DEMOGRAPHIC & SOCIAL STATUS OF SUNDERKHAL VILLAGE DISTRICT NAINITAL, UTTARAKHAND

A FIELD REPORT SUBMITTED TO THE

DEPARTMENT OF GEOGRAPHY

PRACTICAL (17GEO23CL1)

GURUGRAM UNIVERSITY, GURUGRAM

IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF

MASTER OF ARTS IN GEOGRAPHY

SUPERVISION BY:-

Dr. RAJESH KUMARI

ASSOCIATE PROF.

(M.SC., M.Phil., PhD, PGDHE & Diploma
 in RS&GIS)

SUBMITTED BY:-

SUHASINI SEHRAWAT

 M.A. GEOGRAPHY (3rd SEM.)

ROLL NO. – 221034153004

**DEPARTMENT OF GEOGRAPHY
GOVERNMENT COLLEGE FOR GIRLS, SEC-14
GURUGRAM, HARYANA
2022-23**

1

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ROLL NO. – 221034153004

DEPARTMENT OF GEOGRAPHY
GOVERNMENT COLLEGE FOR GIRLS, SECTOR-14
GURUGRAM (HARYANA)
2021-22

DECLARATION

I hereby declare that, the present field work report entitled, **"Demographic & Social Status of Sunderkhal Village, District Nainital, Uttarakhand"** submitted to Department of Geography, Government College for Girls, Sector-14, Gurugram (Haryana) in partial fulfillment of the requirement for the award of Master Degree in Geography is a record of original research field work done by me under the guidance of Dr. Rajesh Kumari, Associate Professor, Department of Geography.

Dated: 15th December, 2022

Signature of the candidate

Suhasini Sehrawat
Roll No. – 221034153004
(M.A. Geography 3rd semester)
Department of Geography

(GOVT. COLLEGE FOR GIRLS, SECTOR-14, GURUGRAM)

(Affiliated to Gurugram University, Gurugram)

(ACCREDITED BY NAAC, UGC)
Tel No.: (Office) 0124-2223222, E-mail: gcgggn@gmail.com

_____

Dr. Rajesh Kumari
(Ph.D., M.Phil., M.Sc., NET-JRF,   *E-mail: rajpoonia.jnu@gmail.com*
PGDHE &Diploma in RS&GIS Certificate)
Associate Prof. of Geography

CERTIFICATE

This is to certify that the work incorporated in this field work entitled **"Demographic & Social Status of Sunderkhal Village, District Nainital, Uttarakhand"** is an original piece of work completed under my supervision during academic session 2022-23 for the award of the Degree of Master of Arts in Geography. The field work report is suitable for submission.

Dated: 15th December, 2022

Dr. RAJESH KUMARI
(Supervisor)

ACKNOWLEDGEMENTS

I take this opportunity to thank our College – Govt. College for Girls Sector-14, Gurugram, Haryana and Principal Dr. R. K. Garg for allowing the students to go for a field trip for the fulfilment of the Practical 17GEO23CL1 (Field Work).

I would like to express my deepest appreciation to all those who provided me the possibility to complete this report. My special thanks and deep gratitude goes to Associate Prof. Dr. Rajesh Kumari for not only making prior arrangement for the trip but also for accompanying us and providing guidance, moral support and proper understanding of each aspect involved in fieldwork. She is our source of inspiration all along the course of study and field work. Her timely interventions, regular discussions and words of encouragement helped us tide over toughest of the situations. Moreover, she acted as a motherly figure when we are boosted with difficult problems.

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I extended my thanks to all the staff members of the Library and Computer lab of College for their kind support to access the necessary documents and report and data base.

I am heartily thankful to all the villagers of Sunderkhal and Head of the village Mr. Chandan Mann and Sub-head of the village Mr. Yashpal for their co-operation and providing us safe environment.

All criticism and suggestions are welcome.

Date: 15th December, 2022

Name of Student

Suhasini Sehrawat

Roll No. 221034153004

CONTENTS

STATEMENT OF PROBLEM

INTRODUCTION

OBJECTIVES

DATA BASE AND METHODOLOGY

RESULT AND DISCUSSION

CONCLUSION

BIBLIOGRAPHY

APPENDIX TABLES

QUESTIONAIRE

PHOTOS OF FIELD WORK

LIST OF TABLES

LIST OF FIGURES

LIST OF MAPS

.1 Statement of Problem:

Before having a clear idea of what is **Physical and Socio-Economic survey**, it is essential to know the meaning of physical and socio-economic survey separately. Physical refers to the natural features on the face of the "earth". The word socio is derived from the word 'Society'. Society is nothing but a group of people organized culturally as well as systematically. Economic conditions of the people has the bearing on their social status. The primary aim of a physical and social survey is, infect, to make an accurate and impartial collection and presentation of facts, the result of careful observation and not of hearsay. A physical and socio-economic survey has very close affinity with natural features and social work, which offers opportunities for the practical application of the principles and techniques of scientific research. Physical refers to the process of determining the demarcation of land by firmly identifying its boundaries and socioeconomics is the field of study that examines social and economic factors to better understand how the combination of these aspects influences something (Nautiyal *et. al.,* 2005). The goal of physical and socio economic study is generally about measuring dimensions of a particular area of the earth surface and also socio-economic development, usually in terms of improvements in metrics such as literacy, life expectancy, levels of employment, land use pattern etc. Here is the report on the Physical and socio-economic status of a village surrounded by the forest area. There is no doubt that forest resources in India usually identifiable with the features of common property resources, offer multiple benefits to people in general and rural people in particular, as evident from various market and non- market values associated with its diverse economic, ecological, social and environmental benefits. This means that there are interrelationships between environmental physical and socioeconomic conditions prevailing in these areas. Physical and socioeconomic study of villages is mainly for understanding the present condition of villages regarding the environment conditions, settlement pattern, land use, agriculture, lifestyle, education status, health status, food scarcity and overall development of rural areas. To find innovative solutions for socially, economically or Physical features based issues and to satisfy the needs of members and users which have been ignored or inadequately fulfilled by the private or public services (Myers, 1990).

People of such areas (i.e. village surrounded by forest) are totally dependent on forest for their livelihood. Mostly villagers are dependent on firewood for cooking and heating whether they are having gas connections. In this category another important aspect is cattle rearing e.g. cow, buffaloes, goat etc. for which they have to depend on forest as they

obtain fodder such as grasses, leaves of important forest trees etc. (Nautiyal *et. al.,* 2005). Some other features are also noticed like agriculture condition and dependency of villagers on farming and about the type of crops, cultural practices, crop composition etc. in this category if any system like Agroforestry (agri-silviculture system, agri-horticulture system etc.) and mixed farming also mentioned. As such areas are totally covered by the forests so we can study different types of ecological factors with the influence of climatic as well as edaphic factors and also the status of flora and fauna. Social status includes the important things like availability of electricity, water supply, toilets, LPG connections etc. and also the well maintained roads, hospital, school (primary and secondary), different forms of schemes launched by the government for the development of rural areas (NREGA (National Rural Employment Guaranty Act), TRYSEM (Training of Rural Youth for Self -Employment), JRY (Jawahar Rozgar Yojna) etc.), sex ratio, data about the population involved in farming, private government services. For economic development the transformation of socio-economic conditions is necessary. Hence, it is need of the hour to analyze the physical and socio-economic conditions of the rural areas and to put forward the suggestions to solve the problems prevailing in the rural areas. Overall certain conclusions can be noticed which play an important role in the physical, social as well as economic life of people.

An intensive survey can help to gather all above written information that can work as a base for further development of any area by government and other organizations.

1.2 Introduction:

Uttarakhand:-

Uttarakhand was formed on 9th November 2000 as the 27th State of India, when it was carved out of northern Uttar Pradesh. Located at the foothills of the Himalayan mountain ranges, it is largely a hilly State, having international boundaries with China (Tibet) in the north and Nepal in the east. On its north-west lies Himachal Pradesh, while on the south is Uttar Pradesh. It is rich in natural resources especially water and forests with many glaciers, rivers, dense forests, and snow-clad mountain peaks. Char-Dhams, the four most sacred and revered Hindu temples of Badrinath, Kedarnath, Gangotri and Yamunotri are nestled in the mighty mountains. It's truly God's Land (Dev-Bhoomi) (see in Pic.-1). Dehradun is the Capital of Uttarakhand. It is one of the most beautiful resort in the sub-mountain tracts of India, known for its scenic surroundings.

Nainital:-

Nainital is a city and headquarters of Nainital district of Kumaon division, Uttarakhand, India. It is the judicial capital of Uttarakhand, the High Court of the state being located there and is the headquarters of an eponymous district. It also houses the Governor of Uttarakhand, who resides in the Raj Bhavan. Nainital was the summer capital of the United Provinces. Nainital is located in the Kumaon foothills of the outer Himalayas at a distance of 285 km from the state capital Dehradun and 345 km from New Delhi, the capital of India. situated at an altitude of 1,938 metres (6,358 ft) above sea level, the city is set in a valley containing an eye-shaped lake, approximately two miles in circumference, and surrounded by mountains, of which the highest are Naina Peak (2,615 m (8,579 ft)) on the north, Deopatha (2,438 m (7,999 ft)) on the west, and Ayarpatha (2,278 m (7,474 ft)) on the south. From the

tops of the higher peaks, "magnificent views can be obtained of the vast plain to the south, or

Pic.-1 "DEVBHUMI" literally 'Land of

the God'

Pic.-2 Clouds touching the roof of Mountains. Photo taken during field work on 6-10-2022 at 7:03 PM
of the mass of tangled ridges lying north, bound by the great snowy range which forms the central axis of the Himalayas." The hill station attracts tourists round the year (see in Pic.-2).

The town of Nainital covers a total area of 11.73 km^2 and is located at 29.38°N 79.45°E, at an average elevation of 2,084 metres (6,837 ft) above sea level. The slopes of the nearby mountains are most populated, with an altitude ranging from 1,940–2,100 m (6,360–6,890 ft). The highest point nearby is the Naina Peak, with a height of 2,619 m (8,593 ft). The town is located in the Kumaon foothills of the outer Himalayas at a distance of
285km (177 mi) from the state capital Dehradun and 345 km (214 mi) from New Delhi, the capital of India. The town is set in a valley around the Nainital Lake - an eye-shaped lake, which is located at an altitude of 1,940m (6,350 ft) from sea level. The lake is 1,433 m long and 463m wide, and is approximately two miles in circumference. The bed of the lake is at a depth of 85m near Pashandevi, the deepest point of the lake. The lake is deduced to have been formed tectonically. Balia Nala, which is the main stream feeding the lake is along a fault line and the subsequent streams align parallel to major joints and faults. 26 major drains feed the lake including the 3 perennial drains.

