

# **RESEARCH PAPER**

# Conservation Issues of Sikh Gurudwara Guru Singh Sabha at Mansehra and its Tourism Potential

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PAPER INFO	ABSTRACT											
Received:	Gurudwara Guru Singh is one of the most sacred heritage sites											
May 27, 2021	of Sikhs, denoting their rule in the area. It is a masterpiece of art											
Accepted: August 20, 2021	and architecture along with religious significance. The											
Online:	objectives of this study are to highlight conservation issues of											
August 24, 2021	this Gurudwara, its tourism potential and to make it											
Keywords:	sustainable tourism destination. Data for this study was											
Conservation,	collected through primary and secondary sources. The study											
Gurudwara,	this Gurudwara, its tourism potential and to make sustainable tourism destination. Data for this study wa collected through primary and secondary sources. The stud reveals that the Gurudwara has a rich potential of tourism attracting thousands of tourists of diverse motivations bein located at a significant route but at the same time is under											
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Tourism Potential	attracting thousands of tourists of diverse motivations being											
*Corresponding	located at a significant route but at the same time is under											
Author	heavy threats of conservation issues and if proper measures are											
shabanaatif.25@g	not taken well in time, it will deteriorate rapidly vanishing a											
mail.com	whole chapter of Sikh history of the region.											

#### Introduction

Mansehra is known for its scenic beauty and rich cultural and archaeological heritage. Located at the junction of the ancient Silk Road, the region has been receiving and transmitting culture flow from all directions. It has witnessed to a number of historical events. It provided the gateway to Kashmir from India via Gandhara since the Mauryan times. King Ashoka inscribed here his edicts on rock like all important places of his way. Since then, cultural flow started here Marshall (1918). Mansehra has roots of its history deep into the Buddhist period. Chronologically, Mauryan came just after the Alexander. We have two appropriate inscribing the edicts of great Mauryan king, Ashoka. Archaeological evidence witnessed in the region with the continuation of Kushans, Parthians, etc. We have evidence of this Buddhist period spread in the whole plain (Pakkhal plain)

containing Mansehra, Shinkiari, Baffa, Khaki, etc. as major towns. Some are surveyed and some are waiting to be. Famous Buddhist sites are Zardheri, Bajna Stupa, Tanda, etc. (Yoshihide 2010); Sardar 1998). Hindushahi also ruled here for a long time. Even though area remained under the early Muslims, the Afghans and Mughals but only a few legends and evidence can be traced (Bahadur Khan 2001); (Sardar 1998)."The Sikh rule in Hazara commenced in the year AD. 1818 (fifteen years after Ranjit Singh had first asserted his independence of the Kabul empire, and seven years after he had seized Attock)" (*Gazetteerof Hazara District, 1883-4.* 2000). Despite their historical and religious importance most of the monuments in Mansehra have already lost their authenticity, while the remaining are in poor state of preservation. Therefore, there is a dire need to properly identify & analyse the conservation issues to these endangered historical buildings.

The present study focuses on one of the most important building known as Gurudwara Guru Singh Sabha in district Mansehra. Despite all its beauty and splendor, it is a neglected building that requires the attention of the Archaeology and Tourism departments and other respective stakeholders. Even though it lies in the center of main bazaar but no one from the local community bothers to take a detailed look. Historians, architects, lawyers, administrators, teachers, students, and even its own visitors that visit it as a library, just pass through. No major publications or the research are made to recover its floor lying in the limbo of oblivion.

#### Architecture of the Gurudwara

Plan of the building is rectangular. Height is nearly 42 feet, the width is nearly 32 feet and length is about 63 feet. Entrance is provided in the centre of the first floor. The entrance is flanked by two wide openings one on either side. The entire building is supported by beams carried by round pillars. However, the side pillars are square in shape. The openings are closed through frets wrought in two panels. The frets are provided with marble posts in the form of railing. All the columns are having square bases, round shafts and brackets supporting the beam. The beam is having the inscriptions in Gurmukhi Script.

