

Strategies for Development of Kedarnath Pilgrim Region

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Abstract

A disaster hit Kedarnath area in June 15th and 16th 2013 without any warning which caused massive destruction in the area. This disaster was happened because of natural causes but this disaster was widely spread because of human interventions in nature and after that no planning or strategies for disaster mitigation. Disaster that occurred in Uttarakhand, was a flash floods with landslide caused by a cloud burst that swept the Kedarnath area, in result it caused massive destruction and loss of life. This paper attempts to access the situation of study area after disaster. It also focus on identifying the key issues and providing possible and plausible recommendations and strategies in respect of planning for development of study area.

Keywords: Panning, Disaster management, Kedarnath, planning approach, Disaster.

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Introduction

Kedarnath is a very famous place for pilgrims since ancient time situated in Rudraprayag district in Uttarakhand. It is located in a valley near two glacier Chorabari glacier and companion glacier. A flash flood caused by heavy rainfall and lake burst swept away the region and so many casualties were happened. A road connecting to Kedarnath from other part of India was also swept away and thousands of pilgrims were stranded in the area without food, shelter and water. So many people were died because of hunger and cold because army was deployed there 3 days later. 3000 soldiers of Army, ITBP and NDMF soldiers started their mission on June 20th 2013 for the rescue of pilgrims. Indian Navy deployed their 12 helicopters for rescue of pilgrims in bad weather situation and caused crash of 2 helicopters. After a week of the disaster army persons rescued around 38000 pilgrims in Kedarnath region.

Study area profile



Kedarnath temple is one of Char Dhams which are Gangotri, Yamunotri, Badrinath and Kedarnath in Uttarakhand state. Kedarnath is located in the in the Mandakini valley of Rudraprayag District in Upper Himalayan region at the height of approx. 3,583 meter above sea level. Uttarakhand. Due to very determined weather condition it is very difficult to visit this Holy place for all months of the years so only from May to October it is safe to visit there. Climate in this are used to change very drastically and rainfall become very quickly. This region is ecologically end seismically very sensitive even a minimum changes (anthropogenic or natural) can invite a dangerous disaster. The fragile nature of oldest crystalline basement of the Himalayan is very sensitive in case of landslides and any disaster.

Delineation of area

Kedarnath valley is started from Sonprayag which is final destination on the vehicular route. Total trek route distance in between Sonprayag and Kedarnath is approx. 22 km. In between the route Gaurikund is 6 km. Jungle chatti is a small market and seasonal check post. Rambara was a hamlet where pilgrims used to take rest in between the route

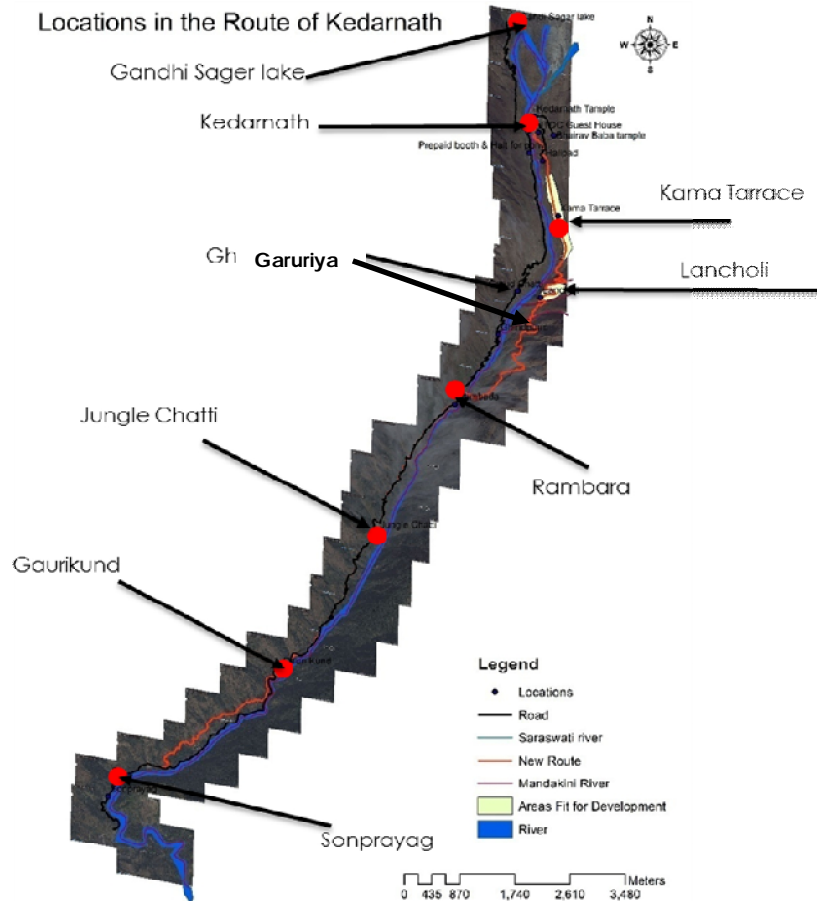
which was washed away by flood. Lancholi & Kama Terrace are areas which

are less disaster prone areas which can be a suitable place for development.

The delineated area includes six development blocks of Kedarnath pilgrim region.

