

INTRODUCTION

Pakistan has immense tourism prospective of various nature. It can attract international and local tourism with its diversity of potential related to religious, adventure, family, cultural, heritage and coastal tourism. However, in tourism sector the problems are very similar to that of urban development in general. We can easily note that plans have been made on regional and local level, but the development of our tourist destination and tourist regions have been either haphazard or project oriented rather than plan steered. Regional plans of Galiyat and Kaghan region were made in mid 90s, whereas Master Plan of Murree was prepared in late 80s. Both documents did not have any significant impact on development pattern that followed in region as whole or Murree town in particular.

Murree is the tourist hub of Pakistan, in hilly area tourism. Due to accessibility from twin cities of Islamabad and Rawalpindi it has been most popular family tourism spot. The accessibility also offers opportunity for the day trippers, which no other tourist spot in the region offers. Owing to its recognition as hill station since colonial rule many development works related to making it more accessible and attractive have been done over decades of its growth. This makes Murree most developed tourist resort in the area that offers blend of nature and scenic beauty along with touch of urban form. Means that one can experience the picturesque landscape of Murree without losing touch of their familiar urban life.

Besides its enchanting scenery Murree renders refuge to its visitors in the extreme summers of plain areas. Moreover, the snowfall in winters attracts snow lovers and many honeymoon couples. Murree was previously accessible from Islamabad through its popular

Murree Road (going further to AJ & K) and also from Murree – Abbottabad road. Recently with construction of Islamabad – Murree Expressway which shall be extended to AJ & K in second phase of development, accessibility options for the tourists have tremendously increased. Due to construction of various motorways (M-1, M-2, M-3 and M-4), Murree has now efficient regional links that have greatly enhanced the tourist influx to Murree.

Murree is also gateway to many other tourist attractions, which include Dunga Gali, Bhurbun, Nathia Gali, Ayubia, Patriata, even further to Abbottabad and AJ & K. Murree itself is considered a family tourist resort, but it is gateway to many much scenic locations, which being less developed and comparatively having lesser accessibility, are mostly visited by much enthusiastic tourists and nature lovers.

With enhanced accessibility to Murree and almost non-existence of any significant development in other tourist locations, Murree is experiencing immense tourist influx. This influx on one hand offer better economic opportunities to local populations associated with tourism as livelihood and at the same time create administrative and municipal nature problems for public authorities at Murree. Besides this seasonal pressure on town's existing facilities and infrastructure, it is experiencing natural growth and demand for additional tourism related buildings and better infrastructure is increasing every year. This has resulted in more and more conversion of residential land use into commercial land use and utilization of forest land into urban buildup area. Moreover, non-availability of natural gas supply to Murree for many decades and shortage of gas in winters, has resulted in cutting of trees for heating and cooking purposes. All these factors have contributed to environmental degradation in Murree and loss of the scenic beauty, for which people from all over Pakistan visit Murree.

Absence of efficient and adequate public transport compel tourists to use private or hired vehicles, which create huge problem of parking in the main town of Murree, during peak tourism season. Murree has hilly terrain which offers very limited plain pockets to build parking for vehicles. Moreover, narrow roads and ever increasing congestion due to new hotels and other commercial buildings in central town has further heightened traffic and parking problems. Another major problem that has developed for local residents of Murree over last couple of decades is the massive increase in land prices in the central town, due to conversion of most of the land into commercial land uses. This has left no option for less privileged and tenant residents, but to live in hinterland of Murree and commute daily.

Although Master Plans have been made for Murree in various eras, but since late eighties Murree has been without a Master Plan. The plan made was not notified for some reason. Without guidance of an overall plan the town kept on expanding along roads, without any guided or controlled manner. This not only contributed to urban sprawl, it also made the town to lose its balance related to distribution of amenities. All facilities were concentrated in the central town with hinterland deprived of the same. In the absence of an efficient local public transport, daily commuters face lot of difficulties to reach to their desired destinations of livelihood, education and social life.

It is high time that some revolutionary steps should be taken to prepare and notify an overall development plan for Murree and supplement it with various action plans for all areas of Murree. Moreover, it is essential that Authorities should start looking at Murree as town and tehsil headquarter, besides its recognized role of a tourism hub. If this can be achieved through required contribution of all stakeholders, it will start reducing pressure on Murree central town and at the same time provide relief to the local population living

in the environs of Murree town, deprived of even basic necessities of urban life. Moreover, the process of environmental degradation and economic stagnation shall also end, paving way for sustainable land use for a tourist destination and functionally efficient town.

RESEARCH OBJECTIVES

The objectives of this research are:

- a. To review the existing land use of Murree under the principles of location and allocation criteria;
- b. To identify the issues in the land use regulation mechanism of Murree town;
- c. To formulate recommendations for improvement of Murree Land Use Regulation System.

RESEARCH QUESTIONS

The present study will answer the following research questions and will help achieving the objectives of this study:

- a. The current pattern of town's existing land use?
- b. The limitations in its land use regulation system?

LITERATURE REVIEW

Land use planning is a critical part of a physical development process. It is a regulation system through which people are motivated to choose between the land uses options that can fulfill their socio-economic needs, as well as ensure a sustainable physical development for the area (UNFAO, 1996).

The range of land use regulation system may vary from country to country depending upon area coverage, statutory framework, prevailing policies, institutional setup, resources, character of city and other urban issues specific to that particular city. Similarly, the nature of problems related to land use regulation and its repercussions have been different in developed and developing world. In developed countries, the development has taken place under some strict development control and formal overall development plan. Therefore in developed world, the problems caused by expansion of cities are pressing, but still manageable.

On the other hand, in case of developing countries the land use plans were usually part of Master Plans or of some other forms of development plan, but were rarely implemented owing to various reasons (UN Habitat, 2015). In this scenario, the land use pattern took a disorganized form rather than a controlled and guided form, resulting in undue urban sprawl and all sorts of urban management and environmental issues. In developing countries, owing to significant urban population living under poverty line, sizable population was compelled to occupy the areas that were disaster prone (Gencer, 2013). Consequently, in recent years when major natural and man induced disasters hit these urban areas it resulted in colossal damage to human life and property. These events

have also highlighted the need for sustainable land use planning along with main streaming requirements of climatic change adaption and disaster management (World Bank, 2014).

In the present era, urban sustainability is the desirable goal for any planning agency. Various aspects of urban sustainability have been pointed out by researchers (Grimm et al., 2008; Pickett et al., 2011; Liu et al., 2014; Wu, 2014) (Huang, Wu and Yan, 2015). Sustainability of any city can only be ensured if its growth process follows a preconceived plan or at least a thinking process that has been carefully and logically knit through guidelines from international practices, adapted to match local conditions, with generous contribution from stakeholders. Absence of land use planning can result in in conversion of rural land into residential and commercial and other uses of land and can cause suburban sprawl (López and others, 2001). Modern progresses in communication and transportation systems, growing population, and the practically nonexistence of land-use planning regulation have steered to the transformation of countless earlier agricultural lands to urban built-up area and subsequently, suburban sprawl (Thomlinson and Rivera, 2000).

Pakistani cities have experienced large influx of rural population and refugees, in various eras of development (Qadeer, 1997). This mass influx, along with natural increase has contributed to the undesired haphazard expansion of urban areas. The most affected in this regard were the provincial capitals. The rate of growth in major urban centers is about 5% as compare to overall growth rate of 3%. However, other areas got their share according to their growth potential and size. Overall, about 40% of country's population is currently residing in urban areas (UN Habitat, 2015). In sharp contrast, there have been cities that had negative population growth rate. This reflects more progressive attention on some areas and wide-ranging exclusion of others. Over the years this has not only resulted in

uncontrolled urbanization, but also social exclusion of most off lesser developed cities and rural population.

After planning of Islamabad, Master Planning of Karachi in year 1968 (Qadeer, 1997) was initiated. In subsequent decades we can find numerous cities with documented Master Plans or Outline Development Plans (ODPs) (Assessment of Land Development and Management Practices in Five Large Cities of Punjab). Most of cities especially in Punjab have attempted to equip themselves with rules & regulation and human resources that can be considered as an effort towards development control. (LGO-GoPb, 2013). But situation prevailing in most of our cities today indicates that these efforts have not resulted in much success.

Beside other reasons, the dilemma of our cities is that polices and plans structured for urban areas are rarely implemented (UN-Habitat III, 2015). The gap between implementation and framing of policies and plans has multiple reason that may vary from city to city and province to province. (Qadeer, 1997). In some cases, polices and plans were expert driven and not stakeholder driven, in some other cases the decision makers were not aware of significance of its implementation for a city.

Most of our cities and towns did not have relevant capacity that could contribute towards implementation process (UN-Habitat III, 2015). It has also been observed that sometimes the decision makers and professionals are unable to interpret policies of 'Development Plans' and correlate them with ongoing development process of the city, which result in development plan documents to be just another addition to the concerned authority's library or data bank. Some cities were equipped with most of the paraphernalia

and prerequisites of implementation, but they lacked political will towards development control, owing to various latent or obvious reasons.

In short, the 'Development Plans' could not get attention they deserved and development in cities was either completely uncontrolled or project oriented, rather plan oriented. Consequently, Local Governments instead of exploring their own avenues of revenue generation, look up to Provincial and Federal Governments development funds. This practice contributes to implementation of project prioritized by higher order government, rather than indicated by local population of Local Governments (UN-Habitat III, 2015). In relation to development control, development agencies have been focusing on framing and standardizing building bylaws & zoning regulations, planning standards, building control, approval of plans related to buildings & housing schemes, encroachment clearance, monitoring and approving change of use of land (GoPb Rules, 2007; 2009; 2010; NRM, 1988). All these efforts in a way can be termed as expressions of implementation in relation to governing policies and plans.

In most of the cases, this expression was not deliberate or a conscious effort, towards development plan implementation. Moreover, limiting the horizon to the above efforts resulted in cities lacking overall balance of amenities, effective relationship between land uses & transportation, pertinent institutional strengthening, density control, grip on pace of development, steering direction/s of growth, awareness campaigns about significance of development plans, development plan reviews & updates, controlling development in disaster prone areas, attracting private sector for development, coordination of various concerned development agencies and establishing & achieving sustainability landmarks. With enough said about the limitations posing hurdles in

implementation of development plans we must not ignore the quality and expression of policies and proposals these development plans had been offering. Moreover, it may be relevant to mention that in most of the case 'Master Planning' technique had been followed, which is considered an out dated practice internationally.

Pakistan so far does not have any Act for Urban and Regional Planning most of its laws pertaining to Urban Planning have been adapted from British times (Urban Unit, 2011). With advancement in technology and issues pertaining to city life becoming complex, interrelated and multidimensional, these laws have significantly lost their validity. With no umbrella Act shaping, supporting and guiding the urban planning statutory frameworks to be prepared at lower levels, the quality of development plan could not be ensured. There has been absolutely no reference scale that what should be part of urban areas development plan and what should be left to some other study and what level of depth should be achieved. As a result, the sole guideline for a development plan has been the 'Terms of Reference (TOR)' issued by development agencies that is mostly carbon copy of some other Master Plan prepared elsewhere. With lack of skill and requisite experience in both counter parts (consultants and development agencies), absence of any standardized guideline or local best practices, the final outcome has been mostly vague policies supporting a proposed zoning plan. The projects identified in this regard have been seldom worked out properly, mostly without any working of crude cost, funding sources or any comprehensive implementation strategy. Consequently, the implementing agents are unable to correlate the policies given in the supporting document and the proposed map of the city. With very meagre public participation during preparation stage, the development agencies are mostly faced with huge task of land acquisition for their projects,

with no ownership of development plan from the private land owners. As a result, only those projects are implemented that have some political will or are situated on public land. Keeping the example of Islamabad in mind and setting aside the fortune it took to implement, the development agencies try to implement the proposed map religiously. Other areas that are weak or devoid in most of the development plan include measures to control urban sprawl, guidance to create balance and hierarchy of amenities, strategic relationship of various dimensions of city's mechanism (e.g. land use and transportation, urban expansion and adjacent food basket – agriculture land), limiting city's expansion through boundary, sustainability and resilience.

Murree Town has developed without any development plan. (H&PPDP MP, 1988, TDCP MP Vols, 2013) The land use expansion of Murree has been dictated by the land ownership pattern and propensity of commercialization to tap the tourism potential of the town. In this regard significant role has been played by the provincial commercialization policy that has safeguarded the interest of investors, rather than the needs of the town (GoPb Rules, 2004). As a result Murree is a town with almost no statutory framework to guide development, with transportation, parking, hierarchy and balance of amenities, ribbon development, environmental concerns, institutional capacity, disaster management, economic issues as its major challenges. The aim of study is to analyze these areas and provide some suggestion that could assist in improvement of the overall land use regulation system and land use of the town.

METHODOLOGY

The modus operandi that was used in the study comprise of following stages:

3.1. STUDY AREA

The area that was selected for the present study was the town of Murree. Murree is one of the largest resort towns in the Galiyat region of Pakistan, and is the municipal capital of Murree Tehsil, an administrative division of the Rawalpindi District. It includes the parts of the Margalla Hills around Islamabad. It is located in the Pir Panjal Range, some 60 km northeast of Islamabad and Rawalpindi via the Murree Road at North Latitude $38^{\circ} - 54'$ and East Longitude $78^{\circ} - 26'$. Murree town is an altitude of 2,286 meters.



Figure 3.1: Location Map of Murree City

It was found by British in 1849 on the Shamlat pasture of a village named Musiari. Name ‘Murree’ was derived from word ‘Marhi’ which in local dialect means ‘place at

higher altitude'. Owing to its picturesque landscape it has also been titled as 'Malika-e-Kohsar' (Queen of Hills).

3.2. RESEARCH DESIGN

The function of a research design is to diagnose the research issues along with various contributing elements. This provide clear picture of intensity of the problem at hand. This helps in projections for future scenarios and anticipating the trends that may prevail in future, which finally forms basis for the proposals, recommendations and project identification.

Following type of research designs shall be considered for this study:

- Descriptive design
- Explanatory design

The descriptive research gives the information regarding the current status of the phenomena and to describe "what exists" with respect to variables or conditions in a situation. The current study is focused on assessing the current status of land use classification in Murree that is why descriptive design is chosen. The existing conditions forces and actors that contributed to this situation and explanation of factors that limit notification of Master Plan of Murree are some conditions that would certainly need explanation, therefore explanatory research design technique shall also be used.

3.3. RESEARCH TECHNIQUES

The techniques which will be used in the present study mixed method research.

3.4. DATA COLLECTION METHODS

The methods for primary and secondary data collection that will be used are as follows:

3.4.1. Primary Data Collection Sources

The methods for collecting primary data are as follows:

- Field survey (Random Verification of Land Use information)
- Observation
- Structured interviews (Development Agencies Officials)
- Questionnaire (sample based - Local Residents and Tourists)

3.4.2. Secondary Data Collection Sources

Methods for secondary data collection are as follows:

- Published Reports
- Government and non-government Offices like TMA, and PHED
- Research papers and other relevant literature downloaded from internet.

3.5. METHODOLOGY

The reviewing of land use of Murree with respect to sustainability and its regulation process, involved various steps in order to conclude certain observations regarding the process. As a first step to get insight of the existing situation of land uses in Murree to identify gaps, issues and implications for future growth, a review of demographic and socioeconomic trends, planning policies and urban growth strategy was carried out. Besides this analytical review of land allocation for all land uses such as commercial, residential, open spaces, institutional etc. was done. For this purpose, secondary data regarding land use maps, master plan, reports were collected from City District Government Rawalpindi (CDGR), Rawalpindi Development Authority (RDA), Tehsil Municipal Administration Murree (TMAM), Housing and Physical Planning Department

Punjab (H&PPDP), Tourism Development Corporation Punjab (TDCP), Forest Department Murree and Water and Sanitation Authority (WASA).

The primary data collection included structured interviews and sample questionnaire surveys with various stakeholders including CDGR, RDA, TMA, TDCP, Forest Department, NESPAK and H&PPDP. A total 20 structure interviews were conducted from aforementioned officials. A checklist was used to draw information regarding various trends in construction (especially in disaster prone areas), traffic management, development control, parking, usage of road by various mode of transport, public transport, environmental degradation, change of use of land etc. Similarly to get public perception and priorities, questionnaire survey was done. A total 100 respondents were interviewed. Survey was administered face to face and a random convenience sampling techniques were adopted.

3.5.1 Review of Existing Situation

The thesis aims to review the sustainability aspect of land use of Murree. This involved various steps in order to conclude certain observations regarding the land use and its regulation process.

As first step it was critical to review and analyze the existing situation of land use in the town. Secondly, it was important to look into various stakeholders related to development in Murree. This also included studying organizational structure, jurisdiction and responsibilities of development, rested with each Authority. Moreover, it was important to note what has been done to improve the land use situation in Murree through development planning techniques and frameworks. To know the gravity of situation of land use interviews with two main categories of this tourist town were conducted, this included

local residents and tourists visiting Murree town. The detailed methodology adopted for review of sustainability and land use regulation process of Murree was as follows:

3.5.1.1 Review of Existing Murree Town Land Use Situation

Review of Demographic and Socio-Economic trends;

- Review and analysis of studies related to planning policies and urban growth strategy;
- Analytical review of land allocation for all land uses, especially public land uses and comparing the same with what was required in light of standards;
- Infrastructure Review;
- Appraised the manufacturing and services economy of the town;
- Analysis of land acquisition issues and prevailing practices;
- Review of roads and communication and issues related to it;
- Evaluate the institutional and legal framework related to pace of development and direction of growth of town;

Identification of gaps, issues, implications and lessons learnt in the above review.

3.5.1.2 Data Collection and Field surveys

a) Secondary Data Collection

All accessible data sources were explored to collect the existing data available with the local authorities, consultants, dependable websites and donor agencies. Work was done to look into the available data, its comprehensiveness, and its format as per study's requirement, its authenticity and usefulness for the study. In this regard reports, research papers and maps formed the main format of secondary data bank.

b) Primary Data Collection

The secondary data analysis guided towards the data gaps related to inadequate area coverage, difference in objective of earlier data collection, obsolescence, missing new developments (in case of maps) and incompatibility of format for the secondary data. These data gaps were filled with the primary data collection. The primary data collection included structured interviews and sample questionnaire surveys with various stakeholders. The involvement of stakeholder was form of public participation that contributed towards better analysis of situation, reaching rational conclusions and finally recommendations at end of the study.

Besides interview and consultation of stakeholders, observation regarding various trends in construction (especially in disaster prone areas), traffic management, development control, parking, usage of road by various mode of transport, public transport, environmental degradation, solid waste management etc. was also done which also guided the analysis, conclusion and recommendation stages of the study.

3.5.2 Findings and Discussion

Sustainable Land Use Planning encompassed the study of following essential land use ingredients in various perspective:

3.5.2.1 Residential land use

The study comprised looking into existing situation of residential land use in Murree. The data provided in Master Plan reports regarding age, height and condition of residential units was studied. Any incompatible land use for residential areas was also identified through the analysis process. Accessibility of residential areas was also discussed in light of

comments of local residents. Formal and informal housing scheme were studied with reference to public sector views about the same. The contribution of formal and informal housing to reduce the housing backlog were also be looked into, along with Public Sector policy regarding the same.

3.5.2.2 *Commercial land use*

The study included observing existing situation of commercial land use in Murree. The data provided in Master Plan reports regarding categorization of commercial and its use with special focus on middle and lower order commercial facilities. The balance between tourism related commercial land use and commercial areas requirements of local population, along with proper locational and allocation distribution of the use was analyzed.

Commercial units registered with TMA and the inclination of change of use of land from other uses to commercial, along with government policy in this regard was studied. Saturation threshold of commercial areas was also observed with respect to local as well as floating/tourist population. Trend related to provision of off-street parking was also observed and made part of analysis.

3.5.2.3 *Industrial land use*

The study also provided information regarding various level/categories of industrial land use. Moreover, potential of any industry of whatever level if observed was also indicated.

3.5.2.4 *Amenities and public buildings*

The study involved observing existing situation of amenities and public buildings in Murree. The data provided in Master Plan reports regarding categorization of amenities and public buildings with special focus on middle and lower order facilities. The balance

of distribution of facilities throughout the town, in light of the population and accessibility parameters of local population along with proper locational and allocation criteria being followed, was analyzed.

3.5.2.5 *Roads & Transportation*

Various category of roads were studied in light of the land use they were serving. Traffic and accessibility, public transportation issues related to land use were discussed with end users and government officials. Land acquisition issues faced by authorities also discussed in implementation of various roads and transportation projects.

Mass transit option for the town also analyzed with reference to local as well as tourist population.