There is a highly elaborated facade on the southern side of the building. It fronts the road passing through the bazaar named as Kashmir Road. On viewing frontally it's a facade of two floor high building.



Figure 1 - Map of Gurudwara Guru Singh Sabha Mansehra (courtesy: Google map)

The ground floor has three openings closed by windows with square panels. The windows are topped by crowned type elements supported through small pilasters. Each of the pillars supporting the beams is decorated with two pilasters, one fluted while the other having decorative elements. The first floor has three balconied windows. The openings are in the arched shape, each of the windows is crowned by a domical roof having railing at the base.

The main entrance leads to veranda, where another doorway is provided to the hall. The wooden door and its flanked elements are richly ornamented with floral and geometrical motifs. Internally the hall is rectangular in shape having the sacred canopy at the end. The canopy has three round arches supported by round pillars. The central one is projected at the front.

#### Plan of the Gurudwara

The buildings of the Sikh shrines, when classified according to their plan, are of four basic types: the square, the rectangular, the octagonal, and the cruciform. On the basis of the number of stories, Gurudwaras have structures, which may be one, two, three, five or nine stories high. One comes across several interesting variations of Gurudwara designs worked out on the permutations and combinations of the aforesaid basic plan and elevation types. Drawings of the Gurudwara are given below:



Figure 2 - Ground Floor Plan (courtesy: Mr. Adnan Anwar)



Figure 3 - First floor plan (courtesy: Mr. Adnan Anwar)



Figure 4 - Second floor plan (courtesy: Mr. Adnan Anwar)



Figure 5 - The fantastic artwork and Architecture can be seen

### **Review of Literature**

Gupta (2013) has described in his article that climate is the act of all atmospheric events such as rainfall, temperature, wind, air pressure and humidity etc. The alterations about natural environment and climate observed by author in Chhattisgarh state that negatively affected the monumental buildings, the cultural riches of the state that they have been worn out by various natural effects for a long time. Author has suggested that precautionary measures should be taken against deteriorations on the monumental buildings. He investigated and identified Climaterelated decay factors on the monumental buildings of Chhattisgarh resulted from such as temperature differences between summer-winter and day-night, water movement at the building due to capillarity, abrasive effects of rainwater, salt and some chemicals involved in water, particles carried by wind and air pollution.

Rehman (2011) highlighted the conservation issues of the world heritage sites at Lahore. His paper focuses on three contextual investigations worked around 1640's specifically Shalimar Garden, Shish Mahal, and Jahangir's tomb. The first two sites have been declared as World Heritage sites.

Farooq(2010) says that the mechanism of decay and deterioration of archaeological monuments is a complex process which results from the interaction of many phenomena including physical and chemical nature of building constituents, climatic changes, fluid movements, air pollutants, humans, light, and many biological agents.

Ahmad (2009) in his report mentioned and highlighted the distinguished architectural features of the Gurudwara in detail, Sikh history in Hazara division, its decoration, paintings, and materials.

Noreen (2009) In her article has dealt with environmental institutions and laws related to the cultural heritage. She is of the view that the cultural properties rapidly degrading due to a variety of reasons. Therefore, she described that we urgently need to develop institutions and enforce laws to overcome the environmental problems. In this article, author gives historical overview of institutions and laws of environment in Pakistan. She also highlighted the changes that have taken place in this regard. At the end she has given her remarks and suggestions, which may help to improve the state of environment in the country.

Awan(2008) described that the conservation of Historic Monuments is a means of continuity of history as it keeps alive the cultural scene of that historic period to which it belongs. Pakistan is rich in a variety of built heritage and a large proportion of the valuable heritage is the monuments built with stone. He further described that all components of materials, used in the construction of historic buildings, can be categorized as being either organic or inorganic in nature/origin. Organic materials are derived from living things such as wood whereas inorganic materials are obtained from non-living substances such as stone and metal.

