



The Future Perspective And Analysis Of Market Services, Water Supply, Sanitation And Housing In And Around Of Rishikesh Town, As Tourism Point Of View, Uttarakhand, India

1. Harsh Naithani

PHD Research Scholar

Department of Geography

Hemvati Nandan Bahuguna Garhwal University is a Central University, Uttarakhand, India

2. Dr. Vinod Chandra Pandey

Professor in Geography

Principal D.B.S.P.G. College Dehradun, Uttarakhand, India

Abstract

The research paper is focused on the different amenities such as market services, water supply and housing facilities. The study also highlights the problems related to the solid waste, sanitation and illegal human dwelling in and surrounding of Rishikesh town. The natural hazards vulnerability also analyzed on the basis of people perception. The futures threatening due to social and environmental issues are addressed through this article.

Key words: Tourism, future perspective, analysis of services

1. Introduction

Many ancient cities were developed along the river like Delhi near the Yamuna, Kolkata near to river Hoogly, Gaya near Gomti, and other many cities were found along the river Ganga. Today these rivers are dying not of global warming and climate change but because of anthropogenic factors (Mishra et al., 2018). NGT failed to save and survive these rivers; The Namami Ganga action plan is still in progress but the result did not match the ground reality Rishikesh city is locate right and left bank of the River Ganga. The city is surrounded by a dense green cover and had many small tributaries. The small rivers are indicated that the region has good availability of water sources. But the main threat in the region was excessive growth of human settlement and decreasing open land. In the south of the region, the

agricultural land was decreasing day by day.

The field observation and geographic information system indicated that the region has better facilities for market services. The buffer analysis made clear that Jonk, Muni Ki Rati, Rishikesh, Bhadurpur, IDPL, Kharkwali, and Gumaniwala are many small towns where all basic market services were available. But if we see the future perspectives of this small town, the overcrowding and size were increasing and the spacing of settlements was reducing. If this will not control, then in the future more social and physical problems will grow. However many Housing colonies were developed in the study region which was well managed and followed the concept of urban development. But in the area of Chandreswar Nagar, Asutosh Nagar, Muni ki Rati, and Dhawalwal excessive growth of settlements lead to adverse growth of urban development (Fig.1). The region is known for its beauty and religious, health tourism but the excess flux of tourists and less management leads to the waste and pollution problems in the city.