3.5.2.6 *Institutional Land Use*

The study contained observing existing situation of institutional land use (health and education) in Murree. The data provided in Master Plan reports regarding categorization of institutional buildings with special focus on middle and lower order facilities. The balance of distribution of facilities throughout the town, in light of the population and accessibility parameters of local population, along with proper locational and allocation criteria being followed, was analyzed. The issue of clustering of educational institution and problems resulting from the same were too analyzed. Health facilities for tourist were treated separately from the facilities required for local population.

3.5.2.7 *Emergency Related Land Uses*

The study looked into the existing network of emergency facilities, their accessibility and the level of facilities offered. The data provided in Master Plan and survey of local residents

was likewise considered. The possibility of dual excess of these facilities to be used during disasters, were correspondingly considered.

3.5.2.8 *Waste Lands*

The areas wasted due to steep slopes, drains, unstable slopes and disaster prone areas were studied and possibility of reclamation of such for open spaces, agriculture lands and parks and play grounds was considered.

3.5.2.9 *Reserved Land Use*

The land earmarked for any specific use like classified facilities and areas of national or provincial significance were studied, with due coordination with the concerned departments;

3.5.2.10 *Conservation and Preservation Uses*

The sites reserved for national or regional parks, forests or areas of cultural, religious and heritage significance were studied along with policies provided by Master Plan to ensure the conservation and preservation of the same. Improvement if considered feasible were identified broadly.

3.5.2.11 *Recreational Land Use*

The study encompassed observing existing situation of active and passive recreational facilities in Murree. The data provided in Master Plan reports regarding categorization of parks and playgrounds with special focus on middle and lower order facilities. The balance of distribution of facilities throughout the town, in light of the population and accessibility parameters of local population along with proper locational and allocation criteria being followed, was examined.

3.5.2.12 *Tourism Land Use*

The study incorporated observing existing situation of tourism facilities in Murree. The data provided in Master Plan reports in light of the floating/tourist population and accessibility parameters along with proper locational and allocation criteria being followed, was evaluated.

3.5.2.13 *General Parameter of Analysis*

In this regard the information gathered through Master Plans of Murree supported by information from satellite image was used to study, spread of various land uses, along with dominating direction/pockets of growth. Meeting with government officials, local resident's and tourist's survey was also be made part of the analysis. Land uses and especially buildings, situated in or near disaster prone areas were looked into, in light of the areas declared disaster prone through NDMA Report on Seismic Hazard Micro-zonation Study, Murree Town.

3.5.3 Conclusion

The conclusions flowed from the highlighted issues identified at the analysis stage. The basis of conclusions were discussions with stakeholders, study of master plans, observations, surveys conducted with local residents and tourists. All efforts were made so that the conclusions reached are not biased and technocrat derived, except the phenomenon observed during the study, with no support from surveys and meetings.

3.5.4 Recommendations

- Recommendations were derived through the detailed process of consultations with stakeholder, observations, secondary data, detailed analysis and study of standards along with local conditions.

- Recommendations attempted to provide (in light of the anticipated demographic trends) densification and extensification options along with recommended strategy/guidelines;
- All recommendations were stakeholder driven rather than expert driven;
- All recommendations were sensitive and catering the needs of use and accessibility of gender, less privileged, senior citizens and people with disabilities;
- The study provided broad recommendations for land use planning of various categories, with options of involvement of private sector. Broad recommendations to cope with informal land use were provided.
- The outcome of study comprised recommendation/guidelines (wherever applicable) for various level of amenities, institutions and commercial areas considering the Murree town's in role of tourist town and tehsil headquarters. In this regard, emphasis was on balanced distribution of all facilities throughout the town in light of the standards adapted to local settings.
- The study also attempted to provide some broad recommendations related to roads and transportation sector.
- The study also provided recommendations related to disaster prone areas and facilities related to disaster rescue and relief. Moreover, dual or multiple accessibility of such facilities was also emphasized.
- The tourism recommendations were made with perspective to attract local as well as international tourists and with the aim to cater for the needs of family tourism, local cultural values, climate, active and passive tourism. Tourism recommendations were made in coordination with over all land use plans and whole

area falling under the jurisdiction of TMA. The preservation of heritage and sites of religious & cultural significance were also part of the tourism recommendations.

FINDINGS AND DISCUSSION

4.1 REVIEW OF EXISTING LAND USE PLAN OF THE TOWN

Murree town's land use plan was prepared under the project of 'Master Plan to Develop Murree a Pollution Free Tourist Town 2031' can be used as reference study for following analysis.

4.1.1 Review from Allocation of Land Use Perspective

Considering the origin of Murree as tourist resort and summer capital of Punjab in colonial era, the expansion of Murree has not been considerable. The main reason is that Murree as a town has not been offered many economic base options. The more focus in this regard has been tourism. Owing to lack of economic activity Murree has shown even negative growth rate through 60s till late 80s. (H&PPDP, 1988) Even with limited growth and expansion in comparison to its existence of over 1.5 century the spread of Murree does not exhibit any planned pattern. The major reason has been nonexistence of any preconceived plan and private ownership pattern of land. With economic focus on tourism the concentration of all tourism activities have been around the central town.

In absence of a comprehensive/formally notified Master Plan and non-implementation of whatever informal plan was available, Murree could not enjoy a planned pattern of growth, consequent to it the town's population remained deprived of the balanced allocation of amenities and facilities. Moreover, over the decades Murree had to play a role of Tehsil headquarter for which whole tehsil looked towards its head quarter, which was already deficient in its own needs. Due to which the population of peri-urban

and rural areas accessed District Head Quarter Rawalpindi or Federal Capital Islamabad, for fulfillment of their needs.

The allocation wise analysis of existing land uses is as follows:

4.1.1.1 *Housing*

In Murree housing is mostly owned and sparsely located. Numerous housing schemes have been launched among which only three have been formally approved. The reports indicate quantitative backlog of 4599 houses in 25 years plan period (TDCP MP Vol II, 2013). However, no information in form of statistics regarding qualitative backlog of housing has been provided in the report. In Murree from time to time various public sector authorities have contributed to housing sector. Oldest among these is ‘Murree Improvement Trust’ (MIT) which manages a housing scheme at Lower Jhika Gali Road. The houses in this scheme are very old and are not in good condition. The Authority still maintains office in the scheme.

TMA Murree has approved three housing schemes including Bahria Golf City, Commoner’s Sky Garden and Dream Valley Housing Scheme. Three schemes have been processed by ‘Murree Kahota Development Authority’ (MKDA) for approval, but have not been awarded approval status. Among these include Saman Garden, Utility Cooperative Housing Society and Judicial Town. Three housing schemes including Oil and Gas Development Corporation, Islamabad Garden, and Green Valley Farm Houses Project are considered fake as per notification of TMA Murree. Similarly, 24 schemes are considered illegal. Whereas, Al-Qaddar Homes is under process with CDGR and Pakistan Atomic Energy Employees Cooperative Housing Scheme is under process with TMA Murree.

Since year 2013, as per notification of GoPb, Rawalpindi Development Authority (RDA) is the approving Authority for housing schemes related to Murree and other tehsils in jurisdiction of Rawalpindi District. However, Housing Scheme launched prior to year 2013 shall remain responsibility of TMA. There are seven housing schemes pending with RDA for approval. Tehsil Municipal Administration (TMA) is just left with approval of individual building plans, regarding which there is complete ban on new construction in jurisdiction of TMA Murree, since April 2008. This has reasonably limited the current/future revenue generation of TMA the Authority that is actually responsible to manage Murree town affairs.

Older houses in Murree are in some cases even over 70 years old. Murree is an earthquake prone area, but majority of houses including new construction has not been constructed considering seismically active area provisions. Moreover, as observations and analysis of NDMA report titled ‘Seismic Hazard Microzonation of Murree (June 2011)’ area around Northwestern and Western part of Murree is highly hazardous, due to presence of three ‘Thrust Fault Lines’. The land use of Chitta Moore, Ghora Gali (excluding Lawrence College), Bansra Gali area, Kashmiri Mohalla and Sunny Bank are mostly commercial and residential. There are also some mixed use developments of residential cum commercial in this area. There is significant cantonment area (Cliffden Camp and Kuldana area) that falls under highly hazardous zone.

There may be a need to relocate numerous houses or retrofit the same. In either case there would be extensive community participation and political will would be required, to take such initiatives. The houses on fault line or in the highly hazardous corridor along

any of the fault lines may have to be shifted. In hilly area like Murree there are not much land available, if relocation on mass scale is required.

The Municipality by-laws regarding building have not been revised in light of revised building code framed after 'Earthquake Pakistan 2005'. With the completion of study related to seismic micro-zonation much site specific or location specific information can be determined, which can indicate required construction strength for each buildings located anywhere in the area. This aspect need to be made part of by-laws to ensure required quality and strength of houses situated in the highly hazardous zone or in close proximity to it. Ironically, the information regarding presence of highly hazardous areas in or around Murree has not been shared so far with TMA, RDA or CDGR the main approving agencies of buildings and housing schemes. Moreover, this latest study has also not been made part of master planning reports, currently under consideration for approval. Model Building Bylaws and Zoning Regulations – 2007, GoPb and Punjab Private Housing Schemes and Land Subdivision Rules – 2010 also need to adapted for Murree town with incorporation of seismic provisions and findings of NDMA report.

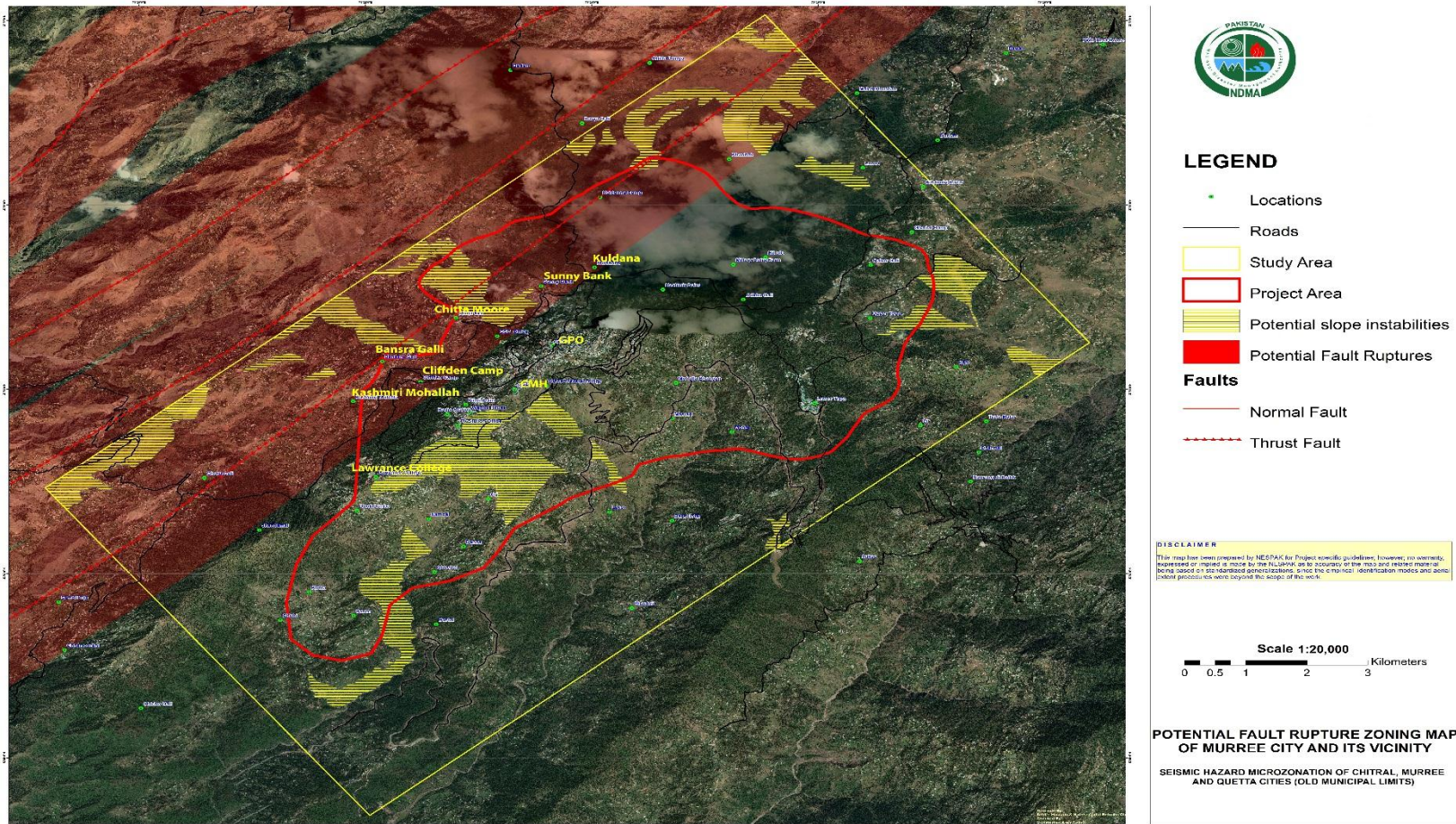


Figure – 4.1 Potential Fault Rapture Zoning Map of Murree Town and its Vicinity
(Source: NDMA Report - Seismic Hazard Micro-zonation of Murree (June 2011))

4.1.1.2 Commercial

Tourism being the foremost economic base of the town commercial is understandably dominating land use after residential. Hotels, restaurants and impulse shops/gift shops that offer goods to attract tourists are most dominating in the commercial activity of the town. However, shops that are located mostly off main Mall road including Cuart Road, Kashmir road (at several places starting from Chattar Park till Sunny Bank), Jinnah Road, Lower Bazar (between Upper and Lower Jhika Gali Roads), and some scattered commercial units between Lower Jhika Gali Road and Islamabad Murree Expressway are of service, demand and convenience nature and do serve local residents to fulfill their day to day needs.

Looking at the pattern of its development, commercial like other land uses does not seem planned, it is more of a linear growth along Mall Road and other important road sides. In some cases it is change in land use from previously residential to commercial or mix use. Although, there is a laid down procedure for approval of conversion of land use, but the change occurred prior to this procedure and its implementation was not supervised or regulated. Currently, there is official ban on any new development and change of use of land in Murree town area.

Commercial land use including hospitality land use contributes to 13% (4.1% and 8.9% respectively of the built up cover (TDCP MP Vol I., 2013) of total land use which is by all means very high for small town like Murree, even if we include floating population. In addition to the above percentage there is mix use of 1.8% which also contains significant percentage of commercial use as mix use (ranging from 30% to 65% at various floors). High commercial land use percentage is one of the major reason that Murree has not witnessed enormous growth rate percentage. Being most dominating economic base of the area, tourism induced commercial became saturated and the businessmen are already

feeling pressure due to limited earnings, interestingly the tourists complain high rents and prices hikes during tourism seasons. In contrast, as per 'Hotel Owners Association' maximum 85% occupancy is achieved even in peak summer season (TDCP MP Vol1., 2013). With accessibility enhancement to relatively scenic areas to which Murree is gateway and the achievement of better political stability in such areas, it is mostly likely that more enthusiastic and adventure tourists would bypass Murree to reach other destinations. Consequently, Murree may witness decline in its floating population, in coming years. This would mean more pressure on business community of Murree town.

There is need that concerned Authorities should limit the change of use of land to commercial and must not allow denser commercial activities in the urban area. Moreover, in the meantime it would be in fitness of things, if more avenues of economic growth are explored for Murree region in general and Murree Urban area in particular. About a two decades ago tourist could find shops related to cultural goods local handicrafts and dry fruit shops, which were main among the main shopping items that tourist use or to take away with them. Now days all the above category of shops have almost eliminated and replaced by shops offering imported goods, with recent addition of national and international chains. Moreover, multistoried hotels have obscured the landscape and scenic views which was one of the main tourist attraction.

Despite high level commercial percentage that Murree has achieved, it still lacks in demand and convenience shops. Fuel filling stations are mostly on Kashmir road or roads connecting Kashmir Road. Private offices are as per market viability and need of these respective offices. There are sufficient number of banks, with almost branches all public and private sector banks in Murree. Murree is gateway to Galiyat and Kashmir. Moreover,

it is also a tehsil headquarter, but for some unknown reason it has never housed a reasonable/formal whole sale market. This aspect has contributed to economics and employment of local population on tourism sector. Murree can function as whole sale market (mandi town), if not for other regions, at least for its own Tehsil. This can generate lot of trade and employment for local population and may introduce Murree to a new avenue of economic growth.

4.1.1.3 Public Buildings

Murree is Tehsil headquarter of District Rawalpindi, therefore it has all the offices related to functioning of a Tehsil Headquarter, including courts, administrative office, development agencies, excise & taxation, utility agencies etc. Other public buildings include agriculture office, food office, arts council, forest office, wildlife office, GPO, survey of Pakistan, heritage shops, metrological department, library, NADRA office, fire brigades, environmental department, Federal and Punjab tourism departments, banks, social welfare organization, Television and Radio Station. Some of these buildings are from British rule and others are newly constructed. Older buildings are rarely maintained. These buildings do not have adequate parking provisions and most of the vehicles of employees and visitors have to opt for on-street parking.

4.1.1.4 Industrial

There has been no industrial unit seen during Murree town survey or reported through master plans of Murree, except one hydal power station on Ayubiya Road and dairy farm on Lower Topa Road, few poultry farms are also operative on Murree - Muzaffarabad Expressway. However, few poultry farms can be found along Kashmir Road and Islamabad – Murree Expressway that are mostly far from main Murree town.

4.1.1.5 Institutions

Education and health sector both have serious issues of allocation and location. There is only one Tehsil/Civil hospital in Murree town which is on Kuldana road near GPO. Besides this there is one CMH in cantonment area. Civil Hospital Murree is under staff and there are no specialist doctors. The equipment donated by donor agency is also lying locked owing to non-availability of trained staff and concerned specialists. In overall Murree Tehsil there are 14 Basic Health Units (BHU) which are spread in various union councils. There is also one dispensary in Sorassi area and one Rural Health Center (RHC) in Phagwari area. There are number of private hospitals and clinics offering limited medical treatment and facilities. In case of serious emergencies people have to rush to twin cities. A hospital extending treatment for tuberculosis also exists in Murree, called Syed Muhammad Hussain Government TB Sanatorium Samli, Murree. The hospital was established as dream of Dr. Syed Muhammad Hussain on the land of 300 kanals donated by Raja Khan Zaman Khan. Currently, it is a 360 bed hospital spread over 365 kanal land. The hospital also has a facilities like laboratory, kitchen, Operation Theater, Mosque, post office, X-ray, rest house, residences for doctors, nurses and lower staff. This hospital has been providing services since 1940s. It is a public sector hospital in an old building and is still renowned for its quality of services. This hospital is located on a small road called TB Sanatorium Road that descends towards South from a hairpin turn short of Company Bagh area, on way to Murree through Kashmir road.

In Tehsil Murree there are 124 government institutes offering education to male students. Among which 71 are primary schools, 18 elementary schools and 13 high schools. In case of female students, there are 21 elementary schools, 92 primary schools and no high

school. The number of education institutions in distant areas is adequate, but the distribution of facilities has not been done considering the number of students to be served. In some school sufficient area has been allocated, but number of students is less, whereas in contrast some schools are overcrowded. The problem of staff and furniture also compel students to opt for one school over another. Overall in Murree Tehsil the number educational institutions is not much problem, actually quality of education, number of staff, furniture etc. are some problems that need attention. These problems effect distribution of land use, because students have to travel on daily basis to a distant school that is better, thus disturbing the overall balance of educational facilities.

The older school that are from colonial times are mostly concentrated in central town. These schools are better equipped in human resource and logistics and offer better education. The clustering of such institutions in main town area makes them difficult to access for residents of distant locations. Moreover, they create traffic problems during peak hours. One of the oldest school is Lawrence College Gohra Gali, Murree which is located on Lawrence College road or Ghora Gali Road that ascends from Kashmir Road on way to Murree short of Bansra Gali. This institute was called Henry Lawrence Memorial Asylum in year 1859 later in year 1910 it became Lawrence School in the name of Sir Henry Montgomery Lawrence. It was upgraded to college in year 1927. The college is located at an area of 150 acres of land and is renowned for its quality of education.

4.1.1.6 Parks and play grounds

In year 1988 as per Master Plan Murree town the area covered by parks and playground was 18.20% of the total area, whereas the area of forest and play grounds part of educational institutions were not included in this percentage. At that time Murree had town

status and a central park was enough to fulfill the requirements of the area. Now days the population has spread beyond the main town and with central town being commercialized people are building their houses away from town center as a result lot of urban pockets are growing all around the main town. This requires parks and play ground of all level, starting from tot-lot to main town park. The amusement parks made to attract tourist should be in addition to these spots of passive recreation.