Singh (2007) has discussed the historic Sikh Shrines adorned with various art forms mainly situated in India. Author shed the light on the various art forms include 'Jaratkari' (inlaid stone) Mohrakashi (frescos, murals, or wall paintings), Gatch work (is a kind of stone -limestone or gypsum). Tukri work (pieces of glass), gold embossing and floor patterns. The paper highlights the philosophy behind these art forms, the society of the period, values, art skills and the personality of the people of the period. The paper also focuses on the history of art forms & their techniques and their present condition.

Qureshi (1994) in her report has discussed the negligence of important built heritage sites. She has pointed out the various conservation issues arose due to the negligence. These issues include structure deterioration by the dust, dampness and biological growth, lack of awareness and education. At the end she has given the recommendations to minimize the issues/threats.

Bhimbar (1984) in his article has identified and described the decay factors such as temperature, humidity, bio-deterioration, light, and air pollution in detail which have affected the historical paintings of Nepal. He has mentioned that temperature and humidity are very important factor of decay. Temperature plays an important role either to increase or to decrease the relative humidity of an atmosphere. In excessive dryness shrinkage and cracking develop in colour pigment and in excessive wetness promotes the fibers to swell and softening. He also discussed bio deterioration that caused by biological agents. He has observed the light and air pollution is also major cause of decay of historical paintings. He further discussed that the damaging effect of light on the painting is of two types. On one hand, chemical changes take place in the material of the paintings and on the other side bleaches out the colour which slowly changes the nature of the paint medium. According to the author, the most dangerous and damaging oxidant are ozone and sulphur di oxide. The dust particles suspended in the air when falls upon the painting surface gives abrasive effect.

Current study is first ever of its nature which sees the conservation issues of this important Sikh heritage and make it sustainable tourism destination in the region.

### Material and Methods

Investigating and analysing the archaeological monuments need a proper methodology and mechanism. The surface of the under-discussion monument is under constant decay and break down of building material of this monument is a serious problem. Keeping in view all these issues, the following methodology was followed in the present research.

### **Data Collection**

Basic research data collection was done by primary and secondary sources. Data was gathered from various sources that has been systematically observed, recorded, and organized. Primary and secondary sources are described below.

### **Primary Data**

Major sources for the primary data in this research are interviews and surveys. Structured and unstructured interviews were conducted about Gurudwara from librarian. Three field surveys were carried out to identify the major conservation problems causing decay to the monument. The data included pictures, measurement, and architectural drawings of the Gurudwara.

### **Secondary Data**

Literature review is an integral part of the whole research. Different books, journals and internet sources were consulted to conduct and formulate the research.

### **Tools Used**

The following tools were used during these field surveys:

• Thermometer

It is used to measure or indicate temperature.

• Lux Meter

Lux meter is a device used for measuring the amount of light. In photometry, this is used as a measure of the intensity, as perceived by the human eye, of light that hits or passes through a surface.

• Digital camera

It was used to take digital photographs of conservation issues of Gurudwara.

• Pen and notebook

The periodic observations were noted about the decay factors such as humidity temperature, rainfall, and light in the monument. Statistical data of one year of humidity, temperature, and rainfall were also collected.

#### Analysis of Conservation Issues in Gurudwara Guru Singh Sabha

Gurudwara Guru Singh Sabha, no doubt represents an excellent example of Sikh Architecture but despite its religious, political, historical and architectural significance, this monument has been exposed to both natural and human threats. Thus, being neglected this important masterpiece is rapidly losing its authenticity.

As mentioned earlier that the present study aims to investigate and analyse the Conservation issues in the said monument, during the three visits the following major issues were noticed.

#### Natural Threats/Environmental Factors

Nature has a great impact on cultural heritage. In favorable environment the building life prolongs but in unfavorable environment the building materials starts deteriorating which can cause serious damage to the building. The main environmental factors causing damage to Gurudwara are:

- Humidity & Rainfall
- Temperature
- Pollution
- Earthquake

The material used for construction in Gurudwara is brick & stone, which are porous material and can easily be affected by rain & humidity. During the monsoon season here in Mansehra, rain & humidity remain high. Due to capillary action, movement of water and salts can be observed on the first floor of the Gurudwara. Its location makes it prone to pollution. The monument is exposed to the carbon and other gases of the vehicles that pass through the road day and night in front of the Gurudwara. This has resulted discoloration of the entire facade of the monument.