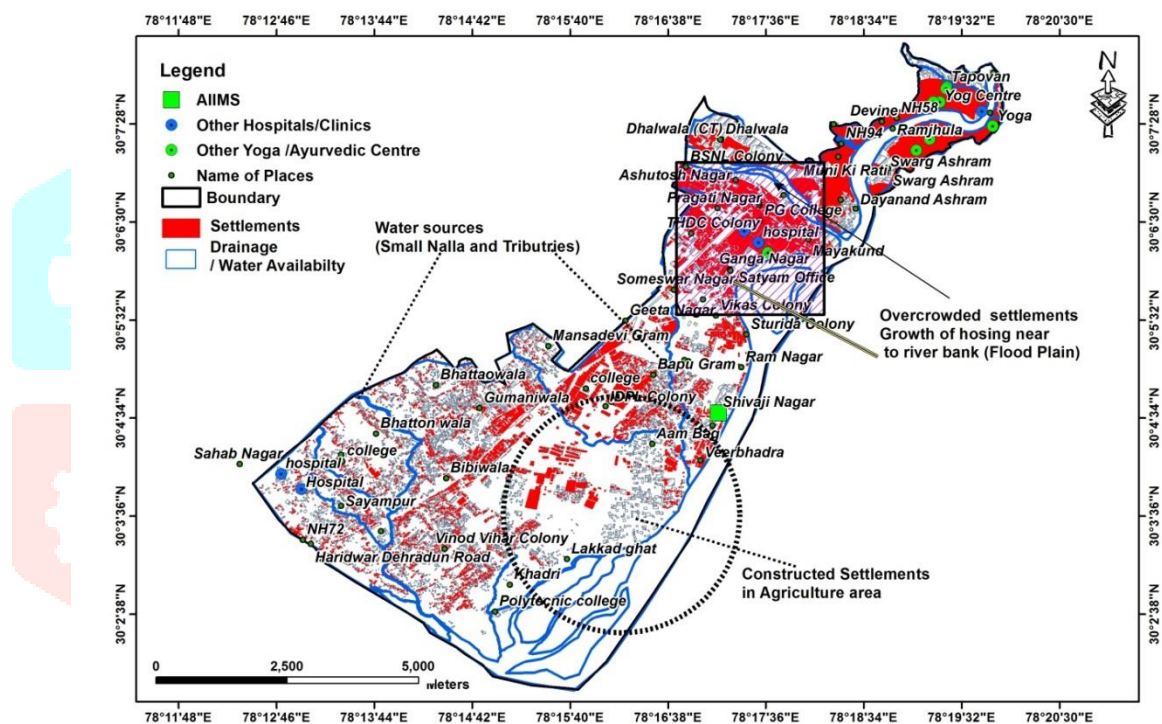


Fig.1 The analyzed map of watershed, settlements and social infrastructure

2. Study Area

Rishikesh is the prominent town of Uttarakhand and well known for its tourism and cultural activities. This city exists in the North West direction of the India and surrounding by the Himalayas from all three directions. Geographically Rishikesh is extended $70^{\circ} 20' 08''$ west to $78^{\circ} 33' 01''$ east in south $30^{\circ} 03' 02''$ to $30^{\circ} 13' 07''$ north. The average elevation of study region is 372metres (Fig.2). The city shared the boundary with three district of Uttarakhand namely Dehradun, Pauri Ghrwal and Tehri Garwal. Resikesh is one of the pilgrimage destinations and it became famous after 1968. In recent time this city was visited by about 30,000 tourists during the peak season (April to August).