Pic.-3 The Sivalik Hills, also known as the Shivalik Hills and Churia Hills, are a mountain range of the outer Himalayas that stretches over about 2,400 km (1,500 mi) from the Indus River eastwards close to the Brahmaputra River, spanning the northern parts of Indian Continent. Photo taken during field work on 6-10-2022 at 12:47 PM.

The Krol group of rocks, comprising slates, marls, sandstones, limestones and dolomites with a few small dykes intrusives, is the dominant geological formation of Nainital's surroundings, although, Nodules, laminae and stringers of phosphatic material, followed upward by the purple-green shales intercalated with muddy fine-grained sandstone and siltstone; recognised as the Tal Formation; are also prevalent. The region has a complex geological framework; the rocks are fragile and newly formed. The town is completely located in the catchment area of the Nainital lake, which has highly folded and faulted rocks due to polyphase deformation. Landslides are a frequent occurrence in the hill slopes surrounding the lake, which are steep. The slopes are highly vulnerable to landslides and mass movement due to various geological and human factors. The first known landslip occurred in Nainital in 1866 on Alma hill, and in 1879 there was a larger one at the same spot. The greatest landslide in Nainital occurred on 18 September 1880, on the slope which rising from the north of the flats ends at Alma peak, and resulted in 151 people being buried under the debris. Another heavy landslip occurred on 17 August 1898 outside the Nainital valley
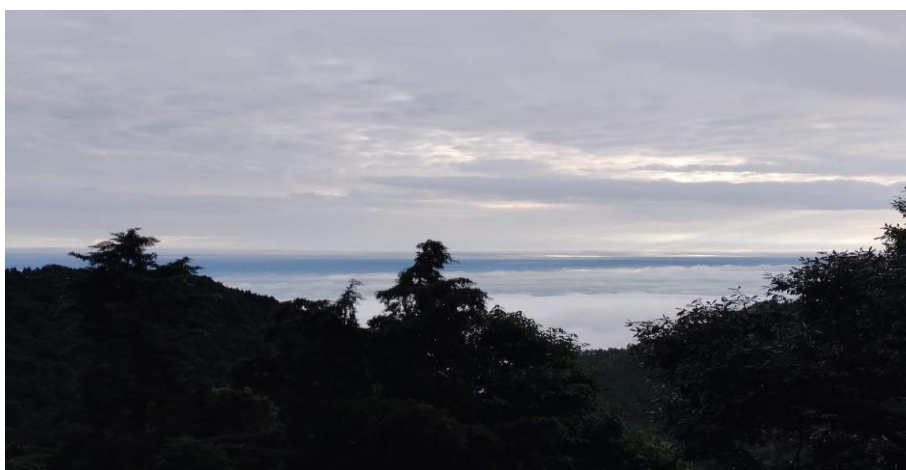
Nainital Climate:-

According to Koppen, "Geiger climate classification system as the town's climate is influenced by the elevation. The town is a bit dry during winter and very wet

during summer due to South Asian monsoon system. The lowest precipitation total occurs in November with total 7.9 millimetres (0.31 in), while the highest precipitation total occurs in July with total 725 millimetres". Like most places in temperate region, Nainital has relatively cool summer. The hottest month is July with temperature ranging from 16.4 °C to 23.5 °C, while the coldest month is January with temperature ranging from 1.7 °C to 10.7 °C. The highest temperature ever recorded in Nainital was 30 °C recorded on 18 June 1972, while the lowest temperature was 5.6 °C recorded on 17 January 1953.

Pic.-4 Climate condition of Nainital. Photo taken during field work on 6-10-2022 at 7:03 PM

Pic.-5 Climate condition of Nainital. Photo taken during field work on 6-10-2022 at 7:10 PM

The winter season in Nainital commences by mid-November and lasts till mid-March. The temperature gradually declines from the month of November onwards and January is the coldest month. Frost and mist are common features in the months of December and January. Occasionally widespread rainfall also occurs due to western disturbance, with snow occurring on peaks higher than 2000m. The winter rainfall is sometimes associated with cyclonic activities. The temperature, however, shows an increasing trend by the end of February or the first half of March. By mid-March, there is a progressive rise in temperature, which indicates the onset of the summer season. While days get slightly warmer, the nights continue to be cool. There is a constant increase in temperature during May and early June when the highest temperature is recorded. The months of March and April are also associated with the occurrence of hailstorms, which brings a short spell of cold. The onset of the summer in the hills is relatively earlier than the plains and is also very lengthy and humid. The mean temperature in July and August goes down and humidity rises abruptly during this season. The monsoon usually begins by mid-May when the rain strikes and continue until mid-October. Nainital, due to its proximity to the outermost high ranges of the Himalaya, receives high annual rainfall. Generally, by mid-September, the monsoon gets weakened and rain occurs generally after long intervals. With the retreat of the monsoon, the winds blow in a reverse direction. The weather during the post-monsoon months is characterized by bright skies. It is in fact a transition between the rains and the winters and with reduced rainfall, the monthly temperature records a progressive decline till mid-January.

Flora and fauna of Nainital:-

The areas around Nainital (in the middle Himalayan ranges up to 2,000 m (6,600 ft), a temperate zone, is rich in flora (typical temperate climate plants) and fauna. The trees and bushes grown in the region with their botanical and common Indian names (in parenthesis) are : Quercus   leucotrichophora Oak (Banj), Aesculus   indica (Pangar or Horse chestnuts), Juglans   regia (Akhrot or walnut), Populus ciliata (Hill Pipal, a sacred

tree), Fraxinus micrantha (Ash tree or Angu), Platanus orientalis (Chinar), Rubus lasiocarpus (Hisalu), Rosa moschata (Kunj or Musk rose), Berberis asiatica (Kilmora), Cupressus torulosa (Surai or Himalayan cypress), Rhododendron arboreum (Buruns), Cedrus deodara (Deodar), Salix acmophylla (Weeping Willow), and Pinus (Pine).

Pic.-6 **Typical conifers in these Mountains regions are Pines, Firs (Abies), spruces (Picea) and the Decidious Larches .Trees present in the mountains are cone-shaped. When there is heavy rainfall or snowfall, snow and water may accumulate on the plants. To avoid this they have cone-shape and needle-shaped leaves to allow rainwater and snow to side off from the trees without damaging them.**
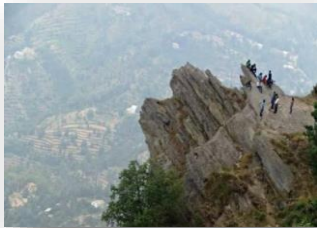

Pic.-7 Flora and Fauna at Nainital

Pic.-8 Flora and Fauna at Nainital

Several species of medicinal flora and horticulture plants have also been found in the Nani lake. The aquatic macrophytic vegetation include potamogeton pectinatus, potamogeton crispus, polygonum glabrum, polygonum amphibium and polygonum hydropiper (Water pepper). The fishes found in the lake are generally carps mahseer and the mirror carp which breed several times during one spawning season during May to September. Two species of Mahaseer fish viz., Tor tor: The red finned mahseer and the Tor putitora: The yellow finned mahseer, a food fish which grows to varying sizes from 20 to 60 cm are found. Three species of Hill Trout are found in the lake: the Schizothorax sinuatus, Schizothorax richardsoni and Schizothorax plagiostornus. The imported fish bred in the lake is Mirror carp or Cyprinus carpio. Gambusia affinis also called Mosquitofish has been introduced in the lake as a biocontrol measure to control Mosquito larvae.

Pic.-9 Nainital Lake, also known as Naini Lake, is a natural freshwater body, situated amidst the town of Nainital in Kumaon, Uttarakhand, India. It is tectonic in origin and is kidney shaped or crescent shaped and has an outfall at the southeastern end. Photo taken on 6-10-2022 at 12:24 PM.
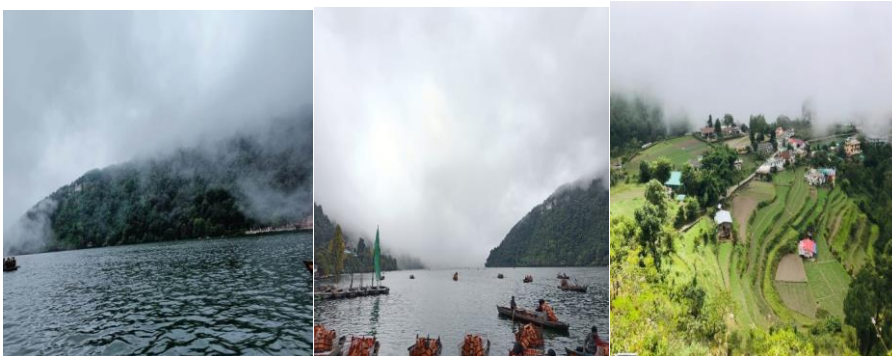
Pic.-10 Huge ammount of fishes found at the Nani Lake

Pic.-11 Picture during Nainital visit on 6-10-2022 at 11:09AM

Pic.-12 Picture of Nani Lake during Boating on 6-10-2022 at 2:21 PM. Agriculture pattern across Khurpatal Lake.

Woodland Water Fall is one of the main attraction in Nainital as a natural water fall claimed to be water stored in plants and ponds. Khurpatal is a lake located 12 kilometers ahead of Nainital, a famous tourist destination in the Indian state of Uttarakhand. Khurpatal was named Khurpatal because its shape looks like a hoof (horse's foot). In November 2016, the Uttarakhand High Court ordered the declaration of several lakes as eco-sensitive zones, banning felling of trees and new construction within a radius of 2–5 km. Khurpatal is one of these lakes.