Currently there are three main play grounds in Murree. One football field is near Dhobi Ghat, other in Ratti Gali and third on Bourbon Road near Pearl Continental Hotel. Children also use play ground in educational institutions. For current population of Murree these paly grounds are insufficient and there is need to provide play grounds of different level as per national and international standards.

4.1.1.7 Graveyards

There is only one community graveyards, along Musiari Road which use to be a Christian Community Graveyard, but now it is shared by Muslim community as well.

In Murree, mostly the land for graveyard is donated by private sector in small pockets and nearby neighborhood people and family members use it for burial.

4.1.1.8 Roads

Murree is sufficiently linked with intercity roads from Rawalpindi-Islamabad, Galiyat area and AJ & K. These include Kashmir Road, Ayubia Road, Muzaffarbad Road and Islamabad – Murree Expressway. Most of the intercity links are old and go back to colonial times. However, time to time their up-gradation has taken place by widening, signage, viewing mirrors, landscaping and road side furniture. Recently, Islamabad – Murree

Expressway has been built to provide variety in accessibility to the road users. This shall be extended to Muzaffarabad in its second phase.

Intra-city roads are mostly old and having very limited Right of Way (ROW), owing to topographic limitations. Due to unstable soil conditions and hilly terrain it is very expensive and technically challenging to upgrade existing roads. Overall condition of Murree intra-city roads is satisfactory. Most significant roads include Mall Road, Brewery Road, Cuart Road, Bank Road, Upper & Lower Jhika Gali Roads, Lawrence College Road, Kuldana Road, Hall Road, Upper Topa & Lower Topa Roads. Jinnah Road, School Road and TV Station Road.

To serve the town there are sufficient road, but during tourist season these become insufficient and choked. Moreover, there is issue of access road from areas away from main roads. These are usually villages or new urban settlements, which lack access road. Such users are compelled to use muddy tracks, which become very slippery during rainy and snowy seasons, resulting in accidents.

4.1.2 Review from Locational Perspective

In Murree the concentration of development has been on the main ridge area of Murree town and population has expanded from there in all directions. Most of the public uses date back to British times. Owing to which most of the facilities are concentrated in the central town. With passage of time as per population needs, these facilities have been up-graded. In this regard no effort has been made to create hierarchy of such uses (except in case of educational facilities). This has created problem of accessibility for users and traffic congestion & parking problems for the town managers. Unfortunately, still the town

administration and development agencies are struggling to find solution in traffic management, rather than reviewing land use of the town from locational perspective.

4.1.2.1 Commercial

Location wise the commercial activity like other activities is concentrated mostly around Mall road with hotels and restaurants dominating the land use. This has deprived local population from the neighborhood living and they have to reach Mall Road or any other main road to fulfill their day to day needs of shopping. Murree has harsh winters and copious rainy days, which makes it difficult for local residents to converge to these location on day to day basis, for fulfillment of their shopping requirements.

With changing character of local commercial scenario towards tourism the demand and convenience shops are becoming lesser, as compare to the spreading population. There is dire need that neighborhood concept is introduced in commercial activity with demand and convenience shops provided near all clusters of local population. In this regard, if required changes may be made in the bylaws to facilitate this provision.

Most of the commercial areas have developed along main road which not only create traffic problems but have also contributed to ribbon development. With limited width of right of way there is no room for road expansion without going through a difficult process of land acquisition. Moreover, the provision of infrastructure would be very costly.

4.1.2.2 Education

Educational land use is the only land use that has been located in abundance. Due to this the accessibility of educational land uses is not much trouble to the users. However, it can be further improved if the public transportation system and road network is extended to the peri-urban areas of the town. In peri-urban areas there are accessibility issues due to non-

availability of access road and children have to travel on muddy paths especially in rainy and snowy days, when they become slippery.

The institutes locate in central town are comparatively old and have experienced staff due to which the standard of education is better than new schools. Therefore people prefer to admit their children to these institutions instead of the schools near their houses. This defeats the concept of neighborhood schooling, especially for primary students. There is need for provision of equipment and furniture in new public sector schools and improvement in education standard.

4.1.2.3 Health institutions

Health institution by public sector are distributed all over thesil in form of BHUs but they are under staffed and without any facility or medicines. There is one government hospital in Murree, which is not sufficiently equipped and is also under staff. Owing to which people either seek medical assistance from private health institutions or Combined Military Hospital (CMH). In case of comparatively bigger emergencies they take patients to twin cities. There is also need for a trauma center to treat emergency patients related to snake bites, accidents, burns etc.

4.1.2.4 Parks and playgrounds

Parks have mostly been located with point of view of attracting tourists. Therefore they have been located along main roads and are mostly town level parks and amusement parks. As neighborhood level parks are very rare they are not in easy access to most of the residents. Similar is the case with tot-lots.

In active recreation the location is not very convenient for users when looked at from town point of view. Some playgrounds have been made by the citizens temporarily

to play cricket or football. Such playgrounds are mostly encroachment on some private land and have insufficient area and equipment. However, this tendency shows the demand of playgrounds of neighborhood level in the town.

4.1.2.5 *Places of worship*

In Murree Muslims are in majority, but there are many worshiper of Christian community. There are several churches from colonial time that are centrally located. These churches serve well as per population. However, there is need to improve their condition of structure. Mosques are in abundance and at walking distance for all users. There are mosques of level and sects in urban and peri-urban areas as well.

4.1.3 *Perception of Local Residents*

While planning for people it is essential to involve the end users and other stakeholders in all stages of planning and designing. This ensures a representative planning and smoothens way for implementation. Moreover, it also develops a sense of ownership regarding the plan, design and all forms of development.

At the analysis stage, to evaluate the sustainability of existing land use it was crucial to look at the town from the resident's perspective, as they are the main beneficiaries or effected from any implication of a specific land use regulation decision independent or corresponding effect. With two master plans prepared for Murree town and none officially notified, it is understood that expansion of Murree took place without any plan. With small ownership pattern of private land, scarcity of public land along with limitation of hilly terrain, the town was bound to develop in irregular pattern, it has developed over the decades. Therefore it may not be rational to expect Murree to be a balanced town, from provision of various amenities perspective. Prior to this survey desk studies were done and

land use map of Murree was also studied that provided initial information regarding various aspects of towns land use. To validate this information and to actually know how an end user feels about the implications decision taken in the current land use regulation system and atmosphere where there prevails a development process without guidance of an overall plan. To facilitate the process two main parameters were selected for local respondent's survey. The first one was the 'Location Criteria' and the other 'Allocation Criteria' of various amenities/facilities.

In this regard fifty structured interviews were conducted from local residents. To enquire about the above mentioned aspects of existing land use plan it was expected that the respondents mainly being nontechnical would not be able to respond precisely. Therefore, the survey instruments were designed in such manner that it offered multiple choices to the respondents. The location of use was established by the time consumed to reach that basic level facility by walking. The reference rule of Naismith was used, according to which a person walks at a speed of five kilometers per hour with an addition of one second for every ten meters ascend. Similarly, the allocation aspect was assessed through the feeling sufficiency or insufficiency of each aspect of a particular facility. A sample instrument in this regard has been annexed at Annexure I for reference.

The survey instrument in its initial questions gather information regarding respondent's personal information so that he/she can be qualified for the remaining interview. It can be observed from the sample questionnaire that analysis of only selective questions has been made part of following exploration. The selection has been done on the basis of direct relationship with the sustainability and land use aspects. The questions made

part of instrument just to facilitate continuous flow of interview have not been made part of the analysis.

4.1.3.1 Educational land use

Table 4.1 presents the distance traveled gender-wise by students of various levels to their respective educational institution. Here we would have to consider a fact that most of the population of Murree lives outside main core of Murree owing to limited land available due to hilly terrain, high land values and conversion of residential land use to commercial/tourism related land uses. This factor shall reflect in all distances covered by various level of students, therefore the distance may seem on higher side than in normal circumstance in any other city.

We can observe that at the degree level male student cover over 45 km (one side) distance whereas female students cover about 13.75 km. This shows that male students travel outside town, which just might be twin cities for their educational institutions. In contrast female students travel within town limits or tehsil limits to acquire education. It is very much possible that male students may be involved in some kind of professional education therefore they ought to travel to Rawalpindi or Islamabad for educational fulfilment purpose and female students are able to get their degree level education within town.

Higher secondary and secondary level students are usually grownup students and can use public transport to reach schools/colleges. The average distance covered by male Higher Secondary students is 13 km whereas average distance covered by female students is almost 17 km this reflects that the number of educational facilities for female students is lesser than the male students. At secondary level the distance of both genders are somewhat

comparable. In town like Murree with limited land option and a town which is going through transformation of commercial and tourism at great pace, it is not possible to provide higher order educational facilities in all areas. However, efforts should be made to somewhat decentralize surplus education facilities from central town to farer areas to reduce daily traveling distance. Moreover, it would also reduce load on central core and may help in creating more breathing spaces for the town.

The children of middle and primary level are usually younger children and are unable to travel longer distance without supervision of any adult. The distance ranging from 6.5 km to 10.8 km is on very high side. Although, there may be issue of quality education in some cases, but still overall traveling of primary and middle level students of both genders is point of concern. There is need for balance provision of lower level education facilities in all localities. Moreover, public sector should also look into provision of quality education, especially at these levels.

Table 4.1: Average distance covered by students daily (gender-wise data)

S. No.	Education Level	Average Distance (km) Traveled Daily For Education (Male)	Average Distance (km) Traveled Daily For Education (Female)
1	Under/ Post Graduate	45.31	13.75
2	Higher Secondary School	13.00	16.86
3	Secondary School	9.80	8.20
4	Middle School	10.80	8.94
5	Primary School	6.50	8.54

Source: Field survey year 2015

In Table 4.2 the transportation modes of students of both gender of various level students can be observed. At degree level most of male students (i.e. 61.5 %) travel by car and remaining 38.46% travel by public transport. If we compare Table 4.1 & 4.2 regarding

male degree students we would observe that the average distance covered by male degree students is over 45 km daily (one side) which may be the reason that we do not find any male student walking to the educational facility.

In case of female degree students it can be observed that 50% students walk to their respective educational institutions. If we compare it with the average distance covered (13.75 km) by female degree level students (Table 4.1) the figure seems unbelievable.

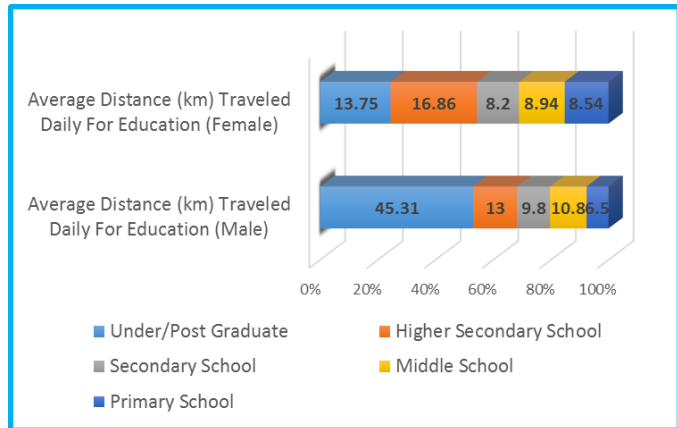


Figure 4.2: Average distance covered by various level of students daily (gender-wise)

However, to clear the confusion we need to look into the details of our data, which reveals that there were only four female degree level students among the respondent’s families, two of them traveled on foot (accounts for 50%), one each by car and public transport. The maximum distance traveled on foot was 4 km which is too much for one side distance, but is humanly possible, with lot of effort of course.

In case of higher secondary school students in Table 4.2 we do not find any student traveling on foot apparently owing to lot off distance. Most of the students in both gender travel by car. Interestingly, in sharp contrast to male higher secondary school students, a reasonable percentage of female students are using public transport.

In case of Secondary School students of both genders we find that 20% male students walk to school while 40% female students do the same. If we look at the average distance of both genders given in Table 4.1 it is between 8 to 10 km, which is too much for student of

any age, especially in hilly terrain like Murree. However, if we look at our detailed data of survey we would observe that in actual the distance traveled by this level students (both genders) on foot is 1 km to 4 km. In fact as the distance traveled by ‘Car’ and ‘Public Transport’ are manifolds as compare to distance covered by students that walk to school, therefore the average distance give misleading figures for students travelling on foot, to their educational institutions.

Table 4.2: Mode of transport used by students daily (gender-wise data)

S. No.	Education Level	Percentage of Each Mode of Transport Used (Male)			Percentage of Each Mode of Transport Used (Female)		
		On Foot	Car	Public Transport	On Foot	Car	Public Transport
1	Under/Post Graduate	0	61.5	38.46	50	25	25
2	Higher Secondary School	0	100	0	0	57.14	42.86
3	Secondary School	20	20	60	40	60	0
4	Middle School	20	20	60	18.75	68.75	12.5
5	Primary School	45	15	40	30.77	30.77	38.46

Source: Field survey year 2015

The number of students walking to the school is lesser than the students traveling by car or using public transport, which also reflects deceptive figures. We have similar situation in case of students walking to education institution of both genders at middle and primary

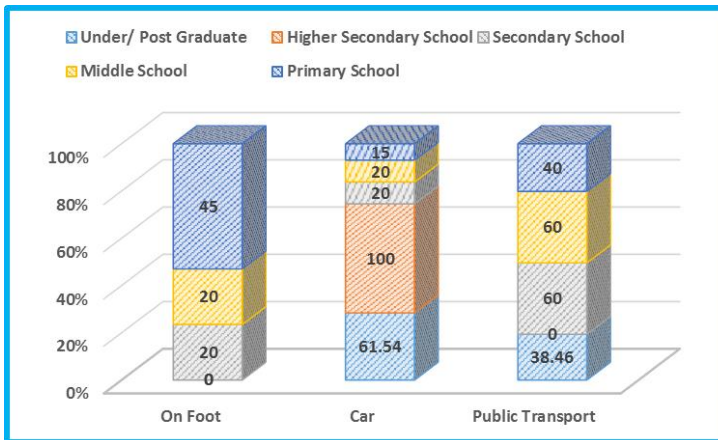


Figure 4.3: Mode of transport used by various level of students daily (males data)

school stages. The explanation to it is also the same. Students covering 1 km to 2 km by walk seems reasonable, but students covering more distance must be going through lot of exertion and with increasing traffic this commuting is not

safe for younger students of both the genders.

If we look at tendency in male and female students of Secondary and middle levels in Table 4.2 we would observe a similar pattern for each gender. In case of male students

the dependency is more on public transport and in case of female students the dependency is on car. However, in case of female students of primary level there seems comparable results for all three mode of transport.

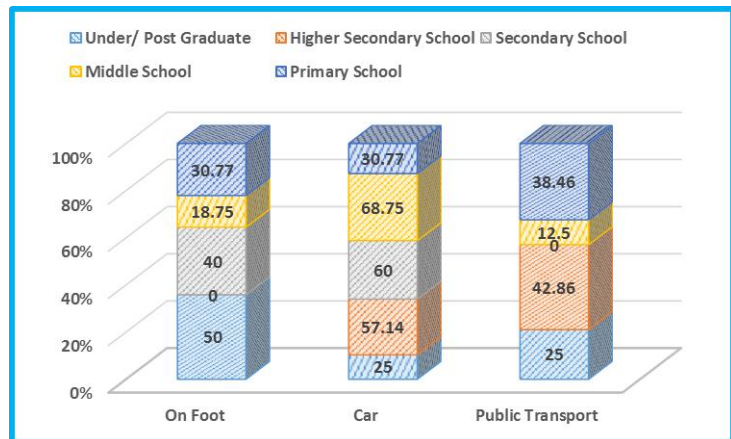


Figure 4.4: Mode of transport used by various level of students daily (females data)

The overall public transport system of Murree is far from impressive. The trends of use of public transport may have been greatly influenced, due to availability of public transport in a vicinity. Similarly, students traveling through car or walking to the school may be doing so it due to unavailability of public transport or unavailability of safe and

efficient public transport. The facilities available in institutions and level of satisfaction were not part of this survey as, as there was fair chance that the respondents were not students themselves and may provide miss leading information. Moreover, this information is already available on Government of Punjab Educational web site.

4.1.3.2 Employment and place of work

Murree is a Tehsil Headquarter and a tourism hub, these two factors mainly constitute the employment related land use of Murree town, although the later dominates the former. During our survey the local respondents where enquired about their livelihood, distance covered to the place of work and mode of transport used for the same.

Table 4.3 presents information regarding percentage of respondents belonging to various strata of employment sectors. It can be seen from the table below that most

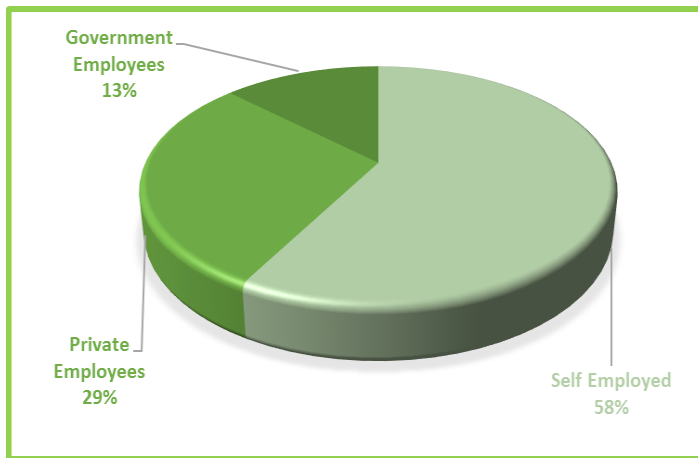


Figure 4.5: Type and percentage of employment of respondents

dominating sector of employment is ‘Self Employed’ with respondents constituting 58.06% of the total respondents. This sector includes daily use shops, hotel owners, tourism related shops, taxi drivers, hawkers, public transport

owners, restaurant owners etc. The second most employment offering sector among respondents was private sector. This includes all employees working for private or commercial offices/units. This may include employees working in hotel, shops, private offices, working with some transporter, poultry farm workers etc. Public sector employees

were minimum among respondents. They constituted only 12.9 % of the total respondents. If we look at the overall land use of Murree town the trend of respondent's employment seems to be true representative of the Murree employment sectors.

Table 4.3: Type and percentage of employment of respondents

S. No.	Type of Employment	Percentage of Each Category
1	Self Employed	58.06
2	Private Employee	29.03
3	Government Employee	12.90
Total		100.00

Source: Field survey year 2015

Table 4.4 depicts the distance traveled by respondents to their respective place of work. It can be seen from the table that most of the people commute from outer fringe of the town. However, number of people commuting from Rawalpindi, Islamabad or other areas is comparatively less. For analysis purpose instead of taking an average distance traveled by respondents to place of work, they have been categorized them into various classes with respect to the distance traveled. Here it is worth mentioning that the household heads of the respondents working overseas were not made part of this analysis, as they do not have any significant impact on the land use sustainability of the town.

This categorization enables us know percentage of respondents traveling equal or less than 10 km which comes out to be 59.42 %. Similarly, respondents traveling between 11 km to 20 km are 24.64 %. If we sum-up these two percentages it concludes to 84.16 %. As this survey was conducted in the town limits and on its major known destinations, this means that respondents coming for work to these parts of the town were mostly travelling

towards the town rather than moving out of it. However, respondents have also reported about their other members of households who travel to place of work outside the town limits, but that number is not significant as most of the households have one earning member.

As per Table 4.4 the respondents traveling over 20 km were divided two categories i.e. respondents or their earning members traveling between 21 km to 40 km were 5.80% whereas working members traveling 41 km to 70 km were 10.14 km. It can be assumed that the respondent's family members traveling more than 20 km or less than 35 km for work and commuting daily, may be traveling towards Murree town from smaller towns or villages as Murree is comparatively bigger magnet in the area. Whereas, respondents family members traveling 35 km to 45 km may be traveling to Islamabad. The working members traveling more than 45 km may be traveling towards Rawalpindi and Muzaffarabad, as they both are bigger magnets than Murree town.

Table 4.4: Distance traveled to place of work

S. No.	Distance Traveled to Place of Work	Percentage of Respondents
1	Travelling less than or equal to 10 km for work	59.42
2	Travelling between 11 to 20 km for work	24.64
3	Travelling between 21 to 40 km for work	5.80
4	Travelling between 41 to 70 km for work	10.14
Total		100.00

Source: field survey year 2015

No matter in which direction the commuters working population of Murree is traveling it contributes to use of public as well as own car. To facilitate such road users we ought to have better traveling facilities and bigger public transport terminals, in terms of size and number. Moreover, it would be better if we can opt for variety of public transport. This may as well boost tourism in the area.