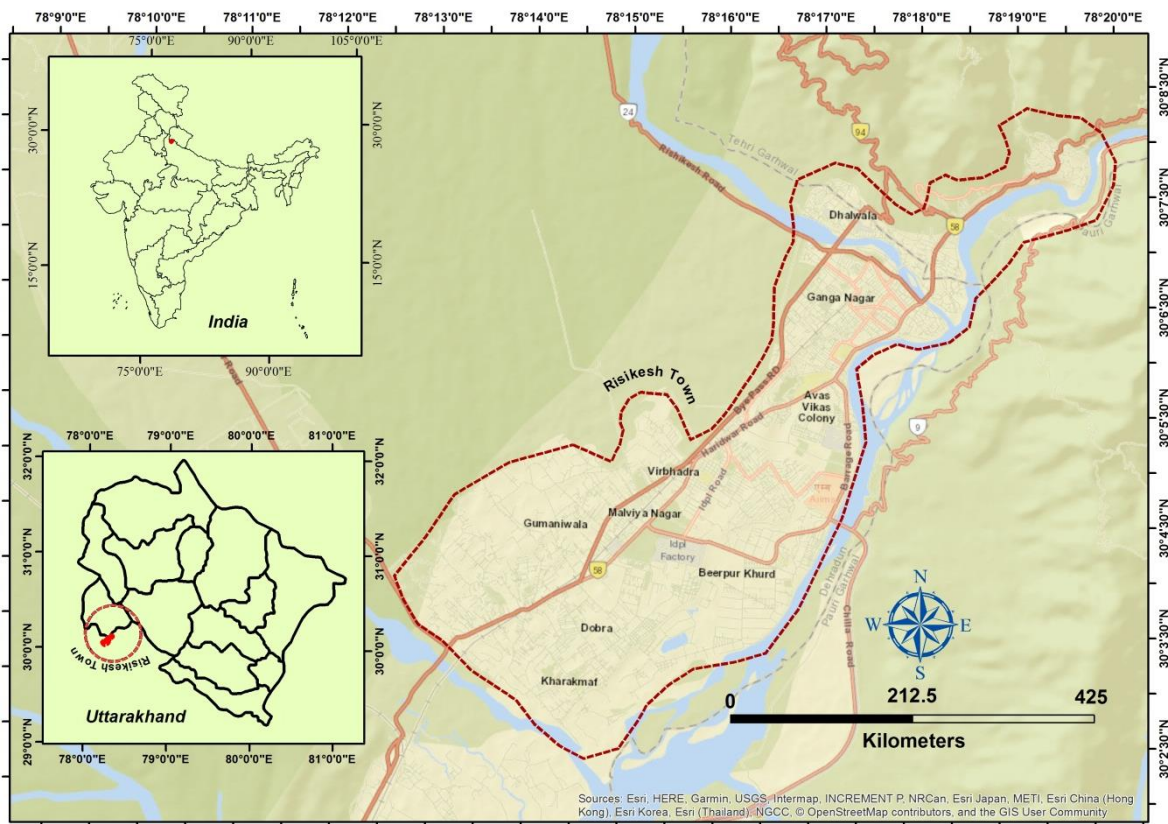


Fig. 2 Study area Rishikesh town

3. Research Method

The future perspective and analysis of market services, water supply, sanitation and housing in and around of Rishikesh town are study. The primary and secondary data was used under the primary data the field survey /questionnaire survey was conducted. Under the secondary data the previous literature and maps were studied. The random sampling method was used under which different location of town were selected for questionnaire survey. Finally the data was presented through the graphs and photographs. The geographic information system was also used to prepare the digital map of town. The open source software quantum GIS used.

4. Result and discussion

4.1 Tourism industries and its future perspective

Rishikesh is one of the fastest-growing tourist centers and thousands of tourists visit every year. The region has known for its tourism industry and it was estimated that about 33.94 crore rupees income per year from this sector. More than 1198712 domestic tourists visited and 5548 foreign tourists were visited in 2017-2018. This has indicated that the region has huge potential for the growth of the tourism industry. The infrastructure of the tourism industry has been developing day by day in this region; Rishikesh has 121 hotels served with 2620 rooms. In 1999-2000 there were only 61 hotels with 1902 rooms. This growth of hotels and restaurants indicated the development of tourism infrastructure in this region (Fig.3). It was made from the field survey that the region has good quality tourism infrastructure and every year this place is visited by many quality tourists (DoT, 2011; Census of India, 2011).