The development blocks included are:

1. Sonprayag
2. Gaurikund
3. Jungle Chatti
4. Rambara*
5. Ghinurpani*
6. Garuriya*
7. Lancholi & Kama Terrace
8. Kedarnath



*

These area were majorly hit by the flash flood so either these areas are washed away or totally abandoned because of no route to reach.

Gaurikund. Now all the vehicles has to stop here near Mundkata Ganesh. Almost 500 m. away from Sonprayag near Mundkata Ganesh, a huge landslide destroyed the route.

❖ **Sonprayag** is last destination point by vehicle before it was clear to

❖ In **Gaurikund**, lower areas were badly hit by the flood. Main market

of Gaurikund, Parking for vehicles and hotels situated in lower most areas were swept away. Famous Gaurikund in campus of Gauri Mata temple was filled with debris. Upper areas were safe in flood and largest no. of pilgrims were evacuated from this area only.

- ❖ **Jungle Chatti** area was affected by landslide and all the shops were filled with soil and debris. Many people were died here and almost 500 people were evacuated on 5th day after disaster.
- ❖ **Rambara** was a local hamlet in midway of the trek route of

Kedarnath. Pilgrims used to stay here for rest and then they used to carry on their yatra. Now Rambara is swept away in flood and landslide has demolished the route to Ghinurpani and Garuriya.

- ❖ **Kama Terrace** is the same area which was safe from the disaster. A report was submitted to state government saying that Kama terrace is safest area for development except Kedarnath area. This area is just 500m. South-east from Kedarnath town on the right bank of Mandakini River.

Table of settlements and their situation after Disaster

Settlement	Area (in Ha.)	Effect of disaster and cause	Present Condition
Kedarnath	8.35	Bad , Flood	Mandakini river has changed its course and now river flow is from both side of town.
Garuria, Ghinurpani	-	Bad, Landslide	This area has been abandoned because trek route has been destroyed because of landslide.
Kama terrace	-	Not effected	This area is in good condition, area was clear from disaster and no rocks were exposed there.
Lancholi	-	Not effected	Lancholi was also not effected in disaster and it was the site camps for pilgrims.

Rambara	-	Severe, Flood and Landslide	This settlement was totally washed away in flood and landslide.
Jungle Chatti	-	Bad, Landslide	Jungle chatti was hit by the landslide and heavy rainfall. Debris has been removed from the area and redevelopment process in on.
Gauri Kund	3.26 Ha	Medium	Gaurikund was less hit in the disaster but the main market, Parking and lower most area were swept away in the flood.
Sonprayag		Medium	Sonprayag was less affected in settlement but Rudraprayag – Gaurikund road was badly hit on so many places. A now debris has been cleared and parking area for 2000 vehicles has been constructed.

Key findings

- ❖ So many buildings were built near the river bank. Some houses and hotels were also constructed over the hills and landslide prone areas. So those buildings were easily collapsed.
- ❖ The Vehicular mobility has been restricted to Sonprayag which was earlier continuous till Gaurikund. As a result the pedestrian track length has been increased from 14km to 25km beginning from Sonprayag.
- ❖ The earlier path was straight continuous to Kedarnath and was on the left side of the river but now the pilgrims have to cross the river to the right side near Rambara where small temporary bridges are built for the purpose. So a new path is being made on the right hills now which is still under construction and is very exhausting given that it requires the pilgrims to hike 4 steep hills.
- ❖ At some places till Rambara the old path is in good condition which is 3m wide. The new one is just

1.0-1.5m wide which is even less at some places.

- ❖ The new track is narrower, has many turns and is steeper than the old one. The landslides are still prominent and causing damage to the pathway.

Recommendations

Recommendations for Sustainable Development of Kedarnath Valley Region and for other regions of similar character are as under:

I. Land use

- ❖ Active growth management through strong land use planning.
- ❖ Land use plans guided by state-wide goals, and regional and local community visions.
- ❖ Design and development practices that meet community needs and standards.
- ❖ Land use patterns that support a balanced transportation system.
- ❖ Efficient and adequate public facilities and services.
- ❖ Protection of agricultural and forest lands.

II. Transportation

- ❖ Enhanced, innovative, accessible and well-used transit systems, including tracking and ropeways.
- ❖ A transportation system that avoids or minimizes negative impacts on environmental quality.
- ❖ Road sections should proper and hill base should be properly strengthen with retaining walls so that chances for landslide should be minimize.

III. Environment

- ❖ Conservation and sound watershed management as the primary means of ensuring adequate water supplies.
- ❖ Avoiding or minimizing sources of pollution through land use and transportation planning.
- ❖ Sustainable, environmentally sound development practices.
- ❖ Promote solid waste management systems and dustbins should be place at appropriate distance.

IV. Economy

- ❖ Coordinated regional investment strategy for economic development and public infrastructure.
- ❖ Valley quality of life as a prime factor in attracting business investment.
- ❖ Diversified, globally oriented, value-added economic base.

V. Conclusion

Kedarnath is a very famous place for pilgrims. Thousands of people used to

come here for visiting Kedarnath temple. Kedarnath is situated in Upper Himalayan Region which attracts tourists. In this scenario spiritual tourism is growing very rapidly. This is very good for economy of the state and but vise-versa it is very unhealthy for ecology and environment of that area. Hill cutting, road widening are main causes of landslide hilly area so we need restrict the cutting and blasting in hilly areas and restrict the development according to its carrying capacity

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