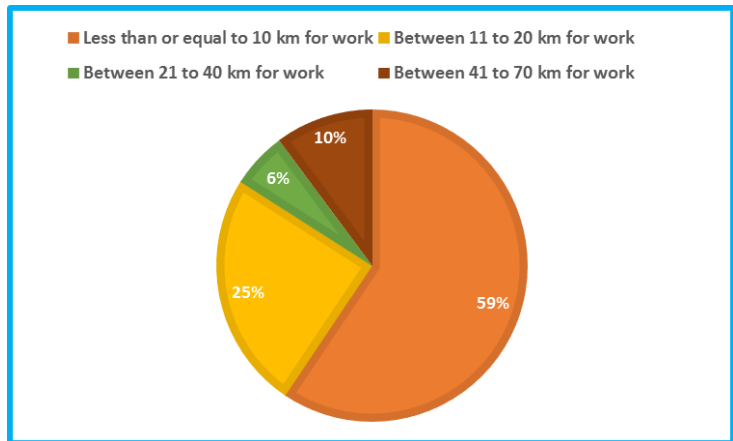


Figure 4.6: Distance Traveled to Place of Work

Significant number of household working members of respondents travel to place of work on foot i.e. 23.19 % (as per Table 4.5) these are respondents that travel less than 05 km to place of work. Table 4.5 also shows that 43.48 % working members were traveling by car whereas 33.33 % were traveling by public transport.

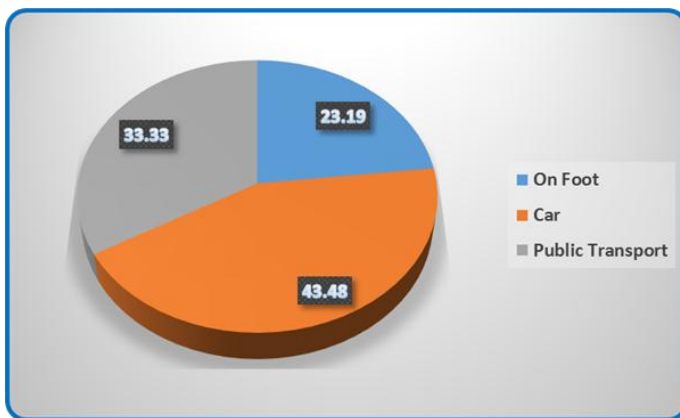


Figure 4.7: Mode of Transport Used to Place of Work

If we compare Table 4.5 to Table 4.4 above it would be interesting to note that in a town where about sixty percent of working members are traveling less than or equivalent to 10 km, only about 23 % walk to the place of work. The reason may be that

the hilly terrain of Murree town which not so walking friendly especially when one has to

walk on daily basis. However, the trend of use of car is not very encouraging with reference to environmental sustainability of the town. The use of public transport is less, which is an indication of unsatisfactory quality of public transport, locally and regionally.

Table 4.5 Mode of transport used to place of work

S. No.	Mode of Transport Used	Percentage
1	On Foot	23.19
2	Car	43.48
3	Public Transport	33.33
Total		100

Source: Field survey year 2015

4.1.3.3 Parking

Parking is serious problem in Murree from tourist's as well as local's perspective. With densification of Murree inner town, not many easily accessible tourist destinations in the region and hilly terrain of Murree contribute to shortage of parking lots in Murree. On weekends and holidays Murree is thronged with visitors which exhibits glimpse of the graveness of this problem. Mall road of Murree being main commercial and employment hub of the town, lot of people from within town and outside travel towards the town center and face the parking problem on daily basis. Public and private sector both have done some efforts to resolve the problem, but still it is far from resolved. It seems that the solution of problem may not be in increasing parking supply, but rather it is in decreasing its demand or doing both simultaneously.

To analyze parking problem from locational perspective, in this section information regarding distance of parking from two major parking generating activities that usually do not offer parking on premises has been combined. These include place of work and

shopping areas. If main public and private work facilities situated in the main core area of Murree town is observed, it can be concluded that the two activities dominate the central core area of the Murree.

Table 4.6 reflects the analysis of responses of local respondents regarding location of parking from their place of work and their preferred shopping location.

Table 4.6: Distance of parking from place of work & shopping center

S. No.	Distance Covered	Percentage of Respondents	
		Parking from Place of Work	Parking from Shopping Center
1	About 3/4 of km	48.15	47.27
2	About Half km	16.67	18.18
3	Less than Half km	35.19	34.55
Total		100.00	100.00

Source: Field survey year 2015

From Table 4.6 it can be seen that 48.15 % of the respondents park their cars at a distance of about 0.75 km to reach their place of work. Similarly, while shopping comparable percentage of respondents i.e. 47.27 % found parking at distance of about 0.75 km. Second highest percentage of respondents that parked their vehicle at about less than half km. The least percentage of vehicles were parked at a distance of about half kilometer. Interestingly, the trend of

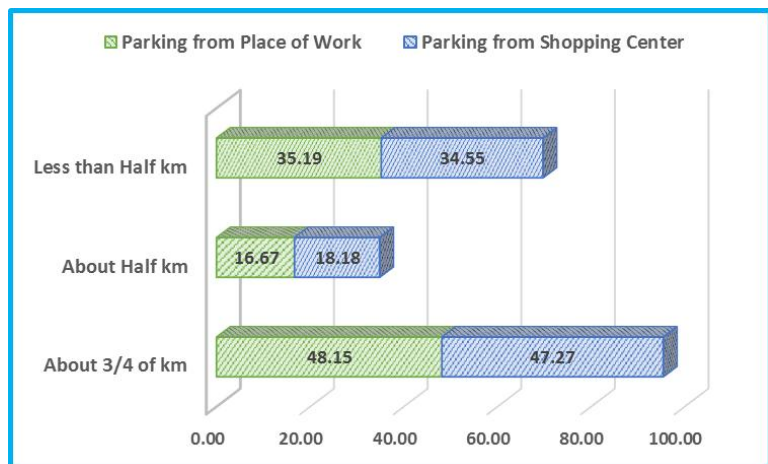


Figure 4.8: Distance of Parking from Place of Work & Shopping Center

respondents that parked their vehicle at about less than half km. The least percentage of vehicles were parked at a distance of about half kilometer. Interestingly, the trend of

parking vehicles during work hours is same as for shopping trip. This indicates the space available at the parking spaces. The biggest parking is located at about distance of 3/4 km i.e. near bus terminal. The second largest and most convenient parking space is near to GPO which is the most preferred, but is mostly full. Lot of cars are parked on street in such cases sometimes they contribute to traffic blockage, as roads in hilly areas cannot be made very wide. The respondents that informed that they parked their vehicle less than half km away also include owners and employees of hotel, who have in house parking for employees and visitors.

4.1.3.4 Amenities

Amenities are the facilities that make an urban area worth living. They facilitate the daily life of the residents and even commuters. Amenities are categorized in various levels/order. This order has been formed considering the frequency of use of any amenity and capabilities of the end users. A facility that is not frequently used by residents can be placed far apart, although equally accessible from all sides. In contrast, facility which is related to daily life and visited most by end users need to be distributed equally throughout the area. Similarly, facilities to be used by children, elderly and housewives should be located at a convenient walking distance from end users. This location of amenities with respect to their users and frequency of use is termed as 'Locational Criteria' of land uses. Activities /amenities that are placed at lesser interval would have lesser number of users, whereas the amenities that are situated at greater distance shall be of higher order and would serve more number of users. This condition necessitates that the facilities of higher order and expected to serve more users shall have comparatively more area as compare to facilities of higher order. If we say it differently we may say that the amenities with more catchment area shall

have larger area requirement and the facilities with lower catchment area would have lesser area requirement. This criteria of area establishment for any order facility is referred to as 'Allocation Criteria' of land uses.

The guidance regarding the above mentioned criteria is already established in various national and international planning standards. From such guidelines usually the standards are adapted as per local weather, topographical, socio-cultural and other conditions to form local building bylaws and zoning regulations. One of the most referred in Pakistan is called National Reference Manual (NRM) of Planning and Infrastructural Standards by Ministry of Environment and Urban Affairs Division, Pakistan.

Generally, the respondents of any survey in urban area are not familiar with the standard requirements of such standards and whether or not the same have been practiced in their town development. However, they can respond to some related questions that enquire the time or distance of the facility from their house or place of work. Similarly, even without having any knowledge of catchment area of any facility they can inform about the sufficiency of any facility with reference to the number of its users or crowding of any facility during peak hours of its respective use. During the study of the land use location and allocation of various order facilities the above mentioned tendency of respondents was considered while the forming survey instruments and the enquiry was conducted accordingly.

In Table 4.7 some of the facilities are of sub-neighborhood level where as some are of neighborhood level and town level. The sub-neighborhood level facilities include park, metaled road and shops. Other facilities include hospital, graveyard and playground. We preceding sections we have already discussed educational facilities, place work and

parking in detail. We have included facilities given in Table 4.7 due to their significance from a local resident's point of view.

The amenities included of sub-neighborhood level are essential for a house wife and other household members. Metaled road in this regard facilitates accessibility for whole household. Parks are essential for daily outdoor activities of younger children and toddlers. Demand and convenience shops offer goods of daily use and mostly shopped by housewives or house maids. All these facilities should be at convenient walking distance, from each house in the vicinity. This distance if measured in time should not be more than five minutes' walk, so that if required a housewife and children can safely access these facilities whenever required.

Table 4.7 depicts that average distance of metaled road from most of the household was communicated as 0.59 km, whereas sub-neighborhood Park is 4.99 km and demand and convenience shopping area is 2.01 km. These statistics shows that most of the areas from which respondents of our survey belonged were not adequately served with respect to these facilities. The end users of these facilities cannot reach these facilities conveniently even in fair weather conditions. The public transportation system of Murree town is not satisfactory so accessing such daily use facilities through walking would not be desired by the residents. The reason contributing to this inadequacy of distribution of facility can be related to the development of Murree town without any preconceived plan. In fact, the town took its shape as per ownership of land and needs of economic base of the town i.e. tourism not considering the convenience of the local residents. The small parcels of private land contributed to the pedestrianized access to most of the houses at higher elevation or away from the main roads of the town. Although shopping areas have developed besides Main

Mall road, but that too are in form of ribbon development, along main roads. There is no concept of shops in the neighborhood or clusters of housing away from the main roads. Park have been developed in Murree, but in the main town and mostly as tourist attraction and not to fulfill the recreational requirement of the local children or other household members.

Table 4.7: Distance of daily used amenities from respondent's household (HH)

S. No.	Various Amenities	Average Distance from HH (in km)
1	Metaled Road	0.59
2	Sub-Neighborhood Park	4.99
3	Consumer and Demand Goods Shopping Area	2.01
4	Hospital	6.68
5	Play Ground	3.22
6	Public Graveyard	4.50

Source: Field survey year 2015

As explained earlier in the preceding sections that Murree town lack in health facilities. It was supposed to play role of a Tehsil headquarter, but unfortunately it is not fulfilling even needs of local residents. There are private clinics and small hospital set ups that attempt to the fill this large gap, but still it is far from what is required for a Murree town and its hinterland. Table 4.7 reveals that average distance of hospital is about 6.68 km from the house of respondents. As we have seen in Table 4.4 about 60% respondents belong to the town and very few commute from other areas. Therefore, an average distance of a town level health facility being at an average distance of 6.68 km is not justified, especially considering extreme winters and inadequate public transport.

Playgrounds are required at neighborhood level. A small playground should be within 10 minutes walking distance of every house. However, the playgrounds made as part of schools can also

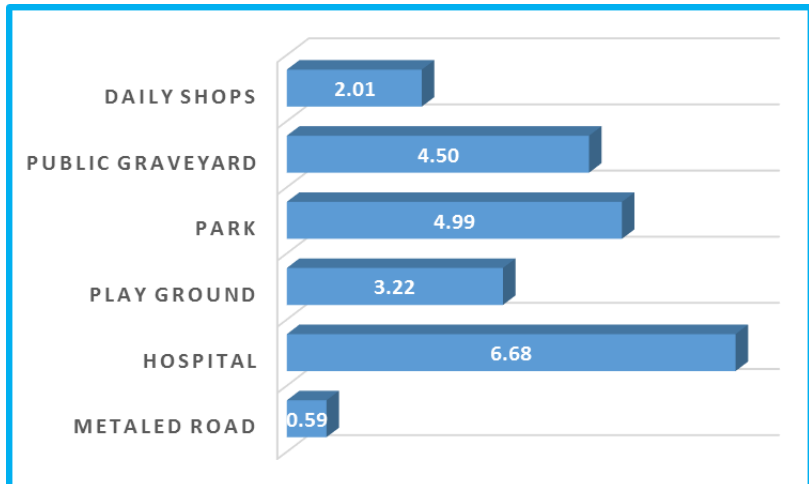


Figure 4.9: Distance of daily used amenities from respondent's household (HH)

serve the children of local population. With the trend of private educational institutions being established in houses the playground with in the premises of schools were also rarely seen.

Table 4.7 shows that the average distance of playground of any level is about 3.22 km from respondent's houses. This distance is by no means justified considering the active recreation need of children of all ages. With trend of provision of educational institutions without playground, prevailing unchecked by government development departments, necessitates that public sector should take initiative for provision of playgrounds in well balanced distribution, throughout the area. This will not only fulfill active recreational needs of the local children, but would also provide more breathing spaces to the town, which owing to scarcity of land is now opting towards vertical extension, despite vulnerability of soil conditions and earthquake prone area.

In hilly areas throughout Pakistan and AJ&K it has been observed that trend of private graveyards prevail. Even if there is community graveyard available it is mostly

developed on donated land by some noble personality/family of the society. The reason is not limited to the land scarcity with respect to public sector. In most of the areas despite smaller land holding the burial of the elders of the family members are done in the land owned by family and mostly beside the house. May be due this trend and owing to reason of unavailability of public land the need of public graveyard could not be felt as in larger cities of Pakistan.

In case of Murree town there is only one public graveyard, which is situated at the South Eastern part of the town (along Musiari Road). During the interview it was felt that most of the people did not know about this graveyard, due to which only 40% percent respondents informed about the distance of public or community graveyard from their house. Table 4.7 shows that average distance of graveyard was 4.50 km. The distance of graveyard is not something of concern, as it is a facility that is not frequently visited and nor it is required in emergency.

Murree is a Tehsil Headquarter therefore while having very active role of a major tourist destination and urban locality it has to offer some services to it tehsil area. In this regard, it should be able to host a hospital that can be termed as Tehsil Hospital. In contradiction to its role as Tehsil Headquarter Murree town is unable to serve adequately to its local residents, as far as quality of service offered at Civil Hospital Murree. As explained earlier the respondents may not be related to urban planning or medical profession therefore shall not be explicit about the quality and adequacy of service being offered at the hospital. To resolve this problem reference questions regarding sufficiency of various facilities offered at hospital were built-in the survey instrument.

Table 4.8 and Figure 4.10 provide insight into the quality of services offered at the hospital facility. The respondents of survey were asked to do grading of various facilities from Poor to Excellent' offered at the hospital, in five different rankings. The facilities included in this discussion were of primary nature that usually most of the tehsil level headquarters offered. Overall picture of the hospital can be easily assessed from the first row of this table. All the facilities about which enquiry was made are mostly ranked in poor category, by the respondents. Table shows that operation theater, out-patient department, lab/X-ray, parking and number of beds in emergency are in miserable state from respondent's point of view, due to which most of the respondents have ranked it in poor state. In case of number of doctors and number of beds in hospital most of the respondents were not satisfied as well. However, the condition of these two aspect seems better than other aspects due to which 54.55% have ranked number of beds in 'Poor' state and 36.36% have ranked it in 'Fair' state. Similarly, 65.45% of respondents have ranked number of doctor's aspect in 'Poor' state and 29.09% have ranked it in 'Fair' state. It is worth mentioning that less than 8% have ranked any of the facility in 'Satisfactory' state. Whereas, the entries related to 'Good' and 'Excellent' state are negligible.

Table 4.8: Ranking of hospital w.r.t sufficiency of various facilities

Ranking	Percentage of ranking w.r.t sufficiency of hospital facilities						
	No. of Beds	No. of Doctors	Operation Theater	Out Patient Dept.	Lab/ X-Ray Facility	Parking	No. of Beds in Emergency
Poor	54.55	65.45	89.09	87.27	78.18	85.45	78.18
Fair	36.36	29.09	7.27	9.09	12.73	7.27	20.00
Satisfactory	7.27	1.82	3.64	3.64	7.27	7.27	1.82
Good	1.82	1.82	0.00	0.00	1.82	0.00	0.00
Excellent	0.00	1.82	0.00	0.00	0.00	0.00	0.00
Total	100	100	100	100	100	100	100

Source: Field survey year 2015

The overall condition of location and allocation of facilities in case of health facilities in Murree town is critical. Being tehsil headquarter and a tourist hub of the country, facilities like health should have been

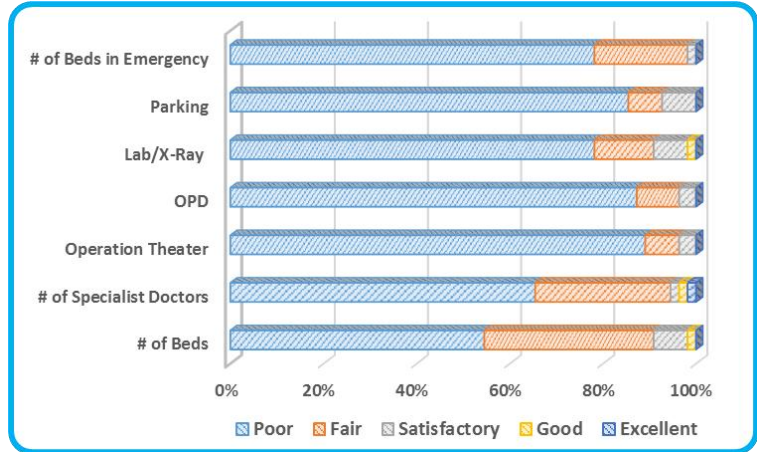


Figure 4.10: Ranking of hospital w.r.t sufficiency of various facilities

commendable, but ironically it is far from what is desired. Government is spending on provision of tourist facilities like chairlifts and accessibility to Murree, but there is no consideration of interest of local population that runs this whole show of tourism. Murree has been popular for its TB-Hospital since colonial rule. Similarly, the significance of Murree has always been health station, but now it is striving to keep pace with its local health needs.

In our cities we lack awareness regarding significance of playgrounds. In town like Murree it is difficult to find some plain land to propose a playground, but with help of engineering solutions playgrounds can be made on



Figure 4.11: Ranking of play grounds w.r.t sufficiency/ availability of various facilities

most of the land not suitable for buildings. It is lot cheaper to develop a playground by recovering a land parcel, rather to recover the same land for a building.

Table 4.9: Ranking of play grounds w.r.t sufficiency/availability of various facilities

Ranking	Percentage of ranking w.r.t sufficiency of playground facilities							
	Area of Play Ground	Parking	No. of Baths	No. of Tuck Shops	Sitting Area (Tuck Shops)	Viewer's Area	Practice Area	Dressing Rooms
Poor	45.45	67.27	98.18	94.55	92.73	74.55	94.55	100
Fair	47.27	29.09	1.82	3.64	5.45	18.18	3.64	0.00
Satisfactory	5.45	3.64	0.00	0.00	0.00	3.64	1.82	0.00
Good	1.82	0.00	0.00	1.82	1.82	3.64	0.00	0.00
Excellent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100	100	100	100	100	100	100	100

Source: Field survey year 2015

Table 4.9 & Figure 4.11 indicate about adequacy/quality of various facilities available in playgrounds of Murree. The respondents of survey were asked to inform about their satisfaction level regarding adequacy of playground size and facilities available there. The planned playgrounds in Murree are very few, mostly wherever there is some incidental plain area children declare it an informal playground. This is the reason that the statistics in Table 4.9 offer a very sorry state about condition of play grounds. It is very obvious from the table above that most of the aspects of playgrounds have been graded as poor quality by over 65% respondents. These include number of parking, baths, number of tuck shops, sitting area around tuck shops, viewer's area, practice area and dressing rooms. Area of playground is the only aspect which has been ranked poor by comparatively lesser number of respondents (i.e. 45.45%). The point of concern is that very few respondents have raked any of the facilities as satisfactory and higher ranking is even in grimmer

situation. The major reason behind this situation is that playground in Murree are not a facility used by tourists and is not revenue generating.