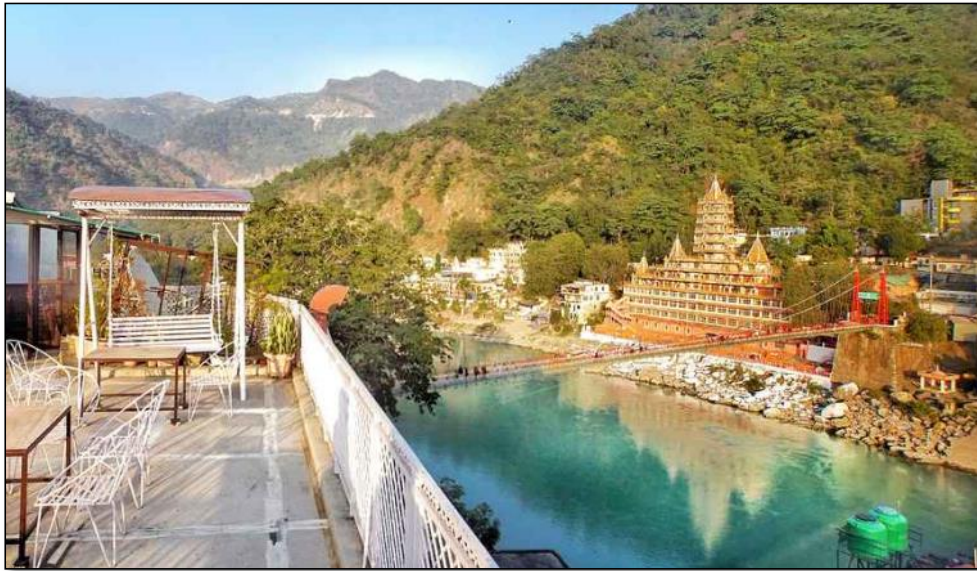


Fig.3 A picture view from hotels Tapovan in Resikesh, Uttarakhand

Tourism is proving a boon to the local economy of the study region with tremendous environmental and cultural constraints. The heavy tourist influx is facilitating economic activities, employment generation, and infrastructural development in the Rishikesh town, in many folds, while on the other, imposing heavy pressure on open land, agriculture, river, and human resources which causing physic-cultural and socioeconomic disparities. The tourism industry of Rishikesh was ranked in Grade A by the Uttarakhand government. Every year Resikesh received a heavy influx of tourists in Rishikesh. It was estimated that in peak season more than 35000 tourists /day enter Rishikesh. In lean season (December-January) about 14000 /15000 tourists enter every day. During this season the highest occupancy was noticed from April to July. The occupancy varies from 65 to 70%. Rishikesh has good transportation facilities which serve all connectivities like road, rail, and air. During the field survey, the Respondents (51) believed that center has better facilities related to tourism. As per the foreign tourists and local respondents the tourism industries are growing in a better way which has adequate shopping facilities.

Tourism facilities must be promoted sustainably in Rishikesh, and the overburdened pressure of the tourists in Hardwar can be reduced. Tourism is facilitating economy and employment in the study region but also creates heavy pressure on physio-cultural settings of the region leading to ecological and cultural degradation. Appropriate and standardized tourism planning and policies must be drafted and applied, eco-friendly infrastructural developments, and popularization of the concept of eco-tourism among tourists and locals are the crucial requirements of the time. They all collectively achieve the goals of sustainable and eco-friendly tourism development in the region (Fig.4)

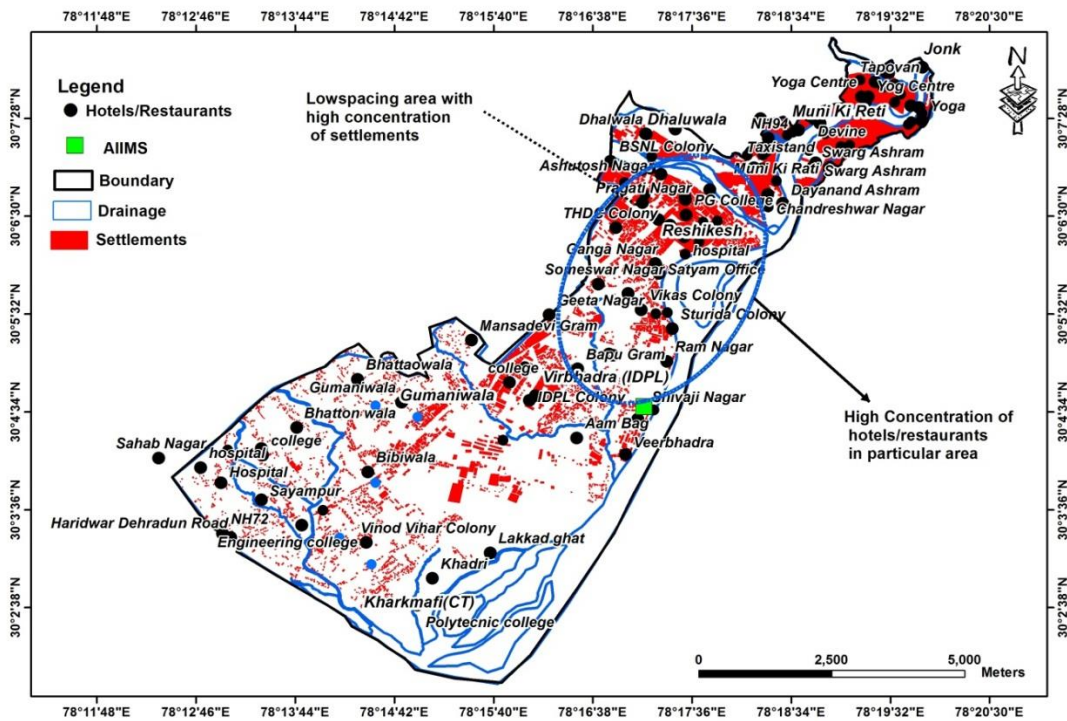


Fig. 4 Location of main tourist's infrastructure hotel, restaurant and guest house

4.2 The analysis of Land use land cover as management point of view

The urban development had adverse impacts on the landscape of the study region. It was evident from the geographic analysis that agricultural land had been decreased and changed into a built-up area. The maximum area of the region was used under the tourism infrastructure, during this period (2000-2020) several hotels, restaurants, rest houses, and residential areas were developed (Rautela et al., 2014).