Pic.-13 Masjid and Cricket Playground of Nainital. Photo taken during field work on 6-10-2022 at 4:00pm

Jim Corbett National Park:-

Jim Corbett is a national park in India located in the Nainital district of Uttarakhand state. The first national park in India, it was established in 1936 during the British Raj and named Hailey National Park after William Malcolm Hailey, a governor of the United Provinces in which it was then located. In 1956, nearly a decade after India's independence, it was renamed Corbett National Park after the hunter and naturalist Jim Corbett, who had played a leading role in its establishment and had died the year before. The park was the first to come under the Project Tiger initiative. Corbett National Park comprises 520.8 km2 area of hills, riverine belts, marshy depressions, grasslands, and a large lake. The elevation ranges from 1300 to 4000ft. Winter nights are cold but the days are bright and sunny. It rains from July to September.

Flora and Fauna of Jim Corbett National Park:-

The park has sub-himalayan belt geographical and ecological characteristics. Dense moist deciduous forest mainly consists of sal, haldu, peepal, rohini and mango trees. Forest covers almost 73% of the park, while 10% of the area consists of grasslands. It houses around 110 tree species, 50 species of mammals, 580 bird species and 25 reptile species. An ecotourism destination, the park contains 488 different species of plants and a diverse variety

21

of fauna. The increase in tourist activities, among other problems, continues to present a serious

Pic.-14 Jim Corbett Museum. Photo taken during field work on 4-10-2022 at 3:08 PM

challenge to the parks ecological balance. Tree density inside the reserve is higher in the areas of Sal forests and lowest in the Anogeissus-Acacia catechu forests.

Total tree basal cover is greater in Sal dominated areas of woody vegetation. Healthy regeneration in sapling and seeding layers is occurring in the mallotus philippensis, jamun and diospyros tomentosa, but in the Sal forests the regeneration of sapling and seeding is poor. 33 species of reptiles, seven species of amphibians, seven species of fish and 36 species of dragonflies have also been recorded. Bengal tigers, although plentiful, are not easily spotted due to the abundance of foliage-camouflage in the reserve. Thick jungle, the Ramnagar River and plentiful prey make this reserve an ideal habitat for tigers who are opportunistic feeders and pray upon a range of animals. The tiger in the park have been known to kill much larger animals such as buffalo and even elephant for food. The tigers prey upon the larger animals in rare cases of food shortage. Leopards are found in hilly areas but may also venture into low land jungles. Small cats in the park include the jungle cat, fishing cat and leopard cat. Other mammals include barking deer, sambar deer, hog deer and chital, sloth and etc. In the summers, Indian elephants can be seen in herds of several hundred. The

Indian python found in the reserve is a dangerous species, capable of killing a chital deer. Local crocodiles and gharials were saved from extinction by captive breeding programs that subsequently released crocodiles into the Ramnagar River.

Pic.- 15 Jim Corbett Museum. Photo taken during field work on 5-10-2022 at 3:09 PM

Pic.- 16 Territory mark by Tiger on left and Kosi Forest cover on Right

Pic.- 17 Sita Bani at left and Termite at trees on right sign of healthy Forest.

Jim Corbett safari:-

Jim Corbett Safari is divide into five different zones namely- Dhikala, Bijrani, Jhirna, Dhela and Durgadevi where tourists can enjoy a safari. The three types of safari offered here are jeep safari, canter safari and elephant safari each allowing you an enthralling perspective of the exquisite place that in Jim Corbett with its splendid creatures. The cost of witnessing such a splendid natural destination is offered at a very budget-friendly price too. For up to 6 people, the cost of Jim Corbett Safari ranges between INR 4500 to INR 8000 allowing an unforgettable experience for everyone. The best time of the year for safari ranges according to the zones. While Jhirna and Sonanadi Zone are suitable to be visited throughout the year, Dhikala, Bijrani and Durga Devi Zone are best visited from the month of October to June for the finest experience. Corbett is a paradise for wildlife enthusiasts and gives shelter to a diverse species that includes more than 600 types of birds, 500 species of distinct flora as well as various wild animals like elephants, leopards etc. A jeep safari can be booked online and tourists can choose the two slots for the day when this safari takes place in the park. The excitement of jeep safari will get your pulse racing as you get to travel in an open Jeep across the park to see the majestic tigers roaming around freely in their natural habitat. For photography lovers too, a jeep safari is a dream come true in Jim Corbett as you get to capture the most delightful shots of wildlife here.

24

Pic.- 18 Sindur tree on left, pine trees shedding bark on middle and Bhandar Pani River on right.

Pic.- 19&20 Group photo taken during field work in Jim Corbett National Park & Kosi River on 5&6-10-2022
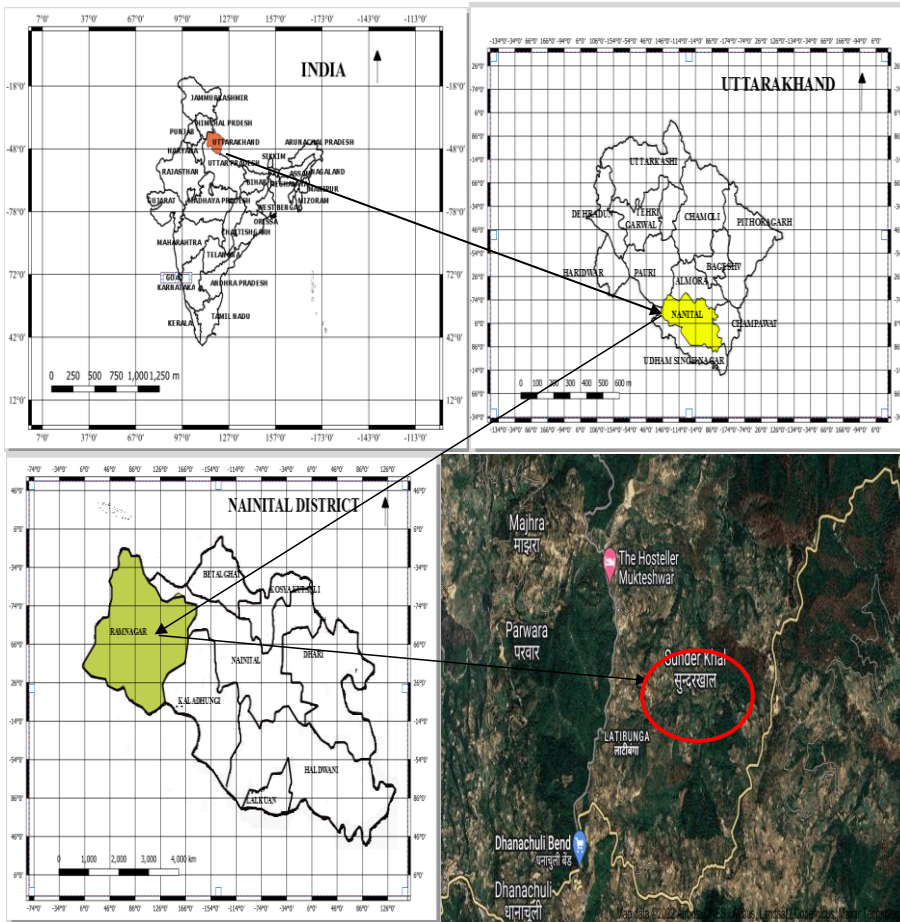
Pic.- 21 Photos taken during Field Work

Sunderkhal Village:-

  Sunderkhal Village as the name suggests, is a charming village on the outskirts of Jim Corbett National Park. Flanked by river Kosi on one side and the hills of

Map 1. LOCATION MAP OF STUDY AREA

Source: Census of India, 2011   **Source: Google Earth**

Corbett on the other, Sunderkhal gets normally overlooked by tourists zipping from Ramnagar to Dhangarhi – the main entry point to the world famous national park. It is located between Jim Corbett National Park and Ramnagar Forest Reserve. Sunderkhal is a Village in Dhari Block in Nainital District of Uttarakhand State, India. It is located 24 KM towards East from District headquarters Nainital. 4 KM from Dhari. 221 KM from State capital Dehradun. Sunderkhal Pin code is 263132 and postal head office is Bhowali. Dhanchuli (3 KM), Majuli (5 KM), Chaukhuta (5 KM), Naie (5 KM), Gajar (5 KM) are the nearby Villages to Sunderkhal. Sunderkhal is surrounded by Okhalkanda Block towards East, Bhimtal Block towards west, Lamgara Block towards North, Ramgarh Block towards North.

28

Nainital, Almora, Haldwani, Champawat are the nearby cities to Sunderkhal village. Total area of village is 75 hectares, Number of household in the village 400, total Population is 1009, males total population is 552, females population is 457, population of age group (0-6) persons 147 in which males are 84 and females are 63 (Data collected from DCH,NAINITAL). Hindi, Urdu, Garhwali and Kumauni are the local language of the village.

Source:- During Field Work 4th October, 2022

Commented [h1]:

Climate of Sunderkhal village:-

The summer temperatures in the village from 20 °C to 25 °C, while winter temperatures remain between 7 °C and -1 °C.

Source:- During Field Survey 4ᵗʰ October 2022

Flora of Sunderkhal Village:-

       The plant life of Tehri Garhwal can be divided into six main categories of tropical dry deciduous forests, Sal forests, Chir forests, oak deodar, fir and spruce forests, and finally the Alpine pastures. The variety of forests is perhaps enough to make anyone realize the sheer multiplicity of the flora species. These forests not provide a safe haven for animals but

Pic.- 22 Different Types of Flora at Sunderkhal Village

Source:- During Field Survey 4ᵗʰ October, 2022

30

also help the villagers to maintain the ecological balance and give them firewood and food.

The scent of damp earth, leaves and the noise of grasshopper are the essence of Garhwali forests. There are many trees like chir, Oaks, Conifers, Sal, Deodar, Haldu, Yew, Cypress, Rhododendron, Birch, Horse-Chestnut, Willow and Alder are found here. A large variety of medicinal herbs, shrubs and bushes like Brahmi and Ashwagandha are found in abundance here. One can also savor fruits like Cornel, Figs, Kaiphal, Mulberry, Kingora, Raspberry, Blackberry, Currants, Medlars, Gooseberries, Hazelnuts, Apples, Pears, Cherries, Apricots, Plums, Peaches, Oranges, Limes, Bananas, Pomegranates and Walnuts.