#### **Thermal Expansion**

Thermal expansion of material occurs when there is frequent change in temperature. When the temperature increases the expansion occurs when temperature decreases contain humidity, due to this expansion and contraction of temperature cracks are observed, flaking occurred on the surface. This can be seen on ground floor and first floor of the Gurudwara.



Figure 6 - Graph of temperature of Mansehra for one year (courtesy: en.climatedata.org)



## Humidity and Rainfall

Figure 7 - Graph of Humidity of Mansehra for one year (courtesy: en.climatedata.org)



Figure 8 - Average Rainfall of Mansehra for one-year (mm) (courtesy: en.climatedata.org).

Humidity is one of the most important harmful factors against brick and stone construction as for as every construction material.

The acid rains threatening stones are carried by rainwater whose capillary rise inside the Gurudwara causes damage to the construction materials. There are two types of moisture ascending and descending noticed during the survey.

#### **Ascending Moisture**

This type of moisture is created due to penetration of water into the walls and its upward movement because of capillary action (Kanani & Zandi,2011).In Gurudwara ascending moisture was observed on the walls and roofs of the first floor especially in the season of monsoon. This type of moisture in Gurudwara is due to blockage of sewage and increase in the absorption capacity of the materials such as bricks. Erosion and abrasion of the walls of first floor are due to the ascending moisture. The presence of fungus was also observed on the walls due to lack of organic factors.

#### Pollution

Environment plays an important role in the degradation of tangible cultural heritage; hence, it was of utmost concern to study about climate and its possible effects on an historical building. The external parts of monument are vulnerable to environmental conditions such as light, rainwater and biological growth. Two of the major pollutants responsible for environmental degradation of cultural heritage are: a) particulate (soot, dust) b) gaseous (SO2, carbon emissions).

The front wall of Gurudwara is made from marble, due to heavy traffic movement discolouration of the walls can be observed.

### **Earthquake Effects**

Deep cracks were observed in the Gurudwara by the earthquake of October 8, 2005. The magnitude of this earthquake was 7.6 at Richter scale. Earthquake affects main entrance also because its level of floor is lower than other level of floor of the building. Vibration due to earthquake also caused minor cracks in marble.

Historical monuments and heritage sites have been exposed to undesirable human uses and interventions. Improper maintenance shows lack of interest of municipality for maintenance and cleanliness of building. During the visits to the Gurudwara, the following human interventions were noticed.

### Vandalism/ Graffiti

As Gurudwara Guru Singh Sabha was built by the Sikh community to carry out their religious activities. But after the partition, the Gurudwara was converted into a primary school. After that, it was taken over by the Police department and food department until 2002, when it was converted into a Municipal Library by the city Government. Thus, this building, being used for various purposes has also gone through many changes in terms of space and architectural elements.

In addition to alteration, the walls of the Gurudwara are also used for posting the pamphlets (for advertisement) by the local community, with the result; the monument is constantly losing its integrity day by day.



Figure 9 - Publicly misuse

#### **Past Interventions**

As mentioned earlier the building was under the use of different departments and intervened several times. After Independence the building served as a purpose of School in early 1960's as discussed above. It went under the jurisdiction of Food Department in 1976. It was then taken over by Police Department and after that a library in August 2002.Likely the building was furnished according to the requirements of police department, for example they painted the walls and staircases and turned most of the building part as blue. Gurudwara bears the scars of heavy fire. Due to that loss of property and missing antiquities were reported.

According to the librarian, most of the walls and floor parts are burnt due to smoke and fire in the building. The structural damages and muddled corners are clearly seen. The entire roof of the second floor is seen dark and dusky due to smoke stains.



Figure 10 - Chimney on the second floor



Figure 11 - Smoky black ceiling on second floor

#### Mismanagement

Serious mismanagement has been observed. Electric wires are crossing everywhere in the building across the floor, stairs, and walls as well as on the roof which spoils the appearance of building. It can also cause short circuit that can be dangerous for the building and other material in Gurudwara.