Private and public sector usually concentrate their investment in activity which is productive in terms of revenue. Moreover, there is not much public land for developing playgrounds. Presently, what respondents considered playground during survey were in fact places which are incidental open spaces that children themselves have declared as informal playfields, till the time it is replaced by some building by the actual owner of the land.

Parks are passive recreational facilities used by all family members from time to time. Higher order parks can be used as revenue source by public and private sector. This not only recover capital cost incurred on parks, but also ensure profit for the investor. These days' theme and amusement parks are built through public private partnership, benefits of which are mutually rewarding. Murree is considered as family tourism resort, understanding which public sector with some assistance from private sector, keeps on contributing towards higher order parks and chairlifts etc. Murree as town lacks in lower order parks and tot-lots, which may not good investment from revenue point of view. Moreover, striving to serve floating population, Murree has shifted its focus from serving resident population to floating population that has contributed towards qualitative and quantitative backlog in various aspects of daily urban life.

Table 4.10 & Figure 4.12 put light on the condition of Parks in Murree town from point of view of our survey respondents. During this survey sufficient care was practiced to record views of our respondents regarding the facilities respondents and their families use in daily life, rather than the higher order facilities, built as tourist attractions. However,

it cannot be claimed with full confidence that they understood the difference between the medium order and lower order facilities especially in case of Sub-neighborhood Park and neighborhood Level Park, so the response presented in



Figure 4.12: Ranking of parks w.r.t sufficiency/availability of various facilities

the table below may be referring towards any of the two. Parks in Murree town are so scarce that the response is acceptable either way, for the study purpose.

Table 4.10: Ranking of parks w.r.t sufficiency/availability of various facilities

Ranking	Percentage of Ranking w.r.t Sufficiency of Park Facilities					
	Area of Park	Parking	No. of Public Toilets	No. of Tuck Shops	Sitting Area (Tuck Shops)	Swings etc.
Poor	25.00	56.25	91.67	70.83	68.75	64.58
Fair	64.58	37.50	8.33	18.75	18.75	27.08
Satisfactory	8.33	6.25	0.00	2.08	2.08	6.25
Good	2.08	0.00	0.00	8.33	10.42	2.08
Excellent	0.00	0.00	0.00	0.00	0.00	0.00
Total	100	100	100	100	100	100

Source: Field survey year 2015

In Table 4.10 it is encouraging to note that we find some aspects in ranking of ‘Satisfactory’ and ‘Good’ unlike other land uses discussed earlier. Most of the people have considered size of parks in ‘Fair’ category. 56.67 % considered that parking facilities associated with park is in poor state and remaining graded it in ‘Fair’ and ‘Satisfactory’

state. Swings were mostly considered in poor state with 64.58 % voting for ‘Poor’ state and 27.8 % considered it ‘Fair’. The encouraging thing about swings is that in some parks swings are in ‘Satisfactory’ and ‘Good’ state, although the percentages are only 6.25 % and 2.08 % respectively. Tuck shops and sitting area around them were mostly graded in similar ranges. 68 % to 71 % graded it in ‘Poor’ category. With equal grading in ‘Fair’ and ‘Satisfactory’ category i.e. 18.75 % and 2.08 % respectively. Here interesting thing to note is that even if the park is operated publicly the tuck shops are usually operated by private sector. Poor condition for a facility which is revenue generating and is also operated privately is cause of concern and may be discouraging for more private investment in lower and middle order parks. Public toilets are in the worse state with 91.67 % grading it as poor and remaining 8.33 % considered it in ‘Fair’ condition. With tuck shops not doing good it just may not be success to invite private sector to invest in public toilets. Public sector need to take steps to improve parks in Murree town to offer better living conditions to local residents and create more breathing places for the town, which is becoming dense and crowded with every passing year.

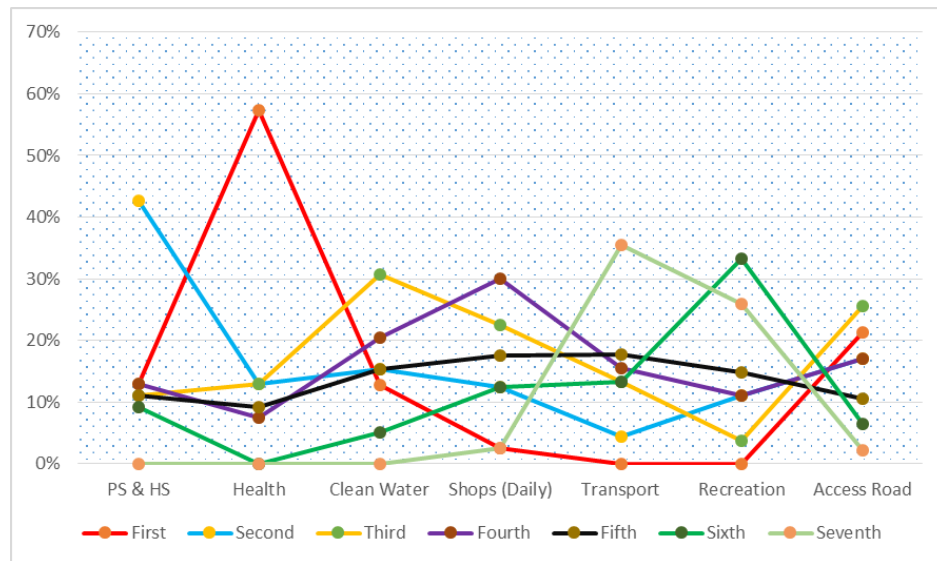


Figure 4.13: Ranking of resident’s priorities for provision of amenities

Another important aspect of survey was the results of priorities of local residents regarding provision of various amenities. Table 4.11 and Figure 4.13 show the priorities of survey respondents. It can be observed that education is second priority of most of the residents, with first being health facilities. The obvious reason is that the town lacks in health facilities, especially in public sector. People have to rush towards Islamabad and Rawalpindi in case of major health problems. Next priorities are clean drinking water, shops offering daily use goods and access road to their residences. Clean drinking water and access road are very basic facilities, whereas requirement for demand and convenience shops is owing to the fact that the concept of independent neighborhoods does not prevail in Murree, shops are usually found on road sides or in central part of Murree. Surprisingly, demand for public transport and recreation facilities is one of the least priority areas for local residents.

Table 4.11: Ranking of resident’s priorities for provision of amenities

Priorities	PS & HS	Health	Clean Water	Shops (Daily Use)	Public Transport	Recreation	Access Road
First	13.0	57.4	12.8	2.5	0.0	0.0	21.3
Second	42.6	13.0	15.4	12.5	4.4	11.1	17.0
Third	11.1	13.0	30.8	22.5	13.3	3.7	25.5
Fourth	13.0	7.4	20.5	30.0	15.6	11.1	17.0
Fifth	11.1	9.2	15.5	17.5	17.8	14.8	10.6
Sixth	9.2	0.0	5.0	12.5	13.3	33.4	6.5
Seventh	0.0	0.0	0.0	2.5	35.6	25.9	2.1
Total	100%	100%	100%	100%	100%	100%	100%

Source: Field survey year 2015

4.1.4 Perception of Tourists

Murree being a tourist town has two kind of population. One is native population that either lives in the town core or live in the environs and commute on daily or need basis, to reach various land uses of the town. The second type of population is floating population of tourists that visit Murree for recreation or other socio-economic reasons, on week days, weekends or during holidays, depending upon their purpose of visit. This population includes day trippers and as well as people who stay overnight or more with their families and friends. The visitors to the Murree look at the town from different point of view as compare to local residents, besides their needs and expectations from the town's land use are also different. Therefore it was essential to record their perception towards and expectations from the town's land use. A sample instrument is given at Annexure II.

Murree is considered as a family tourist resort and mostly popular with the local tourist from all over Pakistan. The day trippers are mostly from nearby areas like Rawalpindi, Islamabad or Kashmir areas. The people who choose to stay overnight or more are mostly from comparatively distant areas. The tourist to Murree irrespective of their duration of stay, look at Murree's land use from the perspective of availability of parking, access to shopping & recreation areas, places of recreation, greenery, road furniture, sitting spaces, sufficiency of roads, availability of hotels and restaurants etc. These aspects are entirely different from the perception of local residents and contribute to the popularity of Murree, as tourist resort. However, Murree being a family tourist resort, it was expected that the respondents would be mostly general public and would prefer to respond through their estimation rather than precision. Therefore the same criteria of duration of walking

distance and sufficiency of a particular facility was followed in tourist structured interviews, as in case of local residents.

In this case, the sufficiency or insufficiency of a particular facility at particular time can be debatable, with respect to the tourist visiting the town on that particular day, time of the year, time of day for that matter. The comment in some cases can be very valid as well. Considering the fact that every facility is designed considering the peak average expected load on that facility, it was attempted to explore most essential tourist facilities the town is lacking even in nonpeak season, on an average weekend. The results could have been misleading in case of the peak summer season holidays, i.e. when Murree gets its main tourist influx. The facilities that are not sufficient on average week end would require special treatment in peak summer holiday season. Besides, with limited land options for Murree, it is evident that ultimate sufficiency cannot be achieved for Murree, particularly with prevailing car ownership rate and lack of similar safer and accessible tourist resorts in the vicinity.

Time and again through various reports it has been emphasized that a comprehensive planning for tourism should be done to develop more tourist destinations and make them safe and accessible. However, this aspect is beyond the scope of this study. In this research with limited time and resources an attempt has been made to know the degree of sufficiency of all land uses for a tourist resort, considering the fact that Murree has been developed without influence of any pre-conceived Master plan. Even the projects that were taken by public sector were initiated with focus to make Murree more accessible and offering more and more tourist attractions. These both aspects on one hand have contributed to enhance the popularity of Murree as tourist resort, have also majorly

contributed to insufficiency and exhaustiveness of space in core Murree town, when looked from tourists and development agencies perspective. Following account would attempt to explore the perception of Murree’s land use from tourist view point. The origin of tourist defines the catchment area of Murree. The more diversity in the origin of tourists the more likely it is that the expectations of tourist regarding various land uses may vary. The tourist belonging to different socio-cultural and socio-economic background may look at some deficiency of a land use as of utmost importance whereas the tourist from some other background may think otherwise.

The survey recorded (Table 4.12 & Figure 4.14) that the most of the tourists belonged to Punjab (56% and Federal 32%) and Federal Capital area. Two obvious reasons that underlie this trend is nearness and accessibility on a normal week end. It can be debated that the trend would have been different if it would have been

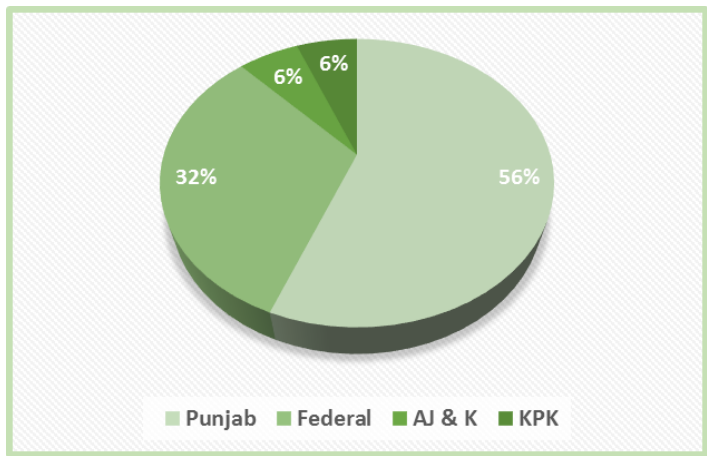


Figure 4.14: Origin of Respondents

summer holidays or some long weekend. Even if it was summer peak season still the percentage of tourists from twin cities would have outnumbered other places. The reason for the same is nearness and accessibility. With two major roads linking twin cities to Murree, the trend of visits from twin cities has also enhanced. However, if it was peak summer season we would have come across some tourist representation from Sindh and

Baluchistan provinces. Currently we had equal representation (6% each) from AJ & K and Sindh.

The focus of survey was of the sufficiency and availability of land uses that facilitate stay of tourists in Murree. In case of peak season the insufficiency of facilities would have been highlighted with much emphasis and more focus would have been on the facilities that affect the overnight stay or longer stay rather than day trippers facilitates. However, the facilities like an emergency/trauma center that are nonexistent would have been still be noted by tourists. With so limited developed tourist resorts in Pakistan the family tourism has always hinged around Murree. With growing population and enhanced accessibility the facilities in Murree are becoming less and less sufficient for tourist.

Table 4.12: Origin of respondents

S. No.	Origin of Respondents	Percentage
1	Punjab	56.00
2	Federal	32.00
3	AJ & K	6.00
4	KPK	6.00
Total		100.00

Source: Field survey year 2015

Most dominating character of Murree is family tourist resort. Besides this character Murree serves the role of a Tehsil Headquarter and business place for farther tourist's locations of Khyber Pakhtunkhwa (KPK) and AJ & K. Although, the later roles are overshadowed by nearness of Rawalpindi with its role of District Headquarter and a business hub of the region, with district level offices and facilities, large whole sale & retail markets, variety of private sector entrepreneurs, industrial estates and mass employment generator with respect to public and private sector.

The percentages of survey also represent these facts. The most dominating purpose of visit was tourism showing 82% representation. Followed by official visitors of 14% and business visitors of 4% only Table 4.13 & Figure 4.15).

Table 4.13: Purpose of Visit

S. No.	Purpose	Percentage
1	Tourism	82
2	Official	14
3	Business	4
Total		100

Source: Field survey year 2015

The representation of official visitors might have increased on a typical week day, but the facilities from land use perspective may not have changed significantly, except the focus on recreational facilities. In couple of decades, comparatively better work has been done on recreational facilities than other urban life aspects or tourist town features. So the major problems related to sufficiency and location of land uses highlighted by our

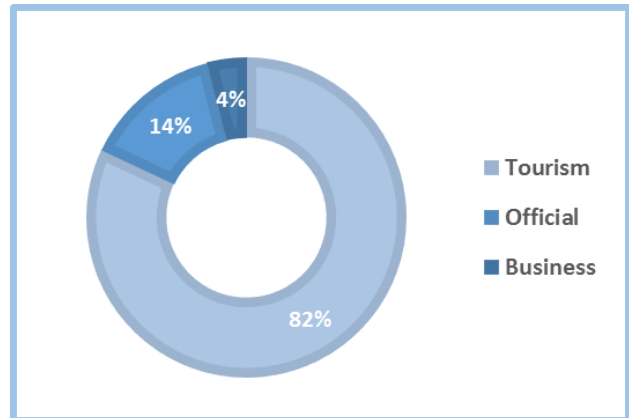


Figure 4.15: Purpose of visit

visitors irrespective of their purpose of visit, may not have changed significantly.

The frequency of visit shows the interest of tourists in a tourist resort. This trend is influenced by number of factors e.g. nearness of the tourist destination, affordability of tourists, better public transport, car ownership rate, accessibility through better road network, safety and security, need and awareness about tourism, facilities offered at a tourist resort as compare to other tourist resorts etc.

If we compare Table 4.14 with Table 4.12 we would observe that the nearness and accessibility to tourist resort seem to be dominating reason that influence frequency of visits to a tourist resort. However, the absence of another similar facility in the region is also one of the significant reason.

Table 4.14: Frequency of visit

S. No.	Frequency of Visit	Percentage
1	More than once	44
2	Occasionally	30
3	Once a year	26
Total		100

Source: Field survey year 2015

The Table 4.14 & Figure 4.16 depict that 44% tourist informed that they visit Murree ‘More than Once’ whereas 30% visited Murree occasionally and remaining 26% visited once a year. In light of above discussion it can be safely assumed that the visitors

that visit occasionally and more than once a year belong to Punjab and twin town areas. Similarly, if we compare Table 4.12 and Table 4.13 we can have clue that our visitors are mostly tourists and this also support the majority

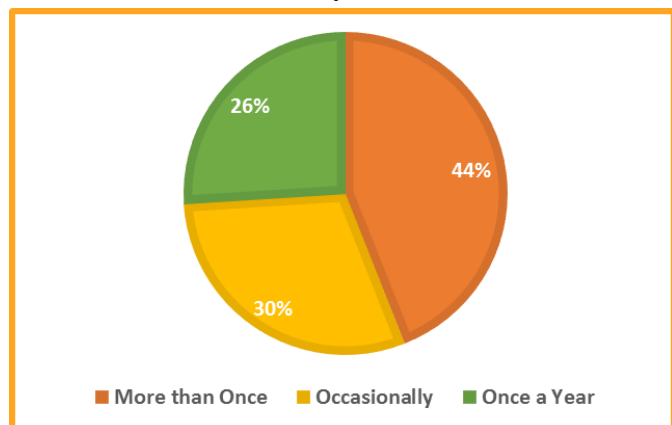


Figure 4.16: Frequency of visits

representation from nearby areas as they are not dependent for their official chores and business activities on Murree. These wants of these visitors are satisfied in twin cities.

Table 4.15 & Figure 4.17 show that maximum people (54%) use their personal vehicle as mode of transport. The reason behind this trend is two folds. Firstly the public transport to Murree and from Murree to other nearby areas is not good. Secondly, their own vehicle

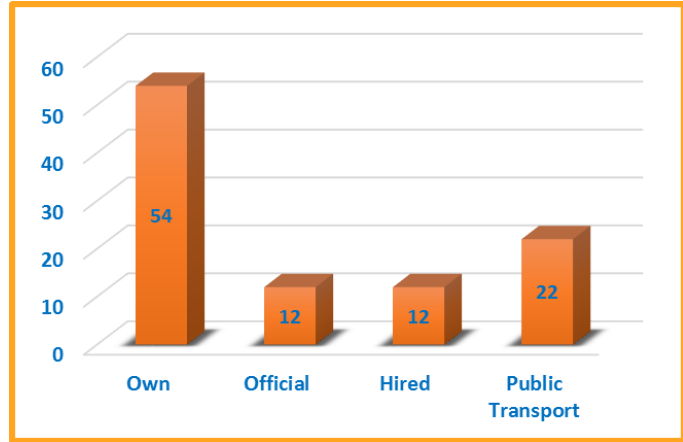


Figure 4.17: Mode of transport used

provide them with liberty of sightseeing, photography and stop overs as per their choice. Secondly, they can reach nearby tourist resorts without much hassle. Besides these advantages the traveling on personal vehicle has some disadvantages. Own transport requires parking when they reach their destination, which becomes usually big problem in peak seasons as Murree does not offer sufficient planned parking facilities. Other problem is the traveling expense due to consumption of fuel of owned transport, which is mostly shared between five people. People balance out this expense comparing it with public or hired transport fare for five people or more and the weigh it against the hassle suffered in hiring separate transport for other nearby tourist areas e.g. Partrita, Nathia Gali, Ayubia.

Table 4.15: Mode of transport used

S. No.	Mode of Transport	Percentage of Responses
1	Own	54
2	Official	12
3	Hired	12
4	Public Transport	22
Total		100

Source: Field survey year 2015

If inter-city and intra-city public transport is improved and made more affordable through subsidiaries or public private partnership modes the trend of use of owned and hired transport to Murree may reduce. Currently, the cumulative percentage of these two categories is 66% as against 22% of public transport users. The official transport users mostly correspond to the official visit respondents i.e. 14% in Table 4.13. It can be safely assumed that the remaining 2% might have used public transport or hired a vehicle to accomplish their official task in Murree.

The statistics presented in Table 4.16 shows that 57.5 % of visitors to Murree found parking at designated spaces or along the road side. This percentage if amplified considering the peak season influx to Murree becomes very alarming. This emphasizes the desperate need for turning around the use of owned and hired vehicles to Murree.

Currently, our survey shows that 42.5% respondents found parking at approximate distance of 0.75 km from their destination or area of interest. In hilly areas this distance is not easy to travel especially by female members and aged people. At the same time there were 25% respondents who found parking at about distance of half kilometer. However, there were 32.5% respondents who were lucky enough to find parking with in distance of half km.