Fauna of Sunderkhal Village:-

The Village is full of rich animal life which includes mammals, reptiles, pisceans and birds. The forests are full of animals like Monkey, Langur, Wild-Cat, Goat, Pig, Fox, Wild-Dog, Black Bear and the Flying Squirrel. Elephants are found only in the Terai forests when entering from Dehradun. A number of carnivore species live in Tehri Garhwal region like the Snow Leopard, Leopard and sometimes Tigers. The Snow Leopard is rare and seriously endangered. The avian species consist of Pheasants, Kalij, Koklas, Cheers, Monal, Wild Fowls, Harial Parrots, Chatak, Papiha, Haldu, Neelkanth, Pigeons, Partridges, Kala Titar, Chakor and Neora. The reptile population is represented by Cobra, Ancistrodon Himalayans, Rat Snake, Leech and Blood-Sucking Lizard.

Pic.- 23 Different Types of Cattle/Fauna at Sunderkhal Village

Source:- During Field Work 4ᵗʰ October, 2022

31

Soil type of Sunderkhal Village:-

       Soils are mainly alluvial type and are very good fertile especially for the crops and fruits agricultural. As most of the soil is rich in mineral and nutrients as due to the availability of forest.

Agriculture and Forestry of Sunderkhal Village:-

       Although 70 percent population of Sunderkhal Village is engaged in Private Work (Labour, different post in resorts & hotels, driver and guide of Jim Corbett Jungle Saphari) and 0.5 percent population in cultivation. Less than one-fifth of the total area of Sunderkhal is cultivable. Steep slopes require careful terracing and irrigation with water

Pic.- 24 Agriculture Crops and Food Grains at Sunderkhal Village

drained from the upper levels used to irrigate the lower ones. This method of terrace cultivation allows fields to be sown more than once per year. Wheat is the most widely cultivated crop,

32

followed by rice and various types of millets, which are planted on the drier leeward slopes. Other important crops include pulses (legumes) such as peas and chickpeas, oilseeds such as soybeans, peanuts, and mustard seeds, Adrak, Haldi (turmeric) and assorted fruits and vegetables (Litchi, Mango Trees).

Shree Hanuman Dham:-

    Hanuman Dham, located amidst the serene surrounding of majestic Himalayan valley, gives you the perfect environment to delve deep inside yourself. The name based on the symbol of Sewa, Shri Hanuman ji. This Hanuman Dham will be a metaphor for Sewa and Bhakti. A centre for sewa, bhakti and samarpan, at Hanuman Dham devotees can lead a peaceful life with complete holistic wellbeing. The Dham will also be a cultural centre to promote the ancient Indian culture specifically the culture of love and sewa of devbhumi Uttarakhand. Situated on the bank of river Kosi, he sprawling ashram is surrounded by lush green lawns, water bodies and fountains. It houses a majestic Hanuman Temple, Yoga-Meditation Hall, Centre for differently-abled, Vanprastha Ashram, etc.

Kosi River:-

        Kosi is a perennial river that originates from Dharpani Dhar, perched at 2,500 metres in Baramandal region of Almora district. This pristine river graciously flows through the verdant valleys and towns of Ramnagar, Uttarakhand, thereafter entering the Tarai regions of Uttar Pradesh, where it joins Ramganga River. This Himalayan River is famous by the name of 'Kosila' among the local populace. Having a length of 168 metres, Kosi River replenishes the farmlands of Kumaon and is a source of water for the wildlife thriving in the Corbett National Park. The river basin is surrounded by ridges which separate it from the Yarlung Tsangpo River in the north, the Gandaki in the west and the Mahananda in the east. The river is joined by major tributaries in the Mahabharat Range approximately 48 km north of the Indo-Nepal border. Below the Siwaliks, the river has built up a megafan some 15,000 km² in extent, breaking into more than 12 distinct channels, all with shifting courses due to flooding. Kamalā, Bāgmati (Kareh) are the major tributaries of Kosi River in India, besides minor tributaries such as Bhutahi Balān.

Its unstable nature has been attributed to the power it can build up as it passes thru the steep and narrow Chatra Gorge in Nepal. During the monsoon season, it picks up a heavy silt load, which it redeposits at times, causing it to change its channel. This leads to flooding in India with extreme effects. Fishing is an important enterprise on the river but fishing resources are being depleted and youth are leaving for other areas of work.

Source:- During Field Work Kosi Barrage 5th October, 2022

1.3 Objectives:

The development of an area depends on Geo-Socio-Economic setting of area. Small units like village helps for collecting data of various socio-economic conditions. Keeping it in mind following objectives are undertaken for the field study.

1. To study the social status of villagers.
2. To study the economic backgrounds of the villagers.
3. To study the relationship between villagers and nearby forest.
4. To study the specific constraints related to the development of the village.

1.4 Data Base and Methodology:

Sampling Procedure: For the selection of samples, simple random sampling technique is adopted. Firstly, a complete list of households of village Sunderkhal prepared and then randomly samples selected. Total number of families is 509 and 38% are selected as sampling units. Thus, a total number of 190 Households are selected randomly for study.

Data: The field study is based on the primary source of data (see Fig.1). The data has been collected through questionnaire, interview and personal observation. Observation has formally been incorporated into geography through fieldwork. Fieldwork is nothing more than systematic observation by a geographer of his or her subject matter. Anyone can do fieldwork and every good geographer does. Virtually anyone can do it because fieldwork is, at its most fundamental, just going out and looking at the land. The field study survey is conducted during 3 October 2022 to 07 October 2022 in village Sunderkhal in Ramnagar Tehsil of Nainital district, Uttarakhand.

Fig. 1

Sources of Data

Primary Source:

The primary source of data is collected through the questionnaire and with response as direct contact with villagers. The data was collected and analyzed to frame the total information into a final record. The information contains the answers relating to the questionnaire.

Secondary Source:

The secondary information was gathered through persons which is the stairway to all the primary information. The information received was in the form of meetings mainly. Sources includes Head of the village and Teachers at primary school.

The family head specifically is the main source for the collection of the data. All the information regarding cultural system, literacy status, age structure, sex ratio, health and hygiene, sports, economic aspects-occupational structure, domestic production, income, house type and settlement pattern, transport and communication are collected. Local peoples, various reference books are others sources of consolidating information for the socio-economic survey of the area. The detailed questionnaire which has been formulated to analyze the study as Annexure-I.

Methodology: The collected data is tabulated and processed with the help of statistical techniques. The processed data is cartographically represented with the help of diagram. The demographic & social characteristics have been studied in relation to social and economic status of households. All the household of the village have been classified into four caste groups. These caste groups are General, OBC, SC and ST.

2. <u>Result and Discussion</u>:

2.1 <u>Physical-Socio-Economic Structure</u>:

Population studies have for long been the subject of concern for social scientists including geographers. The varying content and methodologies of different disciplines studying population notwithstanding, each social science has made valuable contributions towards the understanding of spatial-temporal patterns of population. In geography, the study of population attributes has been the focus of traditional geographers since long. The people of the village are very simple, hardworking, traditional, enterprising and above all valiant defenders of the motherland. The villagers are by and large religious minded, God fearing and vegetarian in their food habits. All peoples in the village are Hindu. Accessibility to school, senior secondary school and colleges/universities in cantonment are not available within the village. There are no basic need facilities are present in the Sunder Khal village. Only One or two small shops, are available and other facilities such as medical, post-office, telephone, bank, newspaper/magazine, rest house and market etc. are not available within the village.

Distribution of Population by Social Group:

As per field survey on 03 October, 2022, it is also taken as an indicator of the stage of development of the society. Table: 1 reveals that 1005 peoples, out of which male population

36

is 532 (52.9%) while female population is 473 (47.1%). Male population is Highest as compare to Females.

Table: 1 Population Structure by Social Group

Social Group	Male	Percentage	Female	Percentage	Total	Percentage
OBC	111	55.8	88	44.2	199	100
SC	412	52.4	374	47.6	786	100
ST	9	45.0	11	55.0	20	100
TOTAL	532	52.9	473	47.1	1005	100

Source: Primary Field Work, October 2022

Fig. 1 POPULATION STRUCTURE BY SOCIAL GROUP

	General	OBC	SC	ST	Total
■Male %		55.8	52.4	45.0	52.9
■Female %		44.2	47.6	55.0	47.1
■Total %		100	100	100	100
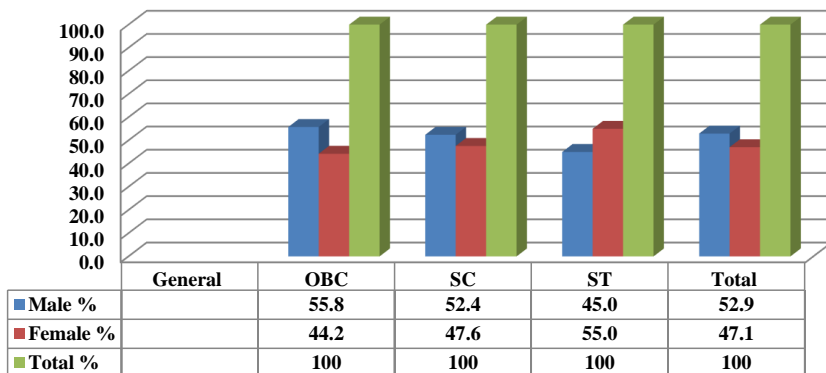
Distribution of Family Type by Social Group:

It is also taken as an indicator of the stage of development of the society. Table: 2 reveals that

Table: 2 Distribution of Family Type by Social Group

Social Group	Male	Percentage	Female	Percentage	Total	Percentage
OBC	22	71.0	9	29.0	31	100
SC	99	67.8	47	32.2	146	100
ST	2	50.0	2	50.0	4	100
Total	123	68.0	58	32.0	181	100

Source: Primary Field Work, October 2022

most families in Sunder Khal village are nuclear families. Scheduled castes have highest proportion 146 (80%), where 31 persons belong to the Other Backward Caste, 4 are Scheduled Tribe. (See Table. 2)