Figure 12 - Waste and garbage on first floor



Figure 13 - Black soot caused by the short circuit on the wall of the ground

#### **Damage to Structural Elements**

Serious structural damages were observed during examination of the Gurudwara. The main types of structural damages include roof beam, windows, doors, floors, and outer and inner walls. Damage to structural elements of Gurudwara can be categorized into the following categories.

- Loss of brick work
- Loss of marble work
- Loss of stucco work

Brick is the major construction material used in the construction of the Gurudwara. While stucco is utilized for inner and outer adornment of the Gurudwara. Bricks can gradually decay through weathering process including sulphurous smoke brought on by dirtied environment. As this Gurudwara is located in main bazaar, is exposed to substantial activities like, water infiltration through little gaps and openings of the block on the second floor; and moistness in divider and second floor was noticed. Because of unsafe vegetation and mould or parasitic development that amasses in the block surface causes block rot on second floor. Blocks dividers are likewise rotting because of breaks brought about by auxiliary developments.



Figure 14 - Brick decay can be seen on second floor

### Loss of Marble

Stone comes in various sorts and properties going from the hard impenetrable, for example, rock, slate, marble to the milder and pervious sandstone and limestone. White marble is utilized as a part of this building. Its propensity of rot in any sort of climate is conceivable. Such weathering happens on Gurudwara in three circumstances. To start with, the assaults from solvent salts particularly when it originates from an intensely dirtied environment. Second, inconvenience emerging from the moderate develops of residue stores and tidy, prompting conceivable onset of rot because of little vegetation. Third, the straightforward disintegration by wind and corrosive downpour.Gurudwara is all that much presented too much to driving precipitation. Pale and rough surface is observed. Minor cracks were also observed.



Figure 15 - Wild growth can be seen in the Facade



Figure 16 - Major cracks can be seen

## Loss of Stucco Work

Stucco work can be found on the primary facade and inside the building. Moreover, stucco in facade is consumed to some degree because of the acidic downpour water, sun, and the perilous movement contamination. Erosion occurred to the marble inside façade because of Carbon dioxide, and Tetraethyl Lead1 mixes depleted from the motors of the vehicles. However, the stuccos inside are for the most part lessened because of the dampness.



Figure 17 - Stucco decay on facade



Figure 18 - Cracks and vegetation growth

### Damage to Surface and Decorative Work

Some damages to the surface and decorative work have also been documented. These are:

#### **Detachment of Plaster**

Like timber, stone or block; mortar also has a tendency to fall apart over a timeframe. Mortar contains lime, sand and water; and in some cases, also mixed straw and animals'hairs slashed creature hairs to give rigidity. Here in this building plaster is utilized as a part of roof renderings, cornices, and inner dividers. During the visits it was noticed that clamminess of rooftop and variation in temperature are the major causes of weakening of mortar.



Figure 19 - Plaster decay can be seen

### **Deterioration of Paintings**

The environment has ended up being an issue for frescoes and different gems. Paintings on Gurudwara roof are badly damaged due to fluctuation in humidity and temperature and dampness. Fresco painting totally faded and not visible. Thus, most of the important frescoes paintings that once adorned the Gurudwara have lost their authenticity. Different adored scenes had been depicted in these painting so their aesthetic values should be preserved by proper reproduction of the disappeared parts and their consolidation.



Figure 20- Decayed painting on the ceiling of Gurudwara on ground floor



Figure 21 - Decayed painting on the beam of the roof of ground floor

#### Stains

The sculptures and constructions made of marble and limestone have a special position among the unique architectural examples. Many of the famous monuments are intensively decaying under the influence of the natural and anthropogenic factors such as atmospheric humidity and temperature changes, air pollution, salts, aggressive microbial communities. Various types of monuments damages were identified: surface erosion and forming of thick black crusts, the presence of biological films, stone detachment, micro crust, alveolar weathering, and others. Due to variation of temperature and sulphur di oxide gas present in the polluted environment (heavy traffic) cause black stains on the surface of the paintings, walls, pillars and due to oily hands of visitors of the building. Black crust on the walls due to biological growth can be observed on second floor.