Table 4.16: Distance from parking

S. No.	Distance	Percentage of Responses
1	About 3/4 of km	42.5
2	About half km	25
3	Less than half km	32.5
Total		100

Source: Field survey year 2015

These figures in Figure 4.18 may not be as alarming as the prevailing magnitude of parking problem in Murree town. In fact, two factors cannot be recorded in this particular inquiry. Firstly, that it was not peak season weekend. Secondly,

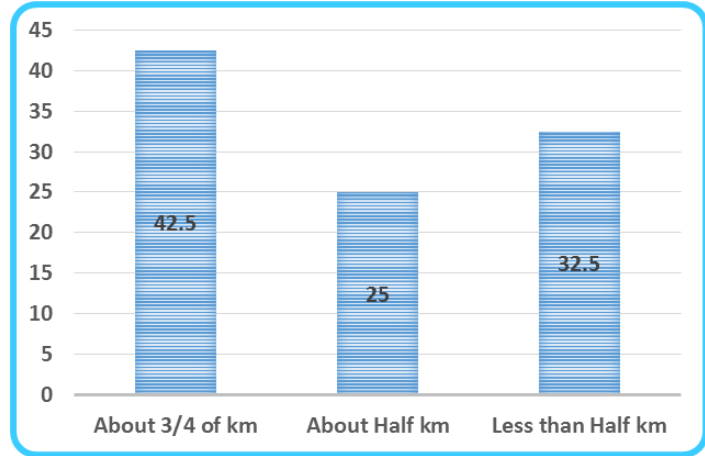


Figure 4.18: Distance from parking

the tourists to Murree do not visit single spot in Murree they usually visit all places worth visiting and at other places they can face comparatively serious parking problem, even on an ordinary weekend. However, in the absence of these two factor need to improve public transport, making it affordable and provision of more planned parking space at all tourist attraction areas of Murree, cannot be denied.

The duration for stay highlights the need for land use facilities beyond parking. This may include some intra-city public transport terminals and stops, efficient inter-city transport terminals, health and emergency facilities, general use shops, planned viewing terraces, family picnic areas in environs of town offering peaceful and safe environment, camping areas, efficient solid waste dumping and disposal mechanism, adequate clean drinking water mechanism, better and more tourist attractions, maintained heritage sites, tourist information & facilitation centers, affordable and better hotels & restaurants, local cultural shops, conserved natural beauty etc. Some of these facilities are available and some are not. There may be some facilities about which local tourists do not have awareness and therefore the need for the same is not felt.

The Table 4.17 & Figure 4.19 show that over 72% respondents choose to stay overnight or more on an ordinary weekend. This figure is bound to rise in peak summer season. This emphasizes need for more and more facilities to house tourists. This

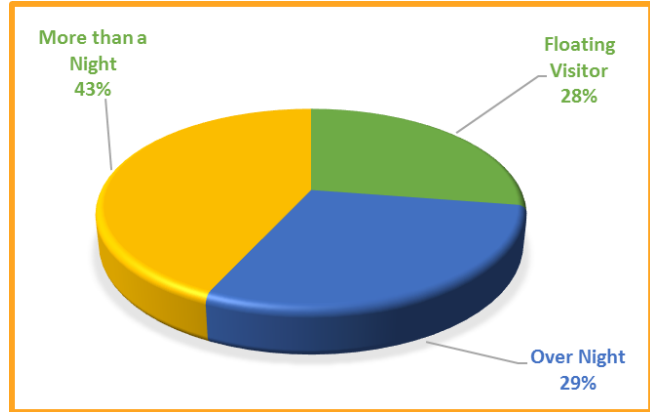


Figure 4.19: Duration of stay

figure also indicates the magnitude of pressure of floating population on the infrastructure of Murree town and its environs. The town and its resident population, for which no Master Plan has been notified, it is less likely that this magnitude pressure on local infrastructure related to floating population has ever been considered rationally. This is one of the factor of ever worsening infrastructure condition of Murree. It is required that comprehensive planning of Murree should be done with rational consideration of floating population including its yearly projections. The prevailing project oriented development shall increase Murree problems, rather than solving them.

Table 4.17: Duration from place of stay

S. No.	Stay Duration	Percentage of Responses
1	Floating Visitor	27.45
2	Over Night	29.41
3	More than a Night	43.14
Total		100

Source: Field survey year 2015

People who choose to stay overnight or more need a place to stay. Our survey reveals that most of the people (86.84%) preferred hotel (Table 4.18 & Figure 4.20). Followed by trend of guest houses i.e. 10.53%. Very few people were privileged to stay

with their relatives. This is the reason that most of the people have converted their houses and other properties in to hotels or guest houses. Public sector rest houses are very few and usually used by higher officials. General public usually cannot stay in these rest

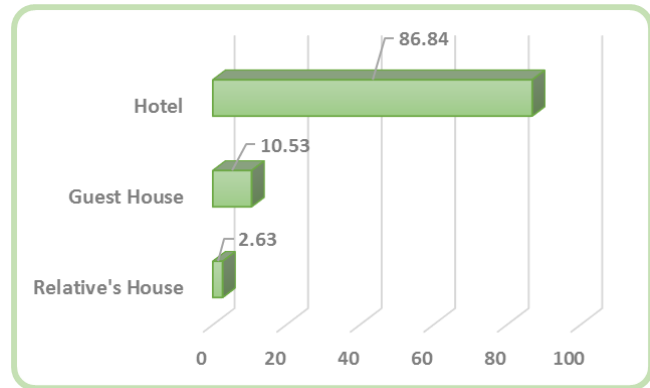


Figure 4.20: Place of Stay

houses. In peak season the rents of these guest houses and hotels escalate with tremendous pace. During survey too many respondents have complained about the unaffordable rent of hotels. Government has not made any policy to control these rents, nor have they intervened to build public sector guest house to facilitate tourists. In this regard, public private partnership option can also be explored. During our survey the respondents have also reported that the hotels are mostly owned by influential people, which is the main reason for public sector not taking interest to control hotels and guest houses rents.

Table 4.18: Place of stay

S. No.	Place of Stay	Percentage of Responses
1	Relative's House	2.63
2	Guest House	10.53
3	Hotel	86.84
Total		100.00

Source: Field survey year 2015

Another problem that has increased with the increase in number of hotels lately is that very few hotels offer parking facility to their clients and even if they have parking it is very limited. In this way trend for on street parking has increased considerably and also

these vehicles are parked for very long period and in some cases days. This aggravates traffic problems on already narrow roads of Murree. There is need to limit the conversion of land use approvals and no approval should be granted until and unless parking has been provided by the hotel management as per requirements of the hotel accommodation, for which guidelines can be drawn from international standards.

To assess the sufficiency of various facilities in parking-lots questions were asked from respondents about various aspects of parking facilities. It is understandable that parking offered in Murree is not well designed and planned facility, still there was need to assess the sufficiency of these facilities from tourist point of view or end user point of view. This provided an insight into the magnitude of problem and aspects that require improvement and degree of improvement, can be known.

Table 4.19: Ranking of parking w.r.t sufficiency of various facilities

Ranking	Percentage of Ranking w.r.t Satisfaction from Parking Facilities						
	Area of Parking	Circulation Space	Width of Vehicle Space	Condition of Pavement	No. of Public Toilets	Illumination	Size of Entrance
Poor	35.00	47.50	20.00	25.00	80.56	32.50	20.00
Fair	25.00	25.00	47.50	25.00	11.11	27.50	35.00
Satisfactory	35.00	22.50	25.00	42.50	5.56	17.50	35.00
Good	2.50	2.50	7.50	5.00	2.78	20.00	7.50
Excellent	2.50	2.50	0.00	2.50	0.00	2.50	2.50
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Field survey year 2015

First question was about sufficiency of area of parking. As per Table 4.19 and Figure 4.21 about 35% respondents considered it 'Poor' and similar percentage considered it satisfactory. Significant percentage of 25% considered it in 'Fair' condition. Very few respondents ranked it good or excellent (2.5% each). The statistics reveal that as per most

of the respondent's perception the area of parking was below the 'Good' ranking that means there is lot of room for improvement as far as area of parking is concerned.

Respondents were also asked about the sufficiency of circulation space for parked vehicles. Most of the respondents (47.50%) considered it far from satisfactory and ranked it 'Poor'. This ranking was followed by 'Fair' category which was graded by 25% respondents. Similarly, only 22.5% end users considered it 'Satisfactory'. Once again ranking of 'Good and 'Excellent' was 2.5% each, which is very low percentage.

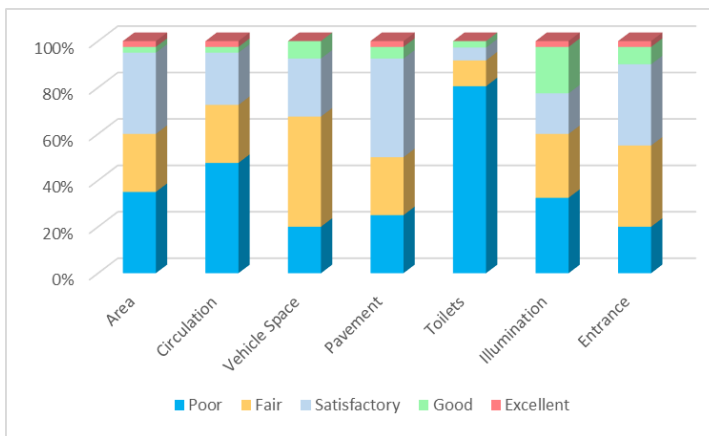


Figure 4.21: Ranking of parking w.r.t sufficiency of various Facilities

It is evident from the area of parking aspect that in an unplanned or ill-planned parking space, if the area sufficiency level is not achieved the circulation space is always compromised, sometimes by reckless drivers and sometimes

attempting to accommodate more vehicles than original capacity, on part of administration. In short, along with overall area of parking the circulation space also need to be improved and it is essential to maintain their balance without compromising on one over another. To avoid this conflict marking of vehicle space and circulation pattern is inevitable.

Slightly better response was recorded with reference to 'Width of Vehicle Space'. Most of the respondents (47.50%) ranked its sufficiency as 'Fair'. This trend was followed by ranking it as 'Satisfactory' by 25% end users. 20% tourists considered width of vehicle space as 'Poor'. Although, no one ranked this aspect 'Excellent', but it was encouraging to

note that 7.50% considered it 'Good'. With marginal improvement in percentages of higher order, still the need was felt for improvement, with guidelines drawn from National Reference Manual (NRM) for Planning and Infrastructure Standards or any other international level time saving standards.

With extreme cold weather conditions of Murree, along with lot of showers and snowfall it is necessary to maintain the condition of pavement of each parking lot. It was encouraging to note that 42.50% respondents ranked it 'Satisfactory'. Ranking of 'Poor' and 'Fair' categories were equal i.e. 25%. Some people were also optimistic about the condition of pavement and gave margin of extreme weather condition to administration and ranked this aspect as 'Good' and 'Excellent' (5% and 2.5% respectively).

Not all parking place in Murree offer toilet facility. The toilet facility offered is in worst state due to cleanliness, hygiene and maintenance. The same picture has been depicted by this data ranked by respondents. 80.56% of people who were interviewed considered it nothing but 'Poor' from sufficiency point of view. This is a very large percentage, it even makes one wonder that other respondents that have ranked it 'Good' (2.78%) or even 'Satisfactory' (5.56%) must have visited some other toilets in some other parking. Similarly, 11.11% respondents have ranked sufficiency aspect of toilets as 'Fair'. This view point very loudly indicates that public sector needs to provide more public toilets at various locations and ensure that all parking facilities, parks, bus terminal should offer this facility in adequate number for both genders separately, as per national or international standards. Illumination has been the only aspect related to parking facility that has been ranked 'Good' or 'Excellent' by 22.50% respondents, whereas 17.50% have considered it satisfactory. Still 60% respondents were not satisfied with illumination facility provided in

parking lots and have ranked it either 'Poor' or 'Fair' from sufficiency point of view. It is required that illumination facility in all parking lots should be properly designed under services of professional electrical engineer and concerned Authority should formally approve the street lightening plan, along with other designs of the parking lots. Besides illumination CCTV camera should also be installed to check the crime rate and car thefts. Size of entrance is a factor that contributes in accidents sometimes. It has been observed in Murree the gates or entrance of parking lots open directly on road without any sight distance, no provision of joining bays are designed. The smaller size of entrance compel two crossing vehicles to reluctantly enter or leave the parking lot. In such situation the traffic on the adjoining road gets blocked. If the parking entrance is near to some blind turn or slope, accidents are most likely to occur.

55% of our respondents have ranked size of entrance unsatisfactory. However, 35% considered it satisfactory, whereas 10% have considered it beyond satisfactory. It would be in the interest of traffic safety that size of entrance of all parking lots should be reviewed by concerned Authorities, to ensure that it is as per design standards.

Public transportation is such an important aspect for Murree that it can resolve most of its traffic problems. An efficient, adequate and affordable intercity and intra-city public transportation can reduce use of private cars by tourists and solve parking problem in Murree effectively. Ironically, the Authorities have preferred projects that enhance accessibility of private cars and absence of any comprehensive plan and efficient land use regulation system has encouraged change of use of land to commercial/hotels. This has increased traffic problems of Murree many folds. However, even if now Authorities prefer

to change their stance towards improving public transportation of Murree by exploring various avenues of development, it may still become a manageable city.

The survey regarding sufficiency of various aspect of present public transportation system was not very encouraging. Table 4.20 & Figure 4.22 show that regarding overall area sufficiency of public transport terminals 80% respondents ranked it below satisfactory, with only 20% considered it satisfactory. Similar response was recorded in case of area of circulation. In contrast to overall area more people (50%) ranked circulation space as ‘Poor’. Again 20% considered it satisfactory.

Table 4.20: Ranking of Public Transport w.r.t Sufficiency of Various Facilities

Ranking	Percentage of Ranking w.r.t Satisfaction from Public Transport							
	Over-all Area	Circulation Space	Width of Vehicle Space	Condition of Pavement	No. of Public Toilets	No. of Ticket Booths	Size of Entrance	Size of Waiting Area
Poor	30.00	50.00	40.00	30.00	80.00	50.00	40.00	80.00
Fair	50.00	30.00	40.00	60.00	20.00	30.00	40.00	10.00
Satisfactory	20.00	20.00	20.00	10.00	0.00	10.00	20.00	10.00
Good	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00
Excellent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100	100	100	100	100	100	100	100

Source: Field survey year 2015

In case of ‘Width of Vehicle Space’ the ranking of ‘Poor’ and ‘Fair’ were equal for each category i.e. 40% each. This means that the cumulative effect of these categories was again 80%. Satisfied respondents in this regard were once again 20%.

From survey results ‘condition of pavement’ of transportation terminals was one of the worst aspect, with 90% respondents ranked it below satisfactory. Only 10% considered it satisfactory. With 90% considering an aspect below satisfactory the remaining seem bit generous in commenting.

Public toilets is the basic facility among all other facility that passenger need, especially that are traveling with family. Although, the hygiene is not easy to maintain in public places, but the sufficiency of the same can be ensured if the facility has been designed as per national or international standards. The survey revealed that 100 % respondents complained that the public toilet facility at transportation terminals were below satisfactory. This is really a cause of concern and Authorities must take notice, to at least bring it to satisfactory level, if not beyond that.

The ranking regarding ticketing booth can be termed as relative to the experience of the respondent and can vary from one to another. It is usual that the passenger with most popular destination get

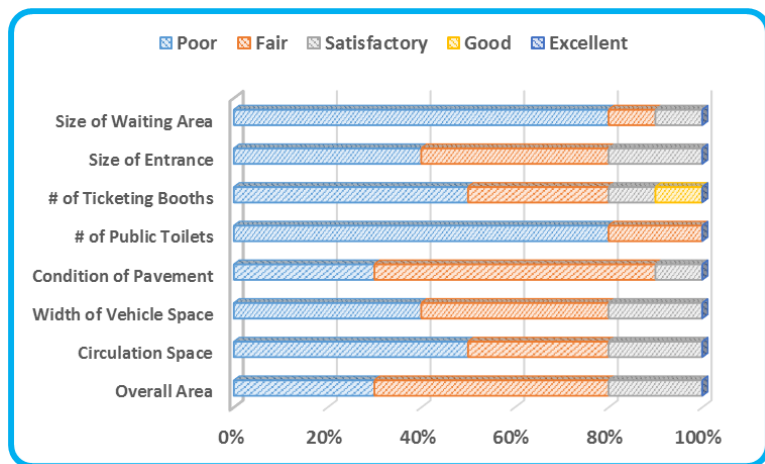


Figure 4.22: Ranking of public transport w.r.t sufficiency of various facilities

tickets with more difficulty than the passenger with lesser popular destination. This may be the case that 80% respondents ranked this facility below ‘Satisfactory’ level. Whereas 10% have regarded it as ‘Satisfactory’ and 10% have ranked it as ‘Good’. However, such problem can be taken care off with reshuffling the booths and staff dealing with passengers of high priority destinations. Still it is point of concern that 80% have considered it below satisfactory. By reshuffling it may be possible that some part of problem can be resolved, but it seems less likely that all the problem and future issues can be taken care off without

increasing the capacity of ticketing booths. So the administration of transport terminal must consider constructing more booths, as per passenger's requirements.

Size of entrance at transport terminal is a serious problem, especially in hilly areas. The vehicle entering the terminal usually has to leave the adjacent road without wasting time. It is a trend that most of the transporters linger on at entrance to catch last passengers. This causes problems for vehicles and passengers entering terminal and also some times the traffic using adjacent roads. The survey revealed that 80% of respondents considered size of entrance below satisfactory. Whereas remaining percentage of respondents has considered it merely satisfactory. If by any chance the respondents considering it satisfactory have used terminal at hours other than rush or peak hours then the problem is very serious and must be taken care off by administration of transport terminal or development agencies.

Waiting area is the place where passengers spend most of their time, sometimes even more than travel time for destinations near to the town. In this regard, it is important that such areas should be kept generously and with provision of maximum possible associated facilities. Survey discovered that 90% of the respondents felt that the waiting area was cramped for space and below satisfactory level. However, 10% were generous enough to grant it 'Satisfactory' status. Again this 10% may have used terminal at lesser rush hours. In any case, the terminal should have been designed as per the passenger load of the tourist destination and the relevant standards for the same. As the observations were made during a normal weekend, which is obviously not equivalent to summer peak, this indicates that in summer the problem would have been really severe.

Hotel facility is the main concern for the tourists planning to stay overnight or more. This concern becomes more sensitive when tourists are visiting a resort as family. In case of families, the requirements and expectations from the place of stay become many folds. Such tourists desire that their hotel/guest house should be near town center, it should have all essential facilities, including parking to facilitate their stay. It is also desirable that the facilities should not only fulfill the numbering requirement, but also satisfy sufficiency standards.

In case of Murree town it has been observed over the years that due to popularity of hoteling business people have converted their houses to small hotels and restaurants. These converted hotels and restaurants rarely fulfill sufficiency requirements of the tourists, as they have been converted to gain more and more profit rather than focusing on providing quality service. Authorities lacking in statutory framework to check such developments in absence of any Master Plan, simply approve such change of use of land in light of the submission of scrutiny fee and some guidelines from reference documents like NRM. Such documents are not area specific, whereas in case Murree the architectural and structural requirements of a building may vary from one place to another, owing to soil conditions, proximity to disaster prone area, accessibility issues, sufficiency of developable land at that particular location, traffic problems etc.

Consequently, numerous substandard hotels and restaurants have sprung up in last decades. However, currently these developments have been banned till further orders, but no satisfactory statutory framework is in pipeline to fulfill the specific requirements of Murree town.

The survey instrument was built-in with questions that inquired respondents regarding sufficiency of various hotel facilities. The survey showed (Figure 4.23) that overall situation of hotels with respect to sufficiency of facilities was not that bad, as compare to other land uses discussed earlier. This seems encouraging in light of the fact that lot of hotels have been developed in absence of effective building byelaws and overall effective land use regulatory system. However, an argument can be given that the survey

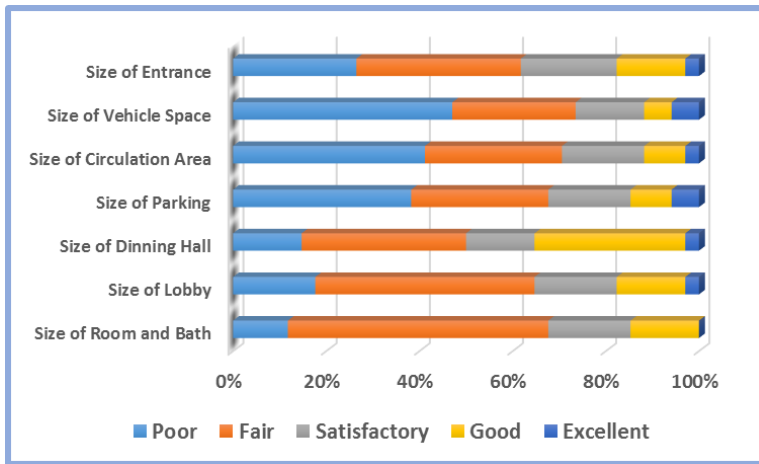


Figure 4.23: Ranking of hotels w.r.t satisfaction from various facilities

was conducted on a normal week end and not in peak summer season. On a normal week end the rent of central town hotels is affordable and people can pick and choose among hotels offering better

service in affordable cost. When people get something close to their choice naturally their opinion about it would also be better. In summer season, when there is scarcity of staying places people usually take whatever is available and their opinion also may vary accordingly.