Fig. 2 DISTRIBUTION OF FAMILY TYPE BY SOCIAL GROUP

	General	OBC	SC	ST	Total
■ Male %		71.0	67.8	50.0	68.0
■ Female %		29.0	32.2	50.0	32.0
■ Total %		100	100	100	100
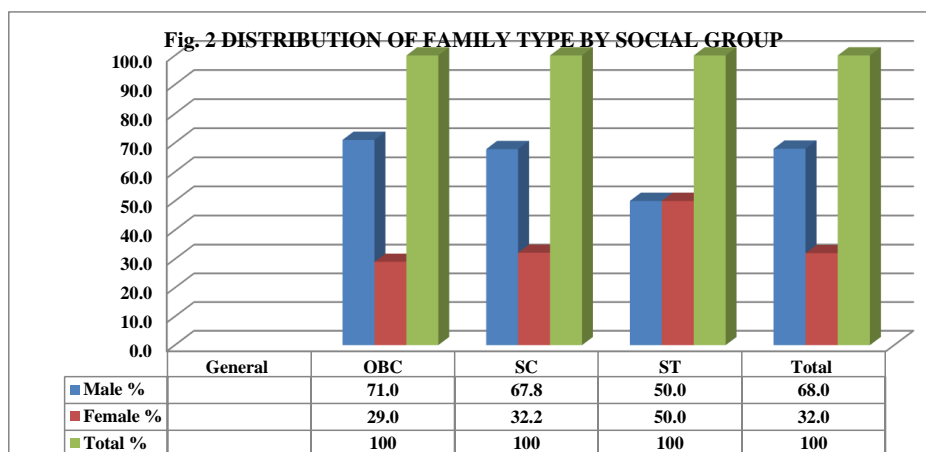
Distribution of Family Size by Social Group:

Size of the family is a parameter that indicates stage of social development. Table: 3 reveals that most of the families in Sunder Khal village are medium size. About 58.5 percent families in the village are medium (up to 5-7 members) sized followed by large size, small size and very large size. The proportion of large size family is lowest among scheduled castes (0 percent) and general castes (0 percent). About 69.7 percent families in the village are medium sized of OBC Caste, Schedule Tribes has higher proportion of population in small families and 12.1 percent of large size families only about 6.1 percent families are very large sized.

Table: 3 Distribution of Family Size by Social Group

Social Group	Small Family (Up to 4)	%Age	Medium (5-7)	%Age	Large (8-10)	%Age	Very Large (Above 10)	%Age	Total	Percentage
OBC	4	12.1	23	69.7	4	12.1	2	6.1	33	100
SC	49	33.6	82	56.2	12	8.2	3	2.1	146	100
ST	2	50.0	2	50.0		0.0		0.0	4	100
Total	55	30.1	107	58.5	16	8.7	5	2.7	183	100

38

Fig. 3 DISTRIBUTION OF FAMILY SIZE BY SOCIAL GROUP
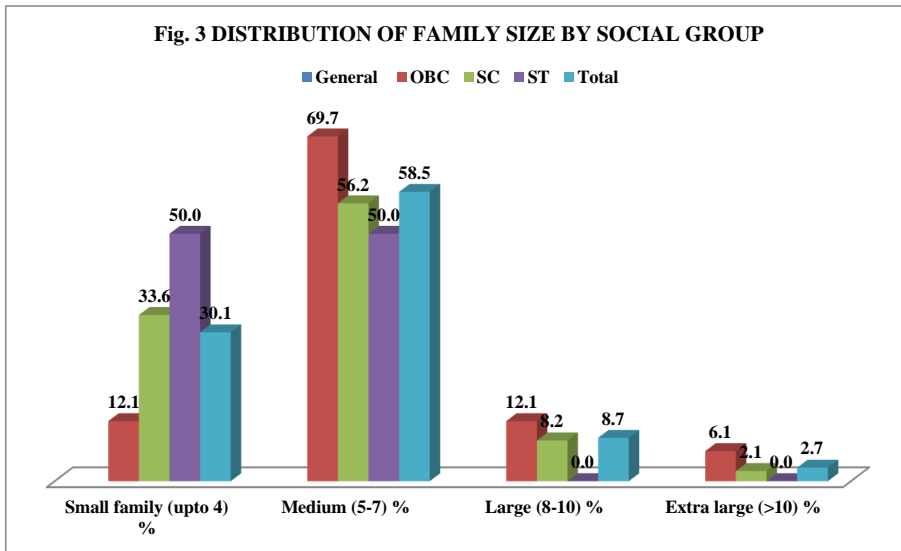
Source: Primary Field Work, October2022

Sex Ratio by Age Group and Social Status:

The numerical measurement of sex composition of a population is often expressed in terms of sex ratio. In India, the sex ratio is calculated in terms of number of females per thousand of males and child sex ratio in terms of number of girls per hundred boys. It is calculated under:

FORMULA:-

Total Female Population
-----------------------------X 100   OR   Total Girls Population (0-6)
Total Male Population   ---------------------------------X 100
                                                Total Girls Population (0-6)

Table:4 shows that the total 993 Age sex composition where 3.3 percent of girls (0-6) per hundred 4.9 percent boys (0-6), at the age group of (7-14) males are 61 and females are52, (15-59) age group females are 32.9 percent over males 36.5, (60+) female population is 6.8 percent more than male population 5.0 percent. Scheduled Caste has highest sex-ratio 80 percent and Scheduled Tribes have least1.9 percent.

Table 4: Sex-ratio by age group and social status

Social group	(0-6) M	%	F	%	(7-14) M	%	F	%	(15-59) M	%	F	%	(60+) M	%	F	%	Total	%
OBC	10	5.8	4	2.3	14	8.2	13	7.6	67	39.2	52	30.4	8	4.7	5	2.9	171	100
SC	37	4.6	34	4.2	48	6.0	40	5.0	293	36.5	247	30.8	41	5.1	63	7.8	803	100
ST	3	15.8		0.0	1	5.3		0.0	6	31.6	8	42.1	1	5.3		0.0	19	100
Total	49	4.9	33	3.3	61	6.1	52	5.2	362	36.5	327	32.9	50	5.0	68	6.8	993	100

Source: Primary Field Work, October2022

Fig. 4 SEX-RATIO BY AGE GROUP AND SOCIAL GROUP
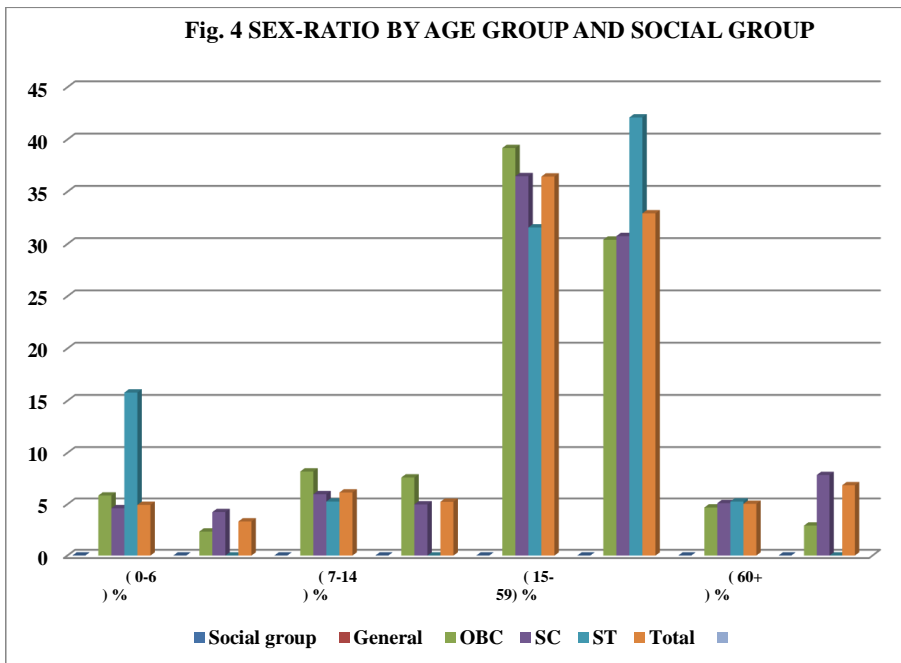
Distribution of unmarried person by social group:

To study the marital status of village we divided the total population into four age group shows that Sunderkhal village has total 1496 married person out of which highest proportion of person got married at the age of 18-21. As the age group is increasing, age at marriage of person is decreasing. As the given table shows that there are 372 unmarried peoples from which Scheduled caste comprises the highest number of unmarried peoples (277). On the other side the number of widows is 18 i.e., 4.6% and widower are 5 i.e., 1.3% of the total population.

40

	Never married								Widow							
Social group	<21	%	21-30	%	>30	%	Total	%	Widow	%	Widower	%	Total	%	Overall total	%
OBC	55	67.1	22	26.8	2	2.4	172.90	210.9	3	3.7			3	3.7	82	100
SC	178	60.3	93	31.5	6	2.0	277	93.9	15	5.1			15	5.1	295	100
ST	14	77.8	1	5.6	1	5.6	16	88.9		0.0	2	11.0	2	11.1	18	100
Total	247	62.5	116	29.4	9	2.3	372	94.2	18	4.6	5	1.3	23	5.8	395	100

Table: 5 Distribution of Unmarried Persons by Social Status

Source: Primary Field Work, October2022

Fig. 5 DISTRIBUTION OF UNMARRIED PERSON BY SOCIAL GROUP
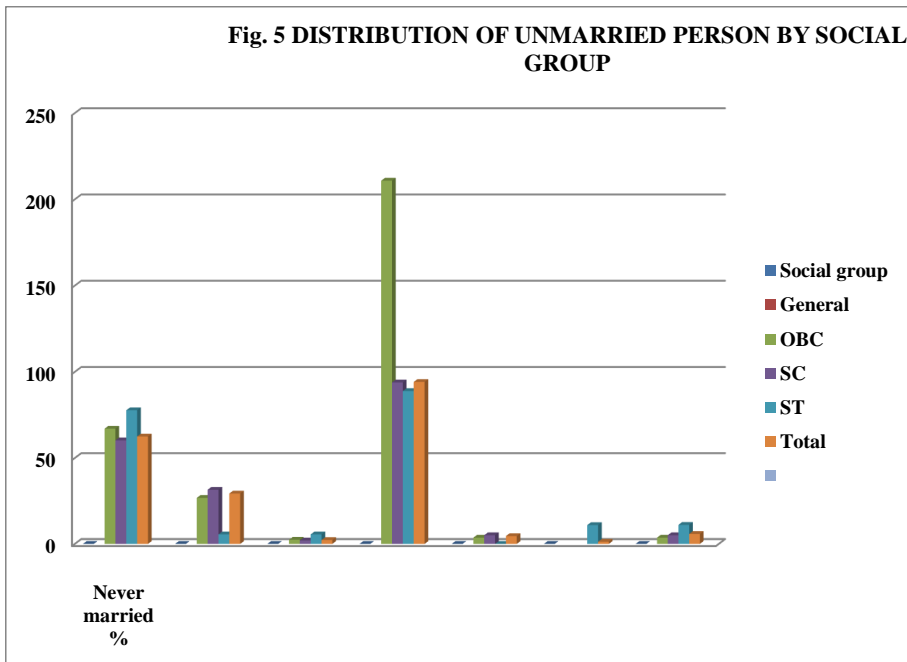
Literacy and Education:

 Literacy is an important demographic element and it is a good measure of human progress. It is essential for social reconstruction, improvement in quality of life and preparation of manpower for rapid development. In fact, it is the necessary first step towards the attainment of education and of higher goals in an individual's life. The various dimensions of socio-

cultural changes in a society can be understood in the light of the levels of literacy and education.

