Skiing and Heli Skiing. Many foreign tourists select Gulmarg for Off Piste Skiing. Expert ski patrolling teams needs to be involved for monitoring these kinds of skiing which is mostly done by crazy foreign skiers. Proper monitoring of the skiing by skiers needs to be done by the use of modern equipments which are used for monitoring in mountains and boarder areas.

(ii) Availability of Modern Equipments: Due to the use of old and outdated ski equipments which are available for hire in Gulmarg had led to many accidents on the groomed ski slopes of Gulmarg. There are many accidents involving fractures, sprains, and twists, etc that are taking place every year. Modern ski equipments with special bindings and ski boots has reduced to a great extents such accidents. So government needs to procure these modern equipments for skiing, surveillance, making slopes, snow beating and lifts.

Proper arrangement of providing medical facilities under the guidance of experienced doctors need to be arranged particularly during the winter months so as to avoid the complications that occurs due to the unavailability of timely treatment at the slopes and in Gulmarg.

(iii) Slopes of varied lengths: All ski resorts have a choice of specially groomed slopes of varying lengths and

difficulty; Green, Orange, Red and Black. Green being most easy for beginners and Black being most difficult for experts. There is tremendous choice for making slopes of different lengths and difficulties but yet not much has been done about this aspect. It would be worth while for the department of tourism to explore the possibilities of creating some ski slopes conforming to the standards set up by the International Ski Federation (FIS).

(iv) Lift services: In order to avoid the rush and long queues of skiers at the slopes for availing lift facility in Gulmarg, the number as well as the frequency of the lifts needs to be increased. The available lifts needs to be remained open throughout the day and for late night skiing also.

(v) Local Involvement: Any type of proposed development at any tourist spot should involve the participation of locals so that the development should not bring any local resentment. Locals should be involved both in decision making and providing services. Involvement of locals in decision make and formulation of any development plan makes the guest-host interaction conducive and does not breed any ill-well by hosts towards the guests.

(vi) Employment Avenues/Local Operators: Skiing in Gulmarg helps in solving the unemployment of the locals particularly the youth of this area. More and more job opportunities needs to be created by capacity building of the local youth in various areas like, ski instructors, equipment sellers, sledge pullers, souvenir vendors, travel agents, transport operators, labourers, etc. They need to be trained for providing quality services and helping the guests by letting them understand the importance of repeated and satisfied guests.

(vii) Use of Technology/Internet: The internet is providing new and powerful ways for resorts and consumers to communicate. As technology advances and internet usage expands, the power and versatility of this medium as marketing and communication tool is sure to grow. Gulmarg needs to provide as effective and attractive website. This web site should be a one stop place for a prospective skier to Gulmarg. It should provide the information about weather, attractions, accessibility, accommodations, amenities, booking facilities, helpline numbers besides an area for queries/complaints and suggestions. In order to keep pace with the advancements in Skiing and snowboarding technological intervention in the need of hour and solution to many problems. The use of lifts, gondola, ropeways, hiring skiing equipments, etc, for the use of skiers and snowboarders should be managed through electronic cards.

(viii) Poor Roads: Accessibility is one of the three most important aspects of success of any tourist destination. Skiers face a lot of inconvenience to reach and then move within the Gulmarg bowl. Roads in Gulmarg are narrow and in very poor condition. Narrow roads which pose a serious problem during winters need to be widened. Besides, proper arrangement of regularly clearing accessible roads to Gulmarg during winters should be among the priorities of the government.

(ix) Shortage of basic amenities: Tourism is a service industry, any bad experience at one point spoils the overall experience of the tourists. Proper arrangement of heating and lighting should be made during winters. For it, enough quantity of firewood, kerosene, LPG, etc, should be made available in advance.

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