Figure 22 - Black stains on the pillars



Figure 23 - Stains due to leakage on the ceiling of second floor



Figure 24 - Black crust on the wall of second floor

### **Biological Colonisation/Decay of wood**

Wood is one of the ancient construction materials used in the historic building of various civilizations. Wood is known to be a very suitable material for the walls and frames of buildings. The Gurudwara is ornamented with alluring wooden work. Bug or termite assaults were noticed in Gurudwara due to sodden and absorbable timber and in all timbers, which are put against or incorporated with moist walling. Unfortunately, due to careless attitude of the management, wood is constantly decaying because of improper humidity and temperature specifically the windows and doors and wood cupboards are badly damaged and decayed due to termite's attack.Direct sunlight causesfading of colours of wooden doors and surfaces as well.



Figure 25 - Wood Decay can be seen on ground floor



Figure 26 - Termites attack on door of ground floor



Figure 27 - Termite attack in bookshelves

The following table was developed after extensive study of the building in different dimensions:

**Table 1** - Analysis and documentation of instance of damage, weathering, and deterioration

LEGEND		DAMAGE RESULTING FROM UNDESIRABLE HUMAN USES & INTERVENTIONS		DAMAGE TO STRUCTURAL ELEMENTS			DAMAGE TO SURFACE & DECORATIVE TREATMENT								
	Less Damage Moderate Damage Extensive Damage No Damage Not Applicable		Past intraventions	Vandskism/Grafti	Structural gradids	Deformation	Loss of Structure! elements e.g. brick work	Loss of cohesion	Detachment of plaster render	Loss of adhesion	Stairts	Saft Crystalisation 8. Efflorescence	Rising damp from floor or ingress of rain water	Biological Colonisation or Growth of Higher Plants	Detenoration of Pail
Façade	Primary Elements	Foundation/Plinth		10000		(Arrest	Variable Contraction		1000			1111		gall the second	
		Walls	-	14				12	-	2 1				5	
		Archee/Vaults		14		1.1							-	2 2	1
		Floors											_	( )	
	Surface & Decorative Treatment	Fresco/Wall Paintin		1				-	_				-		
		Plaster Hender		1.12		64							-	-	-
		fron support	-			_				-					-
Ground Floor	Primary Elements	Constantional Director	_	-		-	_	-		-			-		
		PoundationaPanta	_	-			-	-	_	-				-	-
		Ambostiduate	_	-		1						-		-	-
		Marble Elear	_		-	-		1	-					-	-
	Surface & Decorative Treatment	Morter				-	-	-		-	-				-
		Dianter Bender	_		-			-					-		-
		Bricks	_					-	_	-				-	-
		Wooden Panels		-	-	1	0	-	-	1			1	1	
First Floor	Primary Elements	Wooden Panels		-	-	-				1	-				
		Walk				-	6	1		4	1		-		
		Arches/Vaults						-					-		
		Floors	_		-					1			-	-	
	Surface/Decorative	Paint/ Distemper			-		0				1			1 3	
Second Floor	Primary Elements	Wooden Panels	-		-	1.	1		-	1 1				1	
		Walls		1	8	Si	3		-	1-5				2 2	
		Arches/Vaults		-	1	6		-		2 7				-	
	Surface & Decorative Treatment	Bricks	-		-	-									-
		Repointing	_	-		1		1.		-					
		Mortar			1	-	1			1			-		
		Gates	-	-	-			-					-		

#### SIKH GURUDWARA GURU SINGH SABHA

## Tourism Potential of the Gurudwara Guru Singh Sabha

This Gurudwara is one of the best examples of Sikh architecture and heritage in the region and at the same time a religious edifice. It has the potential to attract thousands of visitors to satisfy the varying needs. Being located near the ancient Silk Road and modern CPEC and on the way to the famous destinations of Northern Areas of Pakistan, it can attract the heritage lovers both national and international. Students of art, architecture and the history may be motivated to visit this monument and learn about the past. Thousands of Sikh pilgrims visit Gurudwara Panja Sahib, Hassan Abdal from different parts of the world, these pilgrims can be attracted towards this Gurudwara through proper marketing and promotion.