The census of India (2011) defines 'literacy' as ability of reading and writing with understanding in any language. Generally, literacy/education increases when there is a demand for it, meaning thereby as the society moves from agricultural to non-agricultural sector. It also increases when there is agricultural prosperity in rural areas. The literacy level and educational attainment differ from village to village within the village among the general castes, other backward and scheduled castes population.

Fig: 5 according to the field report, only 265 people out of 380 people aged seven years and above are literate (70 percent of population, who could read, write and understand), while the rest of the 30 percent population is illiterate. Significant gender gap in the literacy rate exists, as literacy rate is 75.12 percent for males and 62.01 percent for females. Gender gap is 13.11 percent. This is very high gender gap. Fig. 5 shows that scheduled caste Female literacy rates are low in the village as compared to Scheduled Tribe and other backward caste.

Table: 5 Literacy rate by social group

Social group	Literate				Illiterate					
	M	%	F	%	M	%	F	%	Total	%
OBC	77	48.4	42	26.4	16	10.1	24	15.1	159	100
SC	220	47.3	151	32.5	41	8.8	53	11.4	465	100
ST	9	42.9	6	28.6	2	9.5	4	19.0	21	100
Total	306	47.4	199	30.9	59	9.1	81	12.6	645	100

Source: Primary Field Work, October 2022

LITERACY RATE OF SOCIAL GROUP

Social group	General	OBC	SC	ST	Total
■ Literate %	0		48.4	47.3	42.9	47.4
■	0		26.4	32.5	28.6	30.9
▦ Illiterate %	0		10.1	8.8	9.5	9.1
□	0		15.1	11.4	19.0	12.6
■ Total %			100	100	100	100
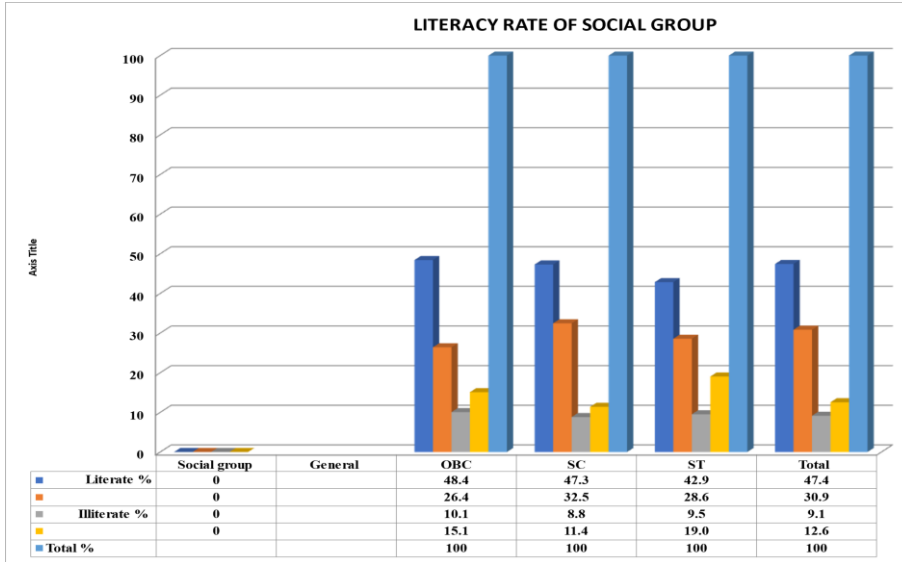
Note: The Percentage of Literacy rate has been calculated on the population aged 7 + years.

Education Status:

Table. 6 shows that importantly the male 11.8 percent and female 7.4 percent of the attainment are only primary level and upper primary level, while male 14.6 percent and female 10.4 percent   are up to secondary level 26.0 percent male and female 19.0 and graduate level 8.3 percent and female 2.5 percent attainment, has degree or above degree level. The girls Constitute 39.3 percent of the total enrolment at primary and upper primary level, secondary and graduate. The attainment is lower for scheduled caste population (85.8 percent) OBC caste population (16.2 percent) in higher education and secondary & senior secondary level. Thus, the attainment for scheduled caste population is less in higher education and secondary & senior secondary level and high in primary and upper primary level.

Social group	Primary (I-V)				Upper primary (VI-VIII)				Secondary (IX-XII)				Graduate				Total	%
	M	%	F	%	M	%	F	%	M	%	F	%	M	%	F	%		
General																		
OBC	13	11.0	8	10.2	14	11.9	12	10.2	36	30.5	20	16.9	11	9.3	4	3.4	118	100
SC	79	53.4	40	48.6	100	67.6	72	48.6	170	114.9	127	85.8	55	37.2	16	10.8	148	100
ST	3	16.7	2	0.0	2	11.1		0.0	4	22.2	6	33.3	1	5.6		0.0	18	100
Total	95	11.8	60	10.4	118	14.6	84	10.4	210	26.0	153	19.0	67	8.3	20	2.5	807	100
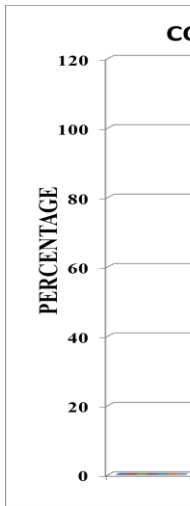
Housing and Sanitation:

To check the condition of house, the most houses are kaccha house and some houses are semi pukka house have been

Considered like no light facility they use of solar panel, light facility, drainage system of houses etc. According to these houses, the houses are divided into two categories i.e., good and bad. It is clear that there are more houses which are in bad condition. Fig. 8 shows that about 37.1 percent houses are in good condition. About 62.9 percent houses are in bad situation. These houses are not well structured and poorly managed. Houses in bad conditions houses are in the communities of lower costs, because these people are not economically sound. Most of the money is spent on bread. So, their houses are in bad condition.

Table: 7 Condition of Housing in Sunderkhal Village

	No. of household					
Social group	Good	%	Bad	%	Total	%
OBC	15	53.6	13	46.4	28	100
SC	49	34.3	94	65.7	143	100
ST	1	25.0	3	75.0	4	100
Total	65	37.1	110	62.9	175	100

Source: Primary Field Work, October2022

**Fig. 7**
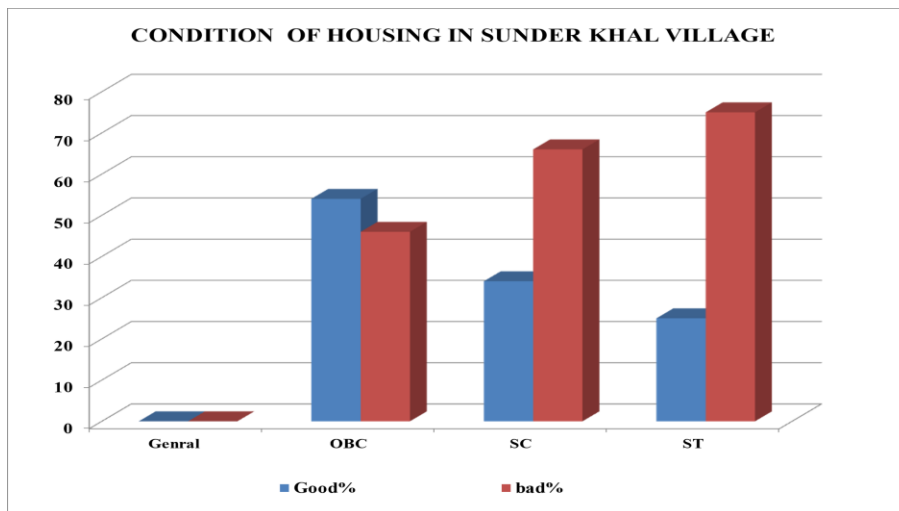
Sources of drinking water:

(Table. 8) show condition the source of drinking water in the village. As we know that the study area is located in plain zone so most of the water supply in the houses by the pipe water and hand pump. Almost 1.2 percent pipe water and 74.3 percent hand pump water and other 9.6 percent distribution of water sources.

| Social group | No. of household | | | | | | | |
	Pipe water	%	Handpump	%	Other	%	Total	%
OBC	3	9.7	22	71.0	6	19.4	31	100
SC	24	18.0	101	75.9	8	6.0	133	100
ST		0.0	1	33.3	2	66.7	3	100
Total	2	1.2	124	74.3	16	9.6	167	100