Table 4.21 showed that 67.64 % considered size of rooms to be below satisfactory. Whereas 17.65 % considered it satisfactory and 14.71 % ranked it as ‘Good’. Although, most of the people considered size of rooms below satisfactory, but there is need to understand that in a popular tourist location the size of rooms are usually lesser than rooms of our houses. It just have to be habitable, as from hotel management point of view, they

try to make as many rooms possible as they could, to get maximum profit. From tourist point of view, it is expected that the tourist would spend most of their time in sightseeing and outdoors and would come to the hotel for resting and refreshing. Therefore the sizes are usually kept that just fulfill minimum habitable standards. However, giving benefit of doubt to the end users, it is recommendable that Authorities should look into size of rooms that whether or not they fulfill internationally acceptable standard of room sizes of hotels, especially in a hilly terrain areas.

Table 4.21: Ranking of hotels w.r.t satisfaction from various facilities

Ranking	Percentage of Ranking w.r.t Satisfaction from Hotel Facility						
	Size of Room and Bath	Size of Lobby	Size of Dining Hall	Size of Parking	Size of Circulation Area	Size of Vehicle Space	Size of Entrance
Poor	11.76	17.65	14.71	38.24	41.18	47.06	26.47
Fair	55.88	47.06	35.29	29.41	29.41	26.47	35.29
Satisfactory	17.65	17.65	14.71	17.65	17.65	14.71	20.59
Good	14.71	14.71	32.35	8.82	8.82	5.88	14.71
Excellent	0.00	2.94	2.94	5.88	2.94	5.88	2.94
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Field survey year 2015

Most of the respondents (47.06 %) ranked size of lobby as ‘Fair’. 17.65 % regarded it as ‘Poor’ with respect to sufficiency. So the combined percentage below satisfactory becomes 64.71 %, which is a very large percentage. However, the positive aspect is that 35.30 % respondents considered lobby as satisfactory or better. As lobby is usually waiting area till the time one gets his/her room reservation confirmed or allocated. So if it is not crowded and have some sitting space, it may be good enough.

In case of dining hall the half of the respondents were satisfied or felt better about it. The overall ranking of ‘Satisfactory’ to ‘Excellent’ was 50%. Similarly, 50% ranked the

facility as insufficient for their use. Dining halls should be allocated area as per accommodation in rooms, plus some provision for the visitors, if the hotel functions as restaurant as well. This aspect should be checked while approving building designs of hotels.

Most of the respondents (67.65%) considered parking as insufficient. These may be visitors that had to park their vehicle outside the hotel or felt cramped for space. It has been observed in field that lot of hotels do have sufficient parking and the vehicles have to be parked one behind other and in some cases more than two lanes are made this way.. This poses difficulties to the visitors as they have to manage according to the needs of management or other visitors. Parking should be provided in hotels as per covered area standards and prevailing practice in international tourist destinations. Not all respondents were dissatisfied with hotel parking facilities, as 32.35% ranked it 'Satisfactory' or better. Survey statistics related to 'Size of Circulation Space' and 'Size of Vehicle Space' seconds field observation related to prevailing practice of parking vehicles one behind other, discussed in previous para. 70.59% respondents considered 'Size of Circulation Space' as insufficient and below satisfactory level. Similarly, 73.53% respondents ranked 'Size of Vehicle Space' as 'Poor' or 'Fair' i.e. below satisfactory level. Remaining 29.41% and 26.47% i.e. below 30% in both cases considered these aspect as satisfactory or better. Again the responsibility is to be shared by approving Authorities that grant approval of facility design in case of new building and also in case of change of use of land, without compelling them to fulfill the required criteria of parking and allied necessities. It may not be rational to alter design of so many hotel buildings, at this stage. However, the hotel owners should be asked to provide shared and secured parking by two or more hotels at

some continent location. This can be done with mutual agreement between all stakeholders, so that litigation and other complications can be avoided and desirable results can be achieved to improve parking situation. 61.76% respondents considered size of entrance as unsatisfactory. Whereas 20.59% respondent were satisfied with the size of entrance of hotel. 17.65% respondents stayed at hotels with good sized entrance or even better. Entrance plays vital role not only on the outlook of a hotel, but also in avoiding traffic problems on adjacent road and for vehicles entering or leaving hotel premises. This factor makes it very important aspect of hotel design. With 61.76% unsatisfied respondents this aspect also need to be looked into by approving Authorities. This is one of the aspect that can be improved in existing hotels and taken care of new buildings.

The tourist to Murree irrespective of their duration of stay, look at Murree’s land use from the perspective of availability of parking, access to shopping and recreation areas, places of recreation, greenery, road furniture, sitting spaces, sufficiency of roads, availability of hotels and restaurants etc.

Table 4.22 and Figure 4.24 depict that Tourist Information Center and Parking are main problems at Murree from tourist’s point of view. At second and third priority respondents have ranked

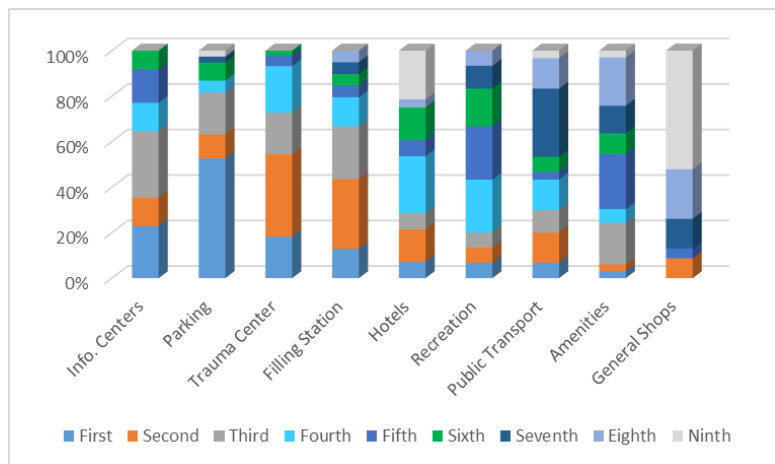


Figure 4.24: Ranking of tourist’s priorities for provision of amenities

mostly provision of Trauma Center and more Filling Station. The health facilities issue in

Murree is obviously critical, as evident from both surveys. Filling stations are few and mostly on regional roads.

Table 4.22: Ranking of tourist’s priorities for provision of amenities

Priorities	Tourist Info. Center	Parking	Trauma Center	Filling Station	Hotels	Recreation	Public Transport	Amenities	General Shops
First	22.9	52.6	18.2	12.8	7.1	6.7	6.7	3.0	0.0
Second	12.5	10.5	36.4	30.6	14.3	6.6	13.3	3.0	8.7
Third	29.2	18.4	18.2	23.2	7.1	6.7	10.0	18.2	0.0
Fourth	12.5	5.4	20.4	12.7	25.1	23.3	13.3	6.1	0.0
Fifth	14.6	0.0	4.5	5.2	7.1	23.3	3.3	24.2	4.4
Sixth	8.3	7.9	2.3	5.1	14.3	16.8	6.7	9.1	0.0
Seventh	0.0	2.6	0.0	5.3	0.0	10.0	30.0	12.1	13.0
Eighth	0.0	0.0	0.0	5.1	3.6	6.6	13.4	21.2	21.7
Ninth	0.0	2.6	0.0	0.00	21.4	0.0	3.3	3.1	52.2
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Field survey year 2015

People seem somewhat satisfied from provision of hotels and recreational areas as they have mostly ranked them at fourth and fifth priorities. As mostly tourist visit Murree on personal or hired cars they ranked public transport at a lower priority. Other amenities and shops offering general use items are least preference of the tourists.

4.2 REVIEW OF THE MASTER PLANS W.R.T LAND USE POLICIES AND PROPOSALS/PROJECTS

4.2.1 Review of Master Plan 1988-2013

First Master Plan for Murree was prepared in late 80s. At that time Murree had population of 21,801(projected by Master Plan) and it was anticipated to grow to 42,776 by the end of plan period in year 2013. It was also reported that 431,000 tourists visited Murree in 1987 out of which 68,000 opted to stay overnight or more. The tourist population was projected to 1,437,663 annually in year 2013.

Table 4.23: Land use distribution of Murree town year 1988

S. NO.	LAND USES	PERCENTAGE
1.	Residential	26.88%
2.	Parks, Gardens & Play Grounds	19.04%
3.	Institutions (education/health)	17.16%
4.	Public Buildings	13.38%
5.	Commercial	4.21%
6.	Graveyards	3.99%
7.	Industrial	0.11%
8.	Circulation	15.23%
Total		100%

Source: Master Plan Murree Town – 1988 - 2013

Note: Reserved forest, agriculture and cantonment areas were not included in this distribution.

Most of the concentration of population was in and around main tourist resort area. The livelihood of residents of urban Murree was dependent on tourism and rural areas were dependent on agriculture, which was also insufficient to fulfill needs of Murree. Due to lesser economic options the growth rate of Murree did not rise much and even in certain time period it fell. The reason obviously was the out migration of local residents to twin cities and other urban areas of Pakistan.

The Master Plan of Murree was focused on the developed urban area, but it covered all aspects of urban life including tourism. For some reason this Master Plan could not be notified and no revision of the same was also made. Therefore the development of Murree in this plan period was not under restrictions or guidance of any Master Plan. The only document or tool that development agencies could refer to was building byelaws. This document too lost its validity and usefulness with passage of time, as it could not provide required guidance to the developers, builders and planners, regarding many areas like development in disaster prone area, adverse effects of ribbon development, excessive change of use of land, allocation and location of various land uses, zoning for various areas

especially newly developed area etc. This gap in statutory framework resulted in expansion of Murree in undesired pattern, without any efficient land use regulation mechanism. The public sector projects that were developed in this era were mostly initiated from Provincial Government, without assessing its need and effect on the local pattern of development and future growth of Murree town. So the development mostly remained project oriented, rather than plan oriented.

In this document at that time most dominating land use was residential with 26.88 % area, followed by 19.04 % of parks, gardens & play grounds. Education & health institutions covered 17.16 %, with 13.38 % area was under public buildings. Commercial area covered 4.21 % of the total area. Industrial and graveyard covered 0.11 % and 3.99 % respectively, remaining 15.23 % was circulation. Forest area, agriculture and cantonment area being too large were not made part of this analysis, to avoid misleading results.

If we look at these figures and compare it with even today's standards it seems that Murree town was a balanced town, considering over all land use of the area. Town being very small and almost walkable, the location and allocation of land uses at various level would not have been much problem. With such a less spread of area things must have been manageable and the project oriented approach would have been good enough for town. However, to let project oriented approach prevail was not a wise decision and it cannot be given as an excuse for not notifying a Master Plan, if this was the reason for the same.

In this part of research it would be attempted to explore the strength in the policy framework of this Master Plan related to land use planning and its effectiveness for Murree, if it would have been timely notified. It has been observed that the plan provided analysis of existing land uses in detail covering each and every sector. Similarly, proposals were

also provided for every aspect of future land use of the town. For some aspects the plan has attempted to provide relevant standards that could have been incorporated in byelaws of Murree at that time.

At that time housing sector which is major land use in most of urban areas was not much of a problem, as most of the people had their own houses, even in the out skirts of Murree town. However, short fall was dealt in the plan by identifying provision of housing in upcoming projects. Similarly, shortage in other areas like parking, commercial, tourist residence, park and open spaces, infrastructure etc. were identified and adequate provisions were made in limited resources and best suitable manner.

The town at that time was very small and rural areas were not shaped to be considered as part of urban Murree and maybe there was not enough interaction between the two that the need for planning for hinterland would have aroused.

The only crises situation in Murree was the influx of tourist in the summer season that left roads of Murree choked and residing tourists could be realized as problem. Murree as town itself was not a problem area. However, the plan was taken up for the plan period of 25 years in future, it failed to anticipate the pace of current growth of Murree town. The reason for the same can be justified, as the transport projects taken up at later stages and law and order situation that changed in other tourist destination that contributed to tourist influx to Murree could not be anticipated earlier.

If we just consider the prevailing trends of those times, still we find certain deficiencies in plan now over 25 years down the time lane. Even in those times it could have been anticipated that Murree being tourist town shall grow. The plan failed to provide some direction of planned growth for town. Similarly, it did not attempt to forecast pace of

development in next 25 years. It did indicate few proposals for neighborhood centers and sub-neighborhood centers, but did not identify any neighborhood in the urban pattern of Murree town that could afford the same in Murree's topographic limitations.

The topography of Murree is highly varying and density of population at one pocket cannot be compared to other. Therefore it was required that estimated upper limit of density should have been given for each pocket identified for development considering the Murree as disaster prone area, unstable soil and hilly terrain. This would have provided guidelines for future development.

Most of the towns and cities in hilly areas started as small settlements, along road side. At the time of this master plan ribbon development was prominent, with Murree taking up its direction of growth along the major roads of town. Master plan did not provide any guideline to check ribbon development or even identify it as threat towards the planned development, at later stages. Consequently, Murree commercial areas flourished along road sides gradually, not only limiting the road with no declared right of way to a very limited width and also resulting in high infrastructure cost. With all sorts of shops along road sides and other facilities following their footsteps, the very concept of planned neighborhoods and sub-neighborhoods suggested through Master Plan, was totally defeated.

Since the beginning it was realized that Murree is a disaster prone area or at least area with unstable soil prone to land sliding. This fact was realized at the time of Master Plan, similarly geological studies have been conducted from time to time about unstable slopes and soil condition of Murree. The plan did not refer anywhere towards such studies

and failed to identify such areas in the existing or proposed studies. Moreover, it did not make any effort to do the same in areas it identified as potential areas of growth.

Murree is known for its natural beauty and this beauty comes from the natural and ancient forest of Murree. The Master Plan being focusing on town areas did not put enough light on the reserved forest areas of Murree. Thus it did not provide sufficient guidelines to conserve the natural habitat of Murree's wildlife and its precious forest areas that includes very old coniferous trees. Similarly, Murree has some heritage sites from colonial times that interest foreign tourists mostly. Master Plan did not provide any discussion regarding significance of the same or emphasis on measure to be taken to preserve such sites.

One of the expectation from master plans are that they provide certain guidelines to update or to form local building byelaws and zoning regulations. This part is accomplished on the basis of existing trends of construction, land use compatibility issues and all sectors of development. Gaps seen in this regard are identified in the instructions or guidelines issued for reframing or revision of building byelaws and zoning regulations. The master plan issued some random standard regarding various land uses and buildings, but comprehensive guidelines that have been made after observing various issues in zoning, building construction, development pattern and combination of various land uses. Building byelaws are the most effective and easily understandable instrument through which the master plan can be implemented. This aspect if missed from the byelaws handicaps the development agencies to improve the condition of town and its prevailing trends of construction and development.

Master plan does highlights the importance of efficient public transport services and road efficiency. However, it fails to emphasis the relationship of location of traffic generating land uses with transportation. Similarly, anticipating enormous tourist influx in future years the master plan was expected to provide various avenues of public transportation and provide best possible and feasible solution for the same. This aspect seems missing and in this plan period years, it left traffic management authorities pondering, regarding traffic solutions, especially during peak tourist season. As a result in later years they opted for temporary solutions for one ways etc.

The proposals given and projects identified through master plan were mostly implementable and would have contributed in improving at least some of the aspects related to land uses of Murree town. The big drawback was that this whole effort of master plan was not backed by a comprehensive implementation strategy. Following are some shortfalls in the implementation strategy of Master Plan:

- a. The policies and proposals were vague in nature, failed to provide clear cut and effective projects;
- b. The implementation tools like byelaws and zoning regulations were not provided that may have delivered the required launching pad;
- c. The projects identified for various land uses did not have any crude costs and probable sources of funding were not identified;
- d. The plan provided proposals for 25 years plan period, the projects identified lacked clear phasing of the identified projects and proposals;
- e. It was not clearly mentioned that whether these projects were to be taken up by public sector or by private sector or by mutual partnership;

- f. The institutions responsible for execution of these projects were not identified along with the guidelines of their capacity buildings;
- g. The public participation and empowerment of concerned population strata was not given that could have provided sense of ownership among the masses and may have been driving force behind approval and implementation of this master plan.

The master plan had various good and bad points, but the problems with the Master Plan would have been resolved in most of the cases, if it was subjected to review by various Authorities, academia and intellectuals from various walks of life. At that time some of the development that took place and contributed to unplanned growth could not have been anticipated, but the built in mechanism for review of Master Plan after every five years could have made it capable to mitigate the later year's problems. In this regard the importance of notification of this master plan cannot be denied.

4.2.2 Review of Master Plan 2013-2032

Second Master Plan was prepared in year 2013 i.e. after the previous Master Plan period expired. The previous Master Plan was not notified and the development of over 25 years went by without any plan. The development agencies did not have any instrument to administer development control in Murree town. Consequently, instead of a plan governing town's trends of development the economics of the town and political interest/influences took control of town's direction of growth and pace of development. The town started to transform into a tourism and commercial hub with less and less place for other activities that could serve local population. Lands owned by institutions and public sector stayed intact, whereas the private sector land went through change of use of land from agriculture,

open spaces and residential to commercial land use related to attraction of tourists in form of hotels, guest houses, shops and restaurants (Existing land use Murree Annexure – III).

With tourism as major economic base this trend would have been inevitable and would have been made part of Master Plan or some other economic base should have been comprehensively knit in Master Plan, so that it would have been visible to investors and decision makers. With changing trend of land use in the town the land values in central core mounted and so did the rental values. The land owners that were not interested in hoteling or could not manage such business settled outside the main core, on their agriculture land or the newly developed scattered pockets outside the main core. This change in town's trend was obscure from the vision of planners of previous Master Plan and with Master Plan not notified even till expiration of its plan period, the required revision and review of Master Plan could not take place to accommodate new trends and make room for planning of scattered pockets, to facilitate local population. This resulted in imbalance of allocation and location of amenities and other daily use land uses. Moreover, at the time of previous master plan in year 1988, Murree was just a town with very small population to serve, owing to this the provision of one higher order facility would have been enough for the local population. Over the years besides the main core, the town extended into small settlements scattered throughout the tehsil, with whole of the tehsil population highly dependent on core for even their day to day needs like livelihood, education and health. The main reasons included limited options of livelihood and underserved newly formed settlements, from quantitative or qualitative perspectives. All these aspects of interests were concentrated in the town core area.

With development Authorities handicapped of statutory framework and institutional strength the Authority of development control was shifted to other higher forums. A town which was full of investment potential and almost no instrument to check development, the politicians and decision makers made no effort to strengthen local Authorities through capacity building and attaining financial independence. Over the years, the projects were vision, decided, funded and implemented by provincial Government. The local stakeholders just managed and operated all such projects, when finally handed over to them. This process of development even ignored the local aspirations and priorities.

New Master Plan prepared in year 2013 was expected to fill the gaps of previous Master Plan and provide the solutions for the very visible urban problems, created by absence of a comprehensive plan for the town that had so much development potential.

For the disappointment of planners the Master Plan was launched by ‘Tourism Development Corporation of Punjab’ (TDCP) instead of ‘Housing and Physical Department, Punjab’. The Authority intended to make a tourism Master Plan. Government of Punjab felt need for a comprehensive plan for the town. Instead of duplicating efforts on two separate Master Plans, it was decided to make one Master Plan covering sustainable tourism as well as other aspects of urban life. Due to an initiative taken by TDCP the same was entrusted this task with some variation in Terms of Reference (TOR) of the assignment to accommodate the required features. The bidding process itself took over a year with bids called and canceled twice against the same TOR. The consultant made a very good effort in preparation of Master Plan with covering all aspects of study of Murree Urban Area. Besides studying existing feature of land uses, it reviewed the old Master Plan for its

existing studies, policies and proposals. This exercise not only provided them basis to initiate the study, but also saved them from reinventing the wheel.

Later Master Plan as per conventional method reviewed the old Master Plan for its existing studies, plan and proposals. Besides Master Plan (1988 – 2013) the new document reviewed the policies of provincial and national level related to urban planning. These documents included:

- Mid Term Development Framework (MTDF 2005-10)
- Punjab Government Strategy for Accelerating Economic Growth and Improving Service Delivery 2009
- Punjab Land Use Classification & Reclassification and Redevelopment Rules 2009
- Punjab Local Government Framework 2010 (Draft)
- Revised Building Regulation by Punjab Urban Unit 2009 – Murree Town (not approved)

The document analyzed Murree Town in light of these documents and its application in case of Murree. Moreover, it also analyzed the prevailing intuitional setup in Murree and commented on the capacity of implementing agencies of the Master Plan.