## **Suggested Remedial Measures**

The following preventive measures are required to be taken in Gurudwara to reduce risk of fire.

- Install automatic gaseous fire suppression system
- Contact numbers of Municipal Fire Brigade & periodic meetings to be ensured
- Staff training regarding firefighting & periodic test should be carried out on regular basis
- Proper maintenance of electric wiring is required
- Automatic fire detection equipment needs to be installed
- Smoke detection equipment needs to be installed
- Portable fire extinguishers are required

The following preventive measures are required in the Gurudwara to reduce risk of theft.

- Key control policy should be enforced. Duplicate of key should not be allowed
- No bags should be allowed in the Gurudwara
- On-site security staff
- 24 hours security guard.

The following preventive measures are required in the Gurudwara to mitigate risk of physical forces.

- The books that are displayed on improper support should be given proper support and should be properly displayed
- Space between books shelves should be mentioned.

The following preventive measures are required in the Gurudwara to reduce risk of damage due to improper light.

- The minimum light intensity for visibility is 50 lux
- UV filters should be used
- Shading devices such as simple roof to the windows should be used
- Indoor use screens, blinds, solar screen, paint etc to block windows
- Use of light meters and passive dosimeters
- Use of a simple thermometer to inspect IR heating problem
- Indirect light source can minimize the intensity of UV

The following preventive measures are required in the Gurudwara to reduce risk of pests.

- Insect's traps should be installed
- Dehumidifiers to control the RH and the growth of microorganism should be used
- Day to day maintenance of Gurudwara should be ensured
- Periodic survey for pest in the Gurudwara should be ensured
- Avoid mixing newly books with already displayed till its confirmation that no pest is present.

The following preventive measures are required in the Gurudwara to reduce risk which is caused by high Humidity.

- Devices should be used in the Gurudwara to measure humidity
- Use of silica gel to control the RH in the cupboards
- Use of humidifiers in case of low humidity and dehumidifiers for high humidity

The following preventive measures are required in the Gurudwara to reduce risk of water.

- Check the leaking of Gurudwara windows and doors
- Check out the pipes which are used in the Gurudwara
- Prevent the wild growth on the shades of the windows of Gurudwara.

The following preventive measures are required in the Gurudwara to reduce risk of pollutants.

- Cupboards should be sealed properly not to allow dust/pollutants etc.
- Vehicles may not be allowed to jam near Gurudwara being a source of pollution.

### General Measures for Sustainable Tourism Development

- Fencing should be ensured to control infringements and give appropriate security to the landmark and guests
- Cleaning of surface and the monument is needed
- Develop the territory around the Gurudwara which is in awful condition to increase the aesthetic sense of the monument and the surroundings.
- Provision of well-disposed environment at the vicinitye.g. rubbish and waste materials around landmarks ought to be evacuated
- Proper guidance should be provided, so that visitors can enjoy their visits
- Proper conservation and restoration are the dire need to preserve his monument for the future generations and the visitors.

#### Conclusion

The Gurudwara Guru Singh Sabha is evidence to the Sikh rule in district Mansehra. After partition Gurudwara is used by different departments. Its present condition is very pathetic which can be observed in the present study. Presently Gurudwara is used as a municipal library and it is situated on the main road of commercial area, where plenty of traffic causes pollution, smoke, dust etc. which spoils the appearance of Gurudwara badly along with some other conservation issues. Its distinguished religious importance, architecture and decorations can be utilized for attracting tourists. It is strongly suggested to convert this Gurudwra into a museum rather than a library, to make a major religious tourism flow to the Mansehra. Keeping in view the present study the relevant authorities should make a comprehensive conservation plan to retain the beauty of this important heritage site. An awareness campaign of the importance and heritage conservation needs to be launched. By providing the tourist facilities, proper marketing and promotion this Gurudwara can be used for the sustainable tourism development.

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