Table: 8 Source of Drinking Water in Sunderkhal Village

Source: Primary Field Work, October2022

Fig. 8

46
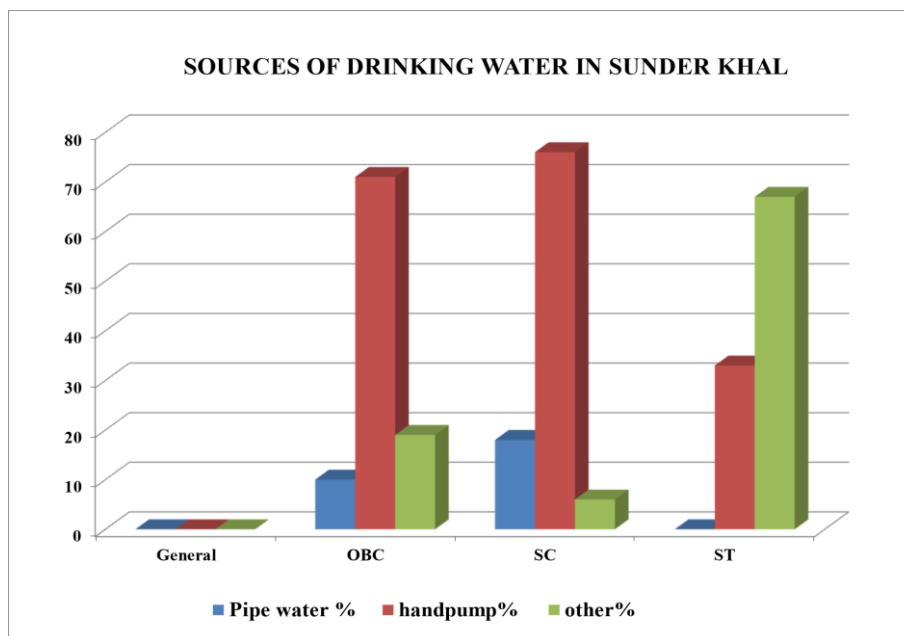
Types of animals:

According to the survey Fig: 9 there are only 244 animals. There are 3.6 percent buffalos, 47.3 percent cows and 35.6 percent 1goats, and others 13.5 percent which fulfil the requirement of the village people.

	No. of household		

Table: 9 Types of Animals in Sunderkhal Village

Source: Primary Field Work, October2022

Fig. 9 TYPES OF ANIMALS BY SOCIAL GROUP
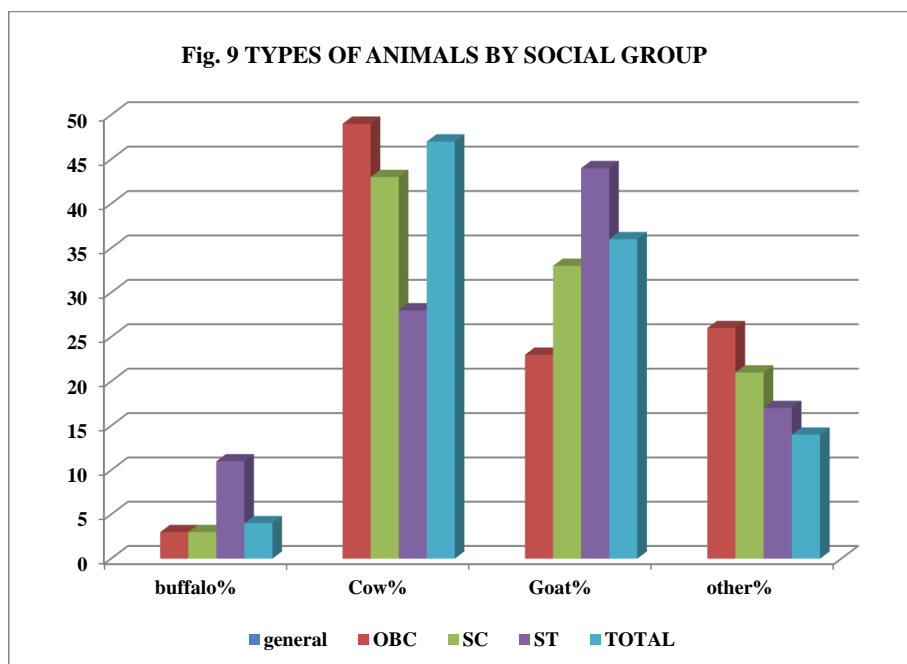
Social group	Buffalo	%	Cow	%	Goat	%	Other	%	Total	%
OBC	1	2.9	17	48.6	8	22.9	9	25.7	35	100
SC	5	2.6	83	43.5	63	33.0	40	20.9	191	100
ST	2	11.1	5	27.8	8	44.4	3	16.7	18	100
Total	8	3.6	105	47.3	79	35.6	30	13.5	244	100

Means of Transportation:

The public transport facility is not so good. It is clear that most of transport mode is by motorcycle, bicycle and public transport. In the village there are only 6 percent tractors used

|	No. of household									
Social group	Car	%	Motor cycle	%	Bicycle	%	Other	%	Total	%
OBC			3	18.8	10	62.5	3	18.8	16	100
SC			16	23.5	45	66.2	7	10.3	68	100
ST			1	25.0	3	75.0		0.0	4	100
Total			20	22.7	58	65.9	10	11.4	88	100

for agriculture and for rent because the village economy is primarily based on private job & secondary based on agriculture and livestock. In the village there are 22.7 percent motorcycle, it is because the economic condition is good. Table. 11 shows that in village, there are 65.9 percent cycle, these motorcycles are used personally and jobs. 11.4 percent people used other local conveyance. So, in short, the transportation system of the village is not satisfactory and they also depend on public transport.

Table: 10 Means of Transportation in Sunderkhal Village

Source: Primary Field Work, October2022

Fig. 10

48

MEANS OF TRANSPORTATION IN SUNDER KHAL VILLAGE
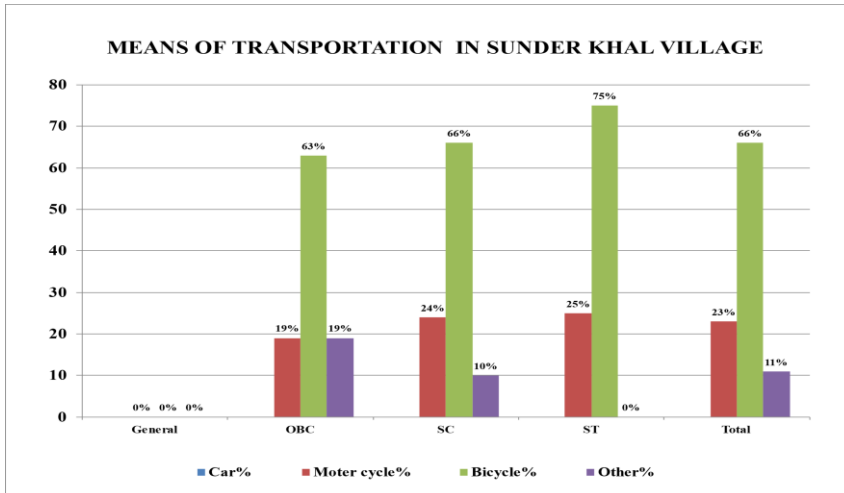
Communication and Entertainment:

According to field work data, only 1 percent radio is used for entertainment. Only 7 percent villagers are well connected through internet facilities. So they are well connected by the information of world. But most of the internet facilities are used by the mean of mobile. In short the communication system of the village is at not good level. Villagers use only mobile modes of entertainment to connect with other people to obtain the information.

Type of Fuel used:

Most of the villagers use fuel wood due to near Ramnagar forest and Jim Corbett national park forest.

Conclusion:

To study the demographic-socio-economic standard of villagers, a survey is conducted. In conclusion the Physical-socio-economic standard of village is not well good. Sunder Khal villager covers 75 hectares of land within the Dhulwa Block of the Ramnagar Forest Division. Total number of surveyed households is 190 in which male and female population is 52.9 percent and 47.1 percent respectively. Proportion of nuclear families is higher among Scheduled castes. This human settlement lies on the eastern boundary of the Corbett Tiger Reserve, between the reserve and the bank of the Kosi.

After the careful survey and analyses of the field study area the main points to be noticed are that, although the village possesses most of the basic amenities to sustain itself but still it lacks the coordination in implementation of any of the various beneficial governmental programs. According to the first objective of the study, the positive results are not found i.e., basic facilities like electricity, water supply, sanitation, irrigation and transport are not existed which is a point of appreciation. Other than the school facility that is primary level is not available at the village; however, the dissatisfaction of some people with the school is a different thing. Health care Centre with a well-qualified doctor is not present in the village. Village is approachable from the nearby Town Ramnagar (16Kms) that is a difficult task to get their basic amenities. It is also to be noted that the maximum number of people at village are illiterate. Maximum population of the village is dependent on laboring as the main occupation. From the complete study, results clarify about the dependency of village people on the forest due the unavailability of life sustaining commodities. Illegal firewood collection with in the forest continues to damage the environment and exposes the wood collectors to the risk of animal attacks. Food security in the village has suffered due to frequent crop destruction by animals which has resulted in strained relations with the Forest Department and the Corbett Reserve authorities.

Some important constraints regarding the development of the village are also known. No special projects such as for rural development like JRY (Jawahar Rozgar Yojana), TRYSEM (Training of Rural Youth for Self–Employment) etc. is carried out, NREGA project is started but remained uncompleted, non-availability of KVK services, Post office, Bank etc. No special step had been taken yet to control the increasing effect of wild animals specially tigers, leopards, wild pigs, elephants etc. as they destroy their most of the crops per year. Problems of corruption has been indicated by such scenario and also mentioned by the villagers. Overall, a dual scenario has been observed during this field work.

On one hand the villagers benefit from the presence of all essential amenities to have a meaningful life but simultaneously a good population of the village complain about the ignorance and lack of concern by the so-called governmental departments which is revealed by the physical and socio-economic condition of the residents of the village. The study reveals the dependency of people on local forest for their sustenance, which is resulting in rapid depletion of forest resources as well deteriorating the peaceful environment of the village. And further it can also motivate the people to migrate towards urban areas in search of jobs. It is also to be noted that their future generation is also ready to repeat the same vicious circle, but the question is whether they will ever find the alternates

for their livelihood or shall they perish or migrate after the depletion of the available resources.

The local people were knee on relocating as the most people had no means of income; little Food was available in most households' Main occupation is farming followed by wage labors and self-employment. Cow was the main cattle reared by the villagers there was very little fodder for them, the most important crop like wheat, rice wasn't seen anywhere very a smaller number of people cropped Haldi, Ginger, few pulses, some fruit trees like Mango, Papaya, Jackal fruit etc. But the important result that was concluded from the study is maximum number of villagers are dependent on forest to support their daily life. They collect fuelwood for cooking as well as heating and fodder for feeding the cattle. The main constraints are unavailability of bank, post office, unawareness among the people about the important government schemes i.e., employment and housing scheme, problems of wild animals in the agriculture fields, seasonal river Kosi destroyed their settlements every year etc. So, these are the findings that explain the real scenario of the village and our study suggests that the village Sunder Khal required certain development programmers and awareness, so that each villager can satisfactorily enjoy every facility in the village.