It also studied the past Land Use Growth Pattern of Murree and also analyzed the land use growth in historical perspective. In this regard, they observed the sprawl in Murree, in form of segregated pockets outside the main urban core. It also observed that topographical limitation of availability of land compelled people to vertical expansion, despite unstable soil conditions and disaster prone area in the vicinity. Furthermore, it studied the daily commuting pattern of Murree city to provide basis for detailed transportation analysis. Good thing about this document was that it studied in detail major

aspects of land use with respect to sustainability. With comprehensive reviews and analysis of various documents related to urban development the documents provided policies about various sectors. In this regard ‘Sustainable Land Use Planning Policies’ (SLPP) have been dealt separately. However, the related policies can be found in other sectors.

First area touched under Sustainable Land Use Planning Policies includes ‘Disaster Risk-Resilient Land Use Planning’. This section prohibits provision of children related facilities and health care centers in disaster prone areas. This range should have included all such buildings where people gather for any activity. Further it emphasizes on the conduction of Seismic micro-zonation study of the whole area. The same has already been conducted by National Disaster Management Authority (NDMA), this policy and other need to be revised in light of this study.

The study very rightly also emphasizes on community involvement in forming disaster risk plans. However, it remain silent on the community participation and resettlement matters for identified highly hazardous areas. Similarly, it emphasizes to follow the provisions of revised ‘Building Code of Pakistan – 2007’ while approving building plans. Here it fails to highlight the need for ‘Peak Ground Acceleration’ (PGA) value maps for each area for designing and approval of building, in accordance with the same. For houses and building already constructed in disaster prone areas it did not provide any guidelines for retrofitting or other engineering solutions. Policy regarding installation of land slide early warning system was also missed in this section.

This section also emphasis on Disaster Risk Management (DRM) training for general public and other stakeholders. However, it did not highlights the need for training

& capacity building of professionals to prepare, read, understand and implement the disaster risk management plans or safer land use plans.

In second section of this Sustainable Land Use Plan chapter the document discusses 'Exploring Growth Opportunities/Corridors'. This is very important section as it attempts to decide various areas with growth potential, which may govern the direction of future growth for the town. It proposes up-gradation of Bhurban and Aliyaot corridor also known as N-75 in Highway department terminology. This corridor is potential corridor for residential and tourism facilities and needs up-gradation. However, ample care should be practiced to discourage the prevailing trend of ribbon development.

Mixed use development was proposed in areas of Chitta Mor (440 acres), Dhobi Ghat (99 acres), Ihata Noor Khan (133 acres) and Bansra Gali (465 acres). A uniform density of 252 persons per acre has been proposed for all these areas, which is very high for hilly areas, considering the instability of soil, disaster prone area and highly varying topography. This need to be reviewed, backed by some random geological studies and consultation of Seismic micro-zonation studies result recently done by NDMA. Moreover, no guidelines have been provided for provision of allied facilities of neighborhood and sub-neighborhood level that support urban social life, except commercial activities and parking. Cantonment area has also been identified barrier for development and tourism and as mitigation measure in long run shifting of the same has been suggested with consultation with Ministry of Defence. Easier said than done, instead of looking for alternate and more viable solution of access for Cantonment Area or for tourism facilities the consultant's opted for shift cantonment area. The problem is that Murree is expanding in haphazard form and at most of the locations we find scattered cantonment areas of military or PAF,

they have secured and well developed facilities better than any area of Murree, if we started shifting these facilities for expansion of town, we would not be left with any room for military in whole Tehsil. Moreover, the presence of military in close vicinity also ensures general security for the residents, as our civilian security forces have not performed up to the mark, in events of disaster and general security.

The section also introduces a system of precincts for various urban activities including tourism. It also provides a criteria for selection of a specific precinct. The criteria focuses on aspect of disaster, environment and infrastructure which are very useful aspects of consideration in Murree. However, the precincts provision may be reviewed in light of fresh findings of Seismic Micro-Zonation Study by NDMA. Moreover, emphasis should also be given to ample and alternate accessibility of these precincts especially considering the expected disaster events.

These precincts included following:

- Residential & Lodging
- Commercial and Hospitality
- Heritage Precinct
- Natural Precinct
- Rural/Tehsil Settlements

This section provides various guidelines for development for these precincts and also refers to details of the relevant sections of the report. Areas identified for residential precincts include Shawala, lower bazaar and Kashmiri Mohallah for urban regeneration, Dhobhi Ghat/Ihata Noor Khan Lawrence College Road, Bansra Gali & Chitta Mor for new self-

sustained mixed use precinct, Bhurban-Aliyotas a tourist select up-class mixed use precinct and Patriata as recreational precinct.

In case of heritage precincts Mall Road has been proposed for urban design oriented up-gradation, lower bazaar/Shawala for revitalized urban regeneration and reconstruction and preservation of Murree Brewery Estate, Nambal and other declared heritage sites have been included. This precincts policy can be a very healthy practice for urban uplift of Murree in a formal manner. However, this policy framework need to be reinforced by comprehensive detailed planning and designing with inclusion of all stakeholders including prospective end-users and land owners.

SLPP also deals with measures to be taken on war footing after the notification of Master Plan. These measures have been well narrated and are mostly very relevant to the core issues of Murree town, especially urban core area. However, inclusion of demarcation and publicizing disaster prone area for awareness of general public may be included to this list. Moreover, installing signage with proper planning would be a positive addition as well. Removal of encroachments and kiosks/stall may be needed for urban design purpose, but doing it without alternate arrangement and proper public consultation may invite public unrest and problems for implementing agency, as it directly affects livelihood of poor people. Any such recommendation in policy and proposals should be backed by complete safeguards of resettlement and international protocols in this regards may be consulted, prior to any such action.

Urban Regeneration Strategies have also been given as SLPP in the document. Here it identifies various areas for urban regeneration and advocates use of Punjab Land Use

Classification, Reclassification and Redevelopment Rules 2009 for regeneration guideline. The identification of sites has been left to TMA Murree.

The documents in its land use policies also caution against unwise development control that may discourage tourism activity in the town. Tourism being major livelihood avenue need to be secured. It is right in this regard, but the alternate it suggest may not mitigate the situation that may arise from development control in core town area, as suggested in the document earlier under section of emergency measures. Here it provides proposed commercial activity as solution. The removal of kiosks in the core area would be threat to livelihood of individuals, who may or may not be able to shift to new commercial areas. Mostly it has been observed that in new commercial areas the first comers are investors that speculate the property prices and are later replaced by original businessmen. These business men need to be well-off, firstly to buy the property from investors who have bought it to gain maximum profit, then able to bear the initial dry period of the business. This cannot be done by poor kiosk owners. So to integrating these two separate activities government may have to intervene, firstly by ensuring that buyers of new commercial facilities are not investors and secondly provide some subsidiary or soft loans to kiosk owners, so they are able to purchase new business. This all does not seem feasible in Murree scenario where most of the investors are influential people. So it may be advisable to have separate project of kiosks, somewhere near by the original locations of kiosks and provide the kiosks owners those shops on subsidized rates or installments.

The document also attempted to link urban security with land use policies by provision of centralized security facility. Moreover, it also emphasizes the promotion of urban gardening system and suggests it to be part of land use rules to ensure security and

provision of quality products. The environmental related SLPP emphasizes on preparation of Environmental Impact Assessment (EIA) study for each and every building project. TMA's responsibility regarding environmental management plan for structural degradation in Murree was highlighted. It was also emphasized to make it part of building byelaws.

One of the most important SLPP was given under Local Fiscal Policy for Financial Autonomy title. It emphasis need for municipal finance and its control under TMA for its financial stability and less dependence of grant from Provincial Government. Under this policy new avenues of taxation and penalties were also highlighted regarding the facilities that are already being furnished by TMA or other development agencies, but no revenue is being generated against them for the concerned authorities. In this context, taxing tourism sector businessmen was also mentioned as healthy sector of revenue for which public sector time and again furnishes infrastructure to ensure its proper functioning. This policy if implemented can ensure not only source of revenue for TMA and other authorities, but may also enhance chances of quality of service delivery for end users and business community of Murree.

SLPP also encourages use of Geographic Information System (GIS) for TMA and other development agencies and highlights sector in which this application can be of significant use. GIS was established during the study by the consultant and handed over to TMA for use in Murree. However, this would require human resource capacity building and induction of some new staff.

At the end of SLPs the document provides short and mid/long term projects. In the list of 15 short term and 21 mid/long term projects, mostly it is repetition of policies in rephrased manner. Only three projects have been stated which include remodeling and

reconstruction of TMA center, construction of Rescue 1122 center, trauma center, model police station along with some other offices and tourism related buildings. All these projects have been identified without location and crude cost.

Murree is a town that has expanded far beyond current urban limits. The land use aspects in Master Plan have been focused on urban core with in crow flying of less than 2.5 km from GPO Murree. This approach shall not solve problem of Murree town. Its physical expansion considering the socio-economic relationship of main core and hinterland should be studied carefully, to revise and acknowledge the actual boundary of the town. Only then its issues can be appreciated in true manner.

With emphasis of main core the focus of SLPP remained on the tourism as prime livelihood avenue and with limited option of land, new avenues cannot be recommended. Moreover, as housing has almost eradicated from the central core the attention of Master Plan or land use plan is not as required, it is mostly busy solving problems of residing floating or tourist population. No attention has been given on low income housing.

The study of this Master Plan has been good considering the fact that there is no approved format of Master Planning in Pakistan. All attempts have been made to provide best possible plan in limited funding and time. However, the vision need to be broadened to whole Murree town and its hinterland, after new boundary of Murree urban areas has been demarcated. Moreover, there is need to put in more work on proposals to evaluate their initial feasibility at some specific location and working out crude cost (like cost of transportation and tourism projects given in Volume 3 of this document) and phasing, so that it can be decided that whether or not public sector can take it up alone or would require some donor agency or opt for Public Private Partnership (PPP) options. If possible funding

sources or identification of profitable projects for attraction of investors should also be made part of Master Plan.

The tourism proposals have mostly been focused on family tourism, whereas Murree has lot of potential for active and adventure tourism. Patriata was banned by honorable Supreme Court of Pakistan for a township development, small project with strict environmental evaluation and impact assessment can be forwarded to the respected court with request for reconsideration of its decision in different perspective.

It has been observed in case of various Master Plans and Land Use Plans that stakeholder especially general public is consulted at data collection stage and sometimes proposal stage, but it is mostly skipped to discuss the projects proposed on their land with them. Whereas this is the actual stage where end user or land owner actually understands that what is going to happen to his town. They are mostly ignorant to the colors and terminologies given on overall plan of the town and for most of the people it is very difficult to orientate themselves while looking at an overall plan. So it is essential that all land use projects should be discussed in detail with all stakeholder, especially land owners. This may increase the land acquisition cost and may lengthen the initial negotiation process, but it ensures sense of ownership by the locals and facilitate implementation process to unbelievable extent.

4.3 VIEWS OF RDA CDGR AND TMA MURREE OFFICIALS – LAND USE REGULATION SYSTEM ISSUES OF MURREE

Being main custodian of Master Plan, view of Urban Planners from City District Government, Rawalpindi and Tehsil Municipal Administration Murree and Rawalpindi Development Authority (RDA) being current approving agency for housing schemes their views regarding land use regulation system of Murree and over problems of existing land

use were recorded. It provided insight towards the main impediments in the planned and systematic development of Murree and to know the emerging challenges in land use regulation mechanism. Moreover, the discussion also highlighted main issues of Murree town and overall Tehsil along with the resource limitations of the developing agencies. They also shared mitigation measures and suggestion to resolve these issues. A sample instrument in this regard has been annexed at Annexure IV for reference.

4.3.1 LAND USE REGULATION CONSTITUENTS

Following important constituents of land use regulation system were highlighted by development agencies officials:

- No Master Plan available to guide development process;
- Town's expansion is mostly through the construction of residential and hospitality buildings;
- Larger projects are basically initiative of provincial Government with funding sources provided by the same;
- Model building bylaws and zoning regulations 2007 have not been adapted by TMA till date, an attempt in this regard was done by Urban Unit in year 2010 which has not been approved so far;
- Change of Use of Land is approved by CDGR, as per orders of Punjab government. There is complete ban on change of use of land for last three years, TMA advocates continuation of this ban;
- RDA is using Punjab Private Housing Schemes and Subdivision Rules 2010 for approval of Housing schemes since year 2013;

- RDA, CDGR and TMA have serious shortage of professional/technical human resource and capacity;
- Murree town boundary was revised in year 2001.

4.3.2 FINDINGS OF INTERVIEW AND DISCUSSION WITH DEVELOPMENT AGENCIES OFFICIALS

Following is the extract of discussions and interviews with various development agencies officials during the research:

- The functions of TMA Murree have been distributed to CDGR and RDA due to which they do not have much Authority over their own jurisdiction and are also being deprived of revenue. Moreover, the Authorities which are responsible to perform these functions of TMA do not have any local offices to have firsthand insight in the issues pertaining to approvals. Dues to lack of human resource and vast administrative jurisdiction of whole district they are dependent on all sorts of information from the TMA Murree;
- Projects that have been recently taken-up/completed in Murree include General Post Office (GPO) improvement, Cuart Road Bus terminal, Art Gallery/Arts Council, Islamabad – Murree Expressway, Water Supply lines and Urban Designing of Mall road. These projects have been financed by Provincial Government and PPP options were not explored in this regard;
- Revenue generation avenues with TMA, Murree are Property rent (commercial & Residential), leased property (Residential & Commercial), Water Charges, Building Plans approval fee, fines (including Dengue detection fine), telephone tower fee, Provincial Government Grant and Parking fee. Approval fee for change

of use of land and billboards is collected by CDG, Murree and approval fee for housing schemes is collected by RDA;

- TMA suggested avenues of revenue as: approval of change of use of land, billboards, housing schemes, Patriata Chair lifts revenue, Jhika Gali parking and Expressway toll. Also suggested to impose tourist tax;
- TMA has very limited revenue collection and therefore has no say in its priorities of projects;
- New sources of water supply need to be explored for Murree town and its hinterland;
- Sewerage system need to be introduced in Murree;
- Serious traffic problems mostly occur at Jhika Gali Bazaar, Bansara Gali and ahead of Lower Topa;
- Master Plan need to be notified at earliest;
- Model bylaws, zoning regulations and subdivision rules need to be adapted as per town specific needs;
- Ban should be imposed on tourist traffic to core Murree area. A feasibility for 'Park and Ride' concept is underway for sites near Lower Topa and foot of Missuari Road;
- Distribution issues of social infrastructure (education, health & parks) are pressing;
- Accessibility issues exist in rural areas of Murree;
- There is no health facility in rural areas. Hospital in urban area is under staffed and not well equipped;

- Murree town should be divided into two administrative units. One for main town and tourist attractions, whereas other for rural hinterland;
- TMA, Murree also lacks human resource and logistics. Need for training, additional technical human resource and heavy machinery like bulldozers and excavators is being felt;
- No data base is kept of development in disaster prone areas. Resettlement considered uphill task awareness campaign emphasized;
- Suggested livelihood avenues: cottage industry, fruit, fruit processing industry and poultry farming in lower altitude areas;
- Municipal Boundary needs revision owing to expansion of development;
- Ample supply of gas emphasized for conservation of forest;
- Preservation of heritage sites should be taken up as per some plan;
- Price of land in urban area range from Rs.300,000 per marla to Rs.600,000 per marla. Whereas in rural areas the range is Rs.50,000 per marla to Rs.100,000 par marla;
- Central town requires breathing spaces;
- CDGR authorities advocate lifting of ban in phase-wise manner. In first phase on building falling under MIT. In second phase on demolishing and reconstruction of dangerous houses and in Phase III ban on remaining area.

CONCLUSION

Murree is a one of the worst example of disregarding the significance of Master Plan based development of a tourist town, which was a recognized tourist resort even in colonial times. With two master plans prepared and none notified Murree town lacks any statutory framework to guide and control development of overall town. This scenario has created manifold problems for the town and population living in its environs. Being only developed and most popular tourist resort it is also center of attraction for highly influential investors. Local Authority without any statutory framework to check undesired and incompatible development, seems stranded against such initiatives.

After discussion with tourists, locals of Murree, representatives of development agencies, general field observations and analysis of development plans of Murree town, it lead to following conclusions regarding the town's land use issues and its land use regulation mechanism:

- Growth of Murree has been without any specific pattern or pre-conceived plan for over three decades there has been no Master Plan to guide the growth or development control of Murree;
- Murree has been treated as tourist hub and not a town or tehsil headquarter, this has changed the overall land use pattern of Murree in many dimensions;
- Tourism has been the main employment sector and not much effort has been made to find new avenues of economic growth of Murree town/tehsil;

- Studies regarding disaster have been conducted especially in the areas of landslides and seismology, but they were never streamlined with ongoing development, due to which the growth has taken place in earthquake prone and instable areas;
- Murree lacks basic amenities of life in qualitative and quantitative terms. In this regard what it lacks most is the balance of distribution of neighborhood and sub-neighborhood level facilities;
- Public transportation system and land use have not been developed in relation to each other as a result the town's transportation does not serve the needs of local citizens and tourists efficiently;
- Parking is becoming one of the major problem for local residents as well as floating population;
- Almost every household and other buildings have water supply, but residents of Murree lacks clean drinking water;
- Model building bylaws and zoning regulation issued by GoPb need to be adapted for Murree as per its local conditions;
- Conservation of habitat of wild life/forest areas and heritage preservation is not being practiced in true spirit;
- The functions of TMA Murree have been distributed among other Authorities located in Rawalpindi, which handicaps TMA off its development control effectiveness and at the same time deprives it off significant avenues of revenue generation.

RECOMMENDATIONS

In light of the above discussion and issues highlighted for Murree town following recommendations may be able to solve land use issues and emerging challenges in its land use regulation system:

- We need depart from orthodox and obsolete Master Planning approach and look forward to adopt Strategic Planning and Action Planning approach for all sectors of development for improvement in quality of life of residents and tourists to Murree;
- Extensive institutional strengthening should be done to enable the development agencies understand and ensure proper implementation of policies, strategies and plans made for development of Murree town and its environs;
- Municipal Finance mechanism needs to be revisited with revenue collection related to various sector e.g. the authority of collection and approval of land use conversion fee and approval of housing schemes should rest with local authority (TMA) rather with other authorities;
- There is need to standardize the constituents of Urban and Regional Development Plans at national and provincial level;
- The format standardized for Land Use Planning issued by Government of Punjab need be reviewed to upgrade it to the level of ‘Sustainable Land Use Planning’ to include features related to environmental sustainability, socio-economic uplift and disaster resilience;

- It is required to comprehend Murree as town and tehsil head quarter not only as a tourist hub, to resolve overall issues of Murree Tehsil that are interrelated and interdependent;
- The boundary of Municipal Area should be expanded, covering the coherent physical development of the town and also incorporating future potential of growth. Rationally extended boundary of the town should be fixed and growth of the town should be limited to the same;
- Public transportation system should be improved with exploring various options of Mass Transit;
- Complete ban should be imposed on tourist's vehicles in Murree town. Tourists in this regard should be facilitated by provision of safe and adequate parking at feasible locations from where they can be conveniently transported through mass transit system of monorail, light rail or bus rapid transit. The same should traverse from scenic locations of Murree to offer maximum traveling pleasure;
- Above recommended mass transit options should be adequately and efficiently supported with transportation services like tram, go-karts, soft wheel trains and fancy buses;
- More economic base options should be explored for the town like Argo-based industry, mandi-town of hilly areas and AJ & K by establishing whole sale markets and cottage industry;
- Conservation of habitat/forest areas and preservation of heritage buildings need to be made priority and taken up through a comprehensive plan in phase wise manner;

- Urban design plans should be taken up for various areas of Murree for beautification and creating tourist attraction;
- Older residential buildings may be acquired to create breathing spaces for the town, in form of parks and play grounds;
- Tourist information centers should be developed with comprehensive networking for all areas;
- Proper sign boards and direction boards should be erected to assist tourists;
- Adventure tourism sports like treks and camping sites should be developed to invite adventure tourists to expand Murree's role from family tourists resort;
- The development plan proposed for Murree must incorporate all guidelines to avoid development in disaster prone areas. Moreover, the development plan must also provide guidelines for resettlements or engineering solutions to stabilize the structures, whatever is feasible in light of studies conducted in this regard and international protocols and standards;
- Hierarchy of land uses should be developed to create balance of amenities for all parts of Murree town and its environs considering international and national standards of tourist cities.

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