The wasteland near the river banks, nalla were used under the slum as temporary settlements. The green cover area of the region received positive change because many meditation centers, yoga schools, and Ayurveda hospitals were developed with green cover (Fig.5). The built-up area mainly in Rishikesh, Dhaluwala, and Virbhadra received excessive growth of human settlement which consist of many hotels, malls, shopping center, restaurants, schools, colleges, residential area, roads, etc. The water bodies' area had also fallen under the negative growth because of adverse growth of built-up area towards the river cross-section. The analysis of land use land cover area cleared that the region area received a lot of changes within 20 years. The city has economic and social growth but its landscape was adversely affected.



Fig.5 Taj hotel spa in Rishikesh

Fig. 4 some social issues addressed by local people and noticed during the time of field survey

The respondents/local people/ stakeholders were taken for an interview during the time of the field survey. The field survey was conducted in a surrounding of Jonk, Muni Ki Reti, Dhaluwala, Resikesh, Virbhadra, Gumainiwala and Kharkmaffi. About 90% of people believed that floods and cloudbursts (63%) were the major physical environmental hazards that had a high vulnerability. However, the earthquakes (19%) and landslides (21%) had low vulnerability. fire, earthquakes were noticed geohazards (Fig.6) (DMMC, 2012). The region had a moderate to a low slope which indicated low vulnerability to landslides. One respondent had believed that he had not noticed any incidences of landslides but he has noticed the incidents of flood and cloud bursts. Another social factor introduced by people which has a high impact on society and the social well-being of the study area was affected factors such as poverty, unemployment, alcohol, drug, diseases, and pollution. Everyone knows Rishikesh is well known for its tourism industry.

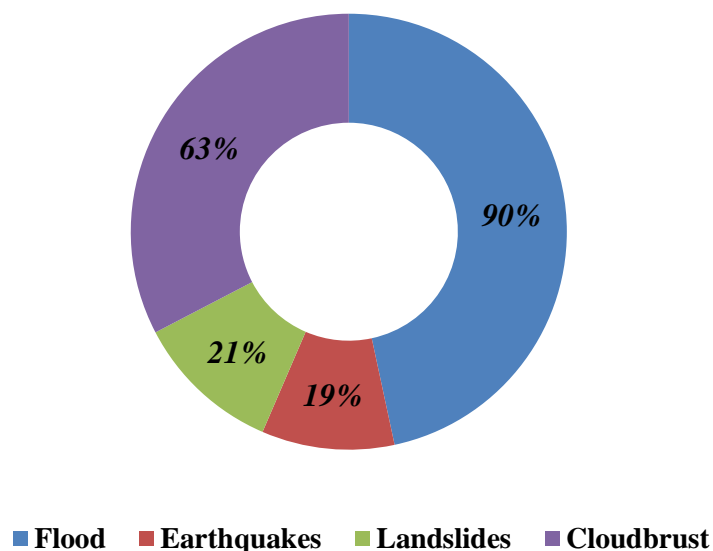


Fig.6 People perception on geo hazards

The over crowd is increasing day by day. The problems of slum areas were noticed; one respondent told that these slum areas have the problem of poverty, hygiene, drug, alcohol, and diseases (Borrini and Brown, 1997) However we can't allege these people, because such types of people have high vulnerability as a comparison to other social groups, because these people have not any sustainable livelihoods and stable houses facilities (Fig.7).