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QUESTIONNAIRE

DEPARTMENT OF GEOGRAPHY
GOVT. COLLEGE FOR GIRLS, SECTOR-14
GURUGRAM (HARYANA)

SOCIO-ECONOMIC FIELD SURVEY, 2022

This field survey is for the student of M.A. Geography and the data collected thus will be used for the academic purpose only. The student of M.A. third semester i.e. session 2022-2023 of the department of Geography of Govt. College for Girls, Sector-14 Gurugram (Haryana) affiliated to Gurugram University, Gurugram (Haryana), are required to collect and analyse the data and prepare a report for the completion of their M.A. Geography 17GEO23CL1 namely practical- Field Work.

Supervisor: Dr. Rajesh Kumari, Associate Professor

A) **Identification:**

1) Date of survey:_____

2) Name of the district:_____

3) Name of Tehsile/Toluca:_____

4) Community development block /ward no.:_____

5) Village/locality:_____

6) Serial no. of house hold:_____

B) **Household particulars**:

7) Respondent name:_____

8) Whether he/she is the head of the household = yes/no

9) Religion= Hindu/Sikh/Christian/Muslim/others(specify)

10) Caste= General/OBC/SC/ST (specify the caste name)

11) Family type= Single/Joint/Nucleated/Extended

12) What is your mother tongue= _____

13) Details of the members of household:

Sr. No.	Name	Relation with the head of household	Age	Sex	Marital status*	Education**	Occupation***	Income per month	Remarks
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

*Marital status:1) Married 2) Unmarried 3) Others (specify)

** Education level: 1)Illiterate 2)Literate 3)Primary (1-5) 4)Upper primary(6-8) 5)Secondary(9-10) 6) Higher secondary(11-12) 7) Graduate/graduate with diploma 8)Post graduate 9) M.Phill/PhD 10) Professional courses (BBA, B-TECH etc.)

*** Occupation: 1) Agriculture 2) Service: govt./semi govt./private 3) Labourer 4) Self occupation/business 5) Other (specify)

C) **Household background characteristics**:
14) Household ownership: owned/rented if it is rented then monthly rent paid is Rs. _____In case of owner rented any portion of house: yes/no
15) Types of house: Pucca/semi-pucca/kachha
16) Separate room for study: yes/no
17) Place of cooking? Kitchen/open space/veranda/other(specify)
18) What is the primary source of energy for cooking: LPG/fire-wood/dunk cake/kerosene/goober gas/electricity/other(specify)

19)   Energy Consumption:

Purpose → Source ↓	Cooking Food	Heating	Any Other
LPG(per cylinder)			
Kerosene (in litres)			
Firewood (in Kg)			
Cow Dung (in Kg)			
Other			

20) What is the primary source of energy for lighting: electricity/gas/kerosene/other(specify)
21) Do you have experience power cut in your house/village? Yes/no. If yes rarely/sometime/frequently/very frequently
22) What is the main source of water? Pipe water/hand pump/well water/other(specify)
23) Does your house have the following facilities? If yes tick in the box

Fan		Computer		Car	
Watch		T.V.		Chair table	
Bicycle		LED		Mobile phone with camera	
Bull cart		Sofa-set		Newspaper	
Tractor		Electric iron		Water filter	
Telephone		Refrigerator		Elmira	
Radio/Transistor		Washing machine		Dressing table	
VCR/DVD		Scoter/Motor cycle		Double bed	
Geezer		Invertor		A.C./Cooler	
Any other (specify)					

1) Furniture
2) Goods for entertainment
3) Cooking and other household appliances
4) Transport
5) Cooking fuel
6) Other personal goods.

24) Have your family migrated from other place. Yes/no. If yes, reason for migration from place of last residence: employment/business/natural climate/other(specify)
25) Distance of your house from the bus stop/railway station? (distance in kms)_____
26) Mode of transportation in your area. Public/private. If public than mention: bus/auto/train/rickshaw/any other(specify)_____
27) Do you have any specific problem regarding the transport facility in your area? If yes than what is the problem?_____

D) **Particulars of land and cultivation**:
28) Weather owns any land. Yes/no. If yes area in _____ acre.
29) How much total cultivated land? _____Irrigated_____/unirrigated_____

30) Type of Land use:

Land use Type	Area	Land use Type	Area
Agriculture		Construction Work	
Tree Plantation		Barren Land	

31) If agriculture land use, then what type of crops does you cultivate:

Crops ⟶ Season ↓	Wheat	Rice	Maize	Fruits	Vegetables	Any Other
Kharif						
Rabi						
Zaid						

32) Do you Plant tree crops: yes/no

33) Source of irrigation? tube well/cannel/others(specify)

34) Does the family adopt traditional agricultural implements? Yes/no

35) Does the family posses modern agriculture implements? Yes/no

36) How do you cultivate your crop: self/hired workers?
    If hired than on contract bases- yes/no. or crop share bases- yes/no

37) Mode of transportation for marketing: cart/tractor/track/others(specify)

38) Where do you market your surplus agriculture product? (sold)_____

39) Types of cattle:

Cattles	Number of cattle
Cow	
Bullock	
Buffalo	
Goat	
Sheep	
Any other (specify)	

E) Particulars of family and expenditure:

40) Source of income: agriculture/service/both/other(specify)
41) Family income (per month approximately)_____
42) Family expenditure (per month approximately)_____
43) Covid-19 expenditure (approximately)_____

44) Proportion of expenditure of the family % wise

Item	Food	education	electricity	clothing	fuel	religious festivals	luxuries*	any others
%		.						

* Luxuries items: Cosmetics/wine/smoking/TV/AC/computer/mobile/others (specify)

Thank you very much for your corporation and patience.

Date:_____   Investigator
Place:_____

Name-
Roll no.-
Class- M.A.(F) 3rd Sem.

PHOTOS OF FIELD WORK

Different Types of House at Sunderkhal Village
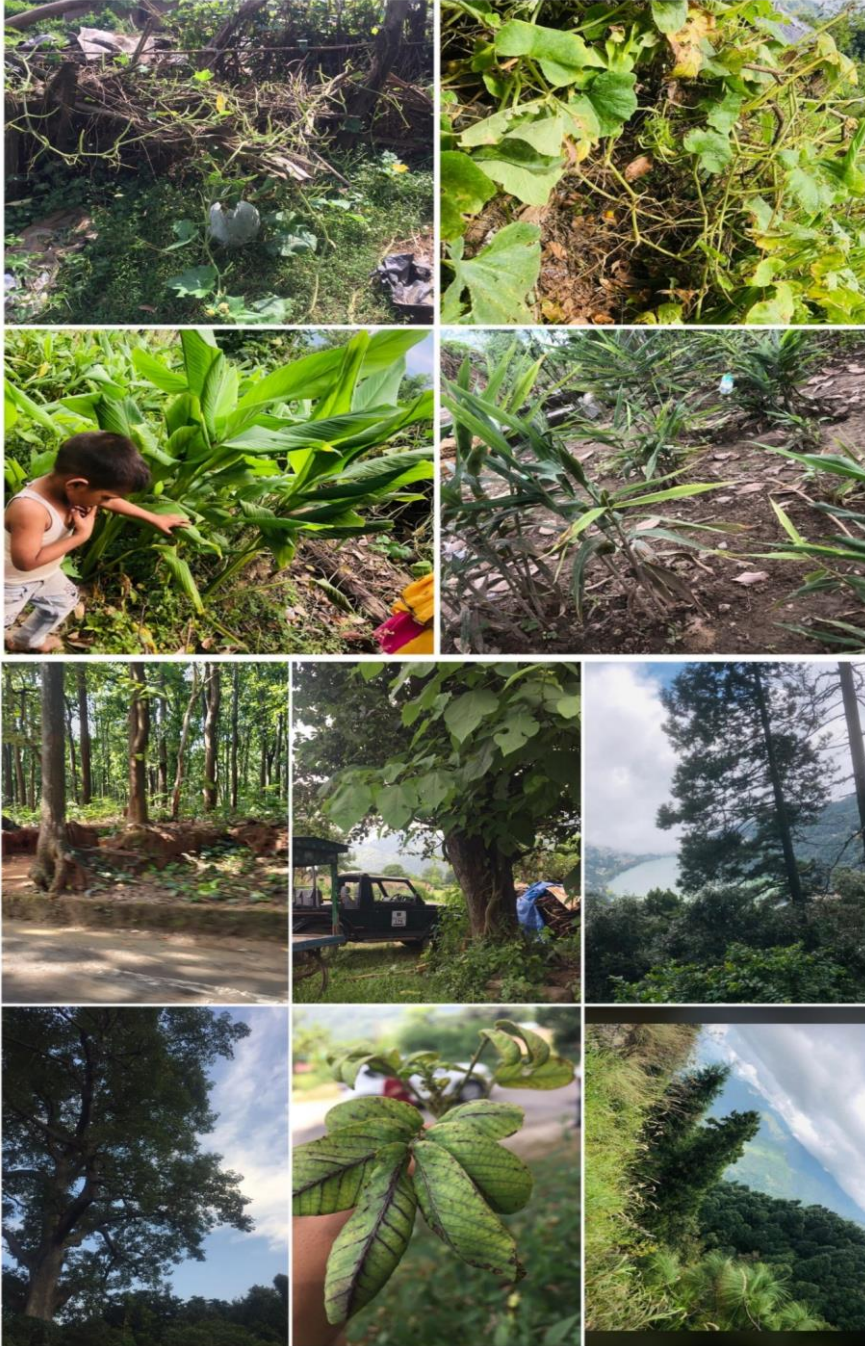

Standard of Living at Sunderkhal Village

Market Facilities near Sunderkhal Village in Ramnagar

Photos of Field Work in Sunderkhal Village

Source: During Field Work, 5th October, 2022

Source: During Field Work, 5th October, 2022