Fig.7 Slum area in the river bed of Resikesh, Near to Munni Ki Rati

The problems of poverty were noticed by 43 % of people, the unemployment (67%) was highly noticed by respondents, they believe that region has potential in the tourism sector but overcrowding had increased and the problem of pollution (31%), hygiene (25%) were noticed. But the problem of alcohol (3%), gambling (5%), and drugs (7%) was observed by very few people. The selling of alcohol was prohibited in this city (Fig.8&9) (Kuniyal et al., 2003)

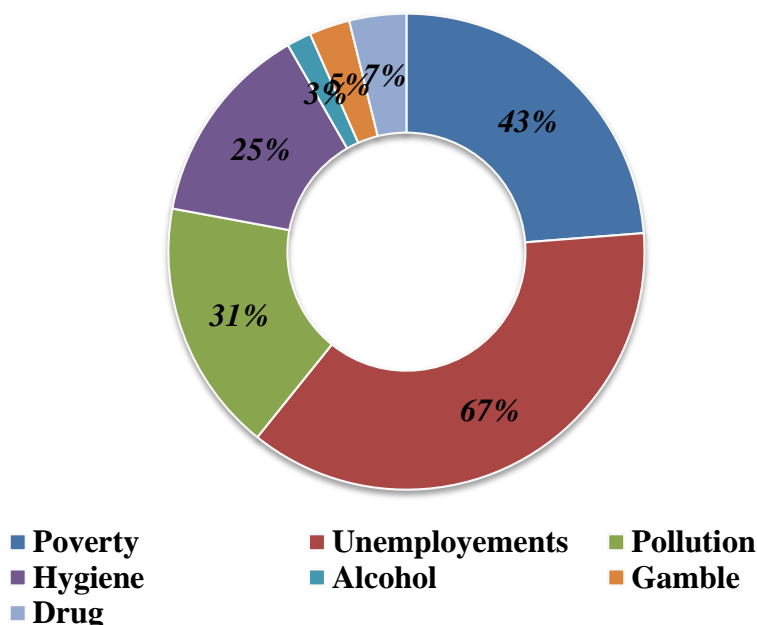


Fig.8 Major social issues observed and noticed in study region



Fig. 9 Solid waste problems in Resikesh

4.3 Resikesh planning for sustainable urban development

The objective of the Rishikesh Master Plan 2011 was to create enabling spatial and land use planning framework to achieve the vision of the Rishikesh Master Plan. For the future growth and development of the urban centers, it will be critical to define their growth framework. The future growth framework of the urban centers is defined by the Master Plan/Development Plans, which were evolved for each settlement at an individual level. Rishikesh Master Plan 2011 has been considered as one of the most effective mechanisms to promote planned growth of the urban centers (GoU, 2020). It lays down the road map, agenda, and framework within which the city's growth is envisioned. It provides a tool for the authorities to take decisions will regard to current and future development-related issues. Rishikesh Master Plan 2011 provides the framework for rationalizing the orderly movement of traffic and transportation within the city and defines the area for laying down a network of various services (OECD, 2015).

5. Conclusion

It also defines the strategies and solutions for overcoming the existing problems of the urban centers and overcoming their infrastructural and service related inadequacies. In addition, it provides options for accommodating the future addition to the population which is likely to come to the urban center due to natural growth and migration. Master Plan acts as a tool for determining the infrastructure cost which would be required to make the city sustainable. The plans offer futuristic solutions by laying down agenda for its growth and development. To prohibit the mushrooming of illegal structures in and around of tourist center, the construction of settlements within the buffer of 200metres from the riverbank is a serious concern from a management and development point of view.

According to the forest conservation act 1980, the river is important ecology and unnecessary construction of 200m cannot be allowed. Flood was one of the major stresses and main concern, here Triveni is located in the dry bed of a river. This colony fell under the flood plain. People of the study region replied that flood was always the result of storm water runoff during the rainy season. About 1000 people have the high vulnerability to floods. The agricultural land in and around Dhawala, the slope of Tapovan had a high vulnerability to flood and loss of agricultural land. Rishikesh is trying to solve the problem of water and waste problems. The mutual functioning of local communities, regional government, businessmen, entrepreneurs, NGOs, agriculture, drinking water operators, and waste/sewage operators is very important to achieve sustainable management. However without the proper management of the urban area is not possible to achieve the sustainable development goal.

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