



कार्यालय प्रभागीय वनाधिकारी चम्पावत वन प्रभाग चम्पावत

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पत्रांक 5233 / 12-1

दिनांक, चम्पावत, 23-5-2026।

सेवा में,

अधिकासी अभियन्ता,
अस्थाई खण्ड, लोक निर्माण विभाग,
भवाली।

विषय -

जनपद नैनीताल के ब्लॉक ओखलकाण्डा में कटना से वारी मोटर मार्ग के निर्माण हेतु 1.53 है० वन भूमि का गैर वानिकी कार्यों हेतु लो०नि०वि० को प्रत्यावर्तन। (Online Portal No-FP/UK/ROAD/43594/2019)

महोदय,

उपरोक्त विषयगत प्रकरण को भारत सरकार, वन एवं जलवायु परिवर्तन मंत्रालय क्षेत्रीय कार्यालय, देहरादून के पत्रांक 8बी/यू०सी०पी०/०६/६८/२०२३/एफ०सी०, दिनांक 27.03.2026 द्वारा कुछ शर्तों के साथ सैद्धान्तिक स्वीकृति प्राप्त हुई है। जिसके अनुपालन में आपको एन०पी०वी०, क्षतिपूरक वनीकरण एवं **Soil and Moisture Conservation Plan (SMCP)** एवं **Wildlife Management Plan (WMP)** हेतु जमा की जाने वाली धनराशि का डिमाण्ड नोट इस कार्यालय के पत्रांक 5032/12-1, दिनांक 08.05.2026 द्वारा पूर्व में प्रेषित किया गया था, को संशोधित कर निम्नानुसार प्रेषित किया जा रहा है:-

एन०पी०वी०, क्षतिपूरक वनीकरण, Soil and Moisture Conservation Plan (SMCP), Wildlife Management Plan(WMP) की धनराशि का विवरण नवीन दरों के अनुसार:-

मद	इकाई	दर	जमा की जाने वाली धनराशि
एन०पी०वी	1.53 है०	861390	1317927
क्षतिपूरक वृक्षारोपण	3.06 है०	597341	1827863
Soil and Moisture Conservation Plan (SMCP)(संलग्नक-1)	-	-	227500
Wildlife Management Plan(WMP)(संलग्नक-2)	-	-	945434
कुल :-			4318724

कुल तैतालीस लाख अठारह हजार सात सौ चौबीस रू० मात्र की धनराशि कैम्पा कोष में जमा की जानी है।

अतः उक्त धनराशि जमा करने हेतु डिमांड नोट प्रेषित है। आंकलित धनराशि उच्च स्तर से सत्यापित होने के पश्चात् ही कैम्पा कोष में जमा करने के उपरान्त प्रकरण में अनुपालन आख्या बिन्दुवार/कॉलमवार मय संलग्नक शीघ्र इस कार्यालय को प्रेषित करें, ताकि प्रकरण का निस्तारण किया जा सके।

संलग्नक-उपरोक्तानुसार।

भवदीय,

(आशुतोष सिंह)

प्रभागीय वनाधिकारी
चम्पावत वन प्रभाग चम्पावत।

संख्या- 5233 /दिनांकित।

प्रतिलिपि :- निम्नलिखित को सूचनार्थ प्रेषित।

1. वन संरक्षक, उत्तरी कुमाऊँ वृत्त उत्तराखण्ड, अल्मोड़ा।
2. जिलाधिकारी, नैनीताल।

(आशुतोष सिंह)

प्रभागीय वनाधिकारी
चम्पावत वन प्रभाग चम्पावत।

Soil & Moisture Conservation Workplan



Uttarakhand Forest Department

Project Name-

Diversion of 1.53 hec of forest land for non-forestry purposes for the construction of the Katna to Wari motor road in Okhalkanda Block of Nainital District.

Devidhura Range

Champawat Forest Division

Project Cost: Rs. 2.275 lakh

USER AGENCY- PWD, BHAWALI

Soil & Moisture Conservation Plan

Project Name

- Diversion of 1.53 hec of forest land for non-forestry purposes for the construction of the Katna to Wari motor road in Okhalkanda Block of Nainital District.

Proposed area

- 1.53 Ha

Range

- Devidhura Range

Project Cost

- Rs. 399.24 lakh

Soil & Moisture Conservation Plan (minimum 0.5%)

- Rs. 2.275 Lakh

Introduction


Soil and water form two major components of a forest ecosystem and they directly influence the status, health and nature of the flora and fauna that such ecosystem is likely to support. It is obvious therefore that while managing the forests the forest officials have to deal with these components and make their best efforts for their conservation to sustain the plants and animals. Soil moisture conservation aims to maintain or improve the productive capacity of the land. It involves activities at the local level that prevent or reduce soil erosion, compaction, and salinity, while also conserving water. The strategy is adapted to local conditions and depends on the participation of the local people;

Forest is the origin for the streams and rivers; therefore, it is very important to conserve soil and moisture in its catchment area. To enhance quality of forest and its management in the target catchment areas, the activities undertaken for the soil moisture conservation include construction of check-dams, gully plugging, and percolation tanks, contour trenches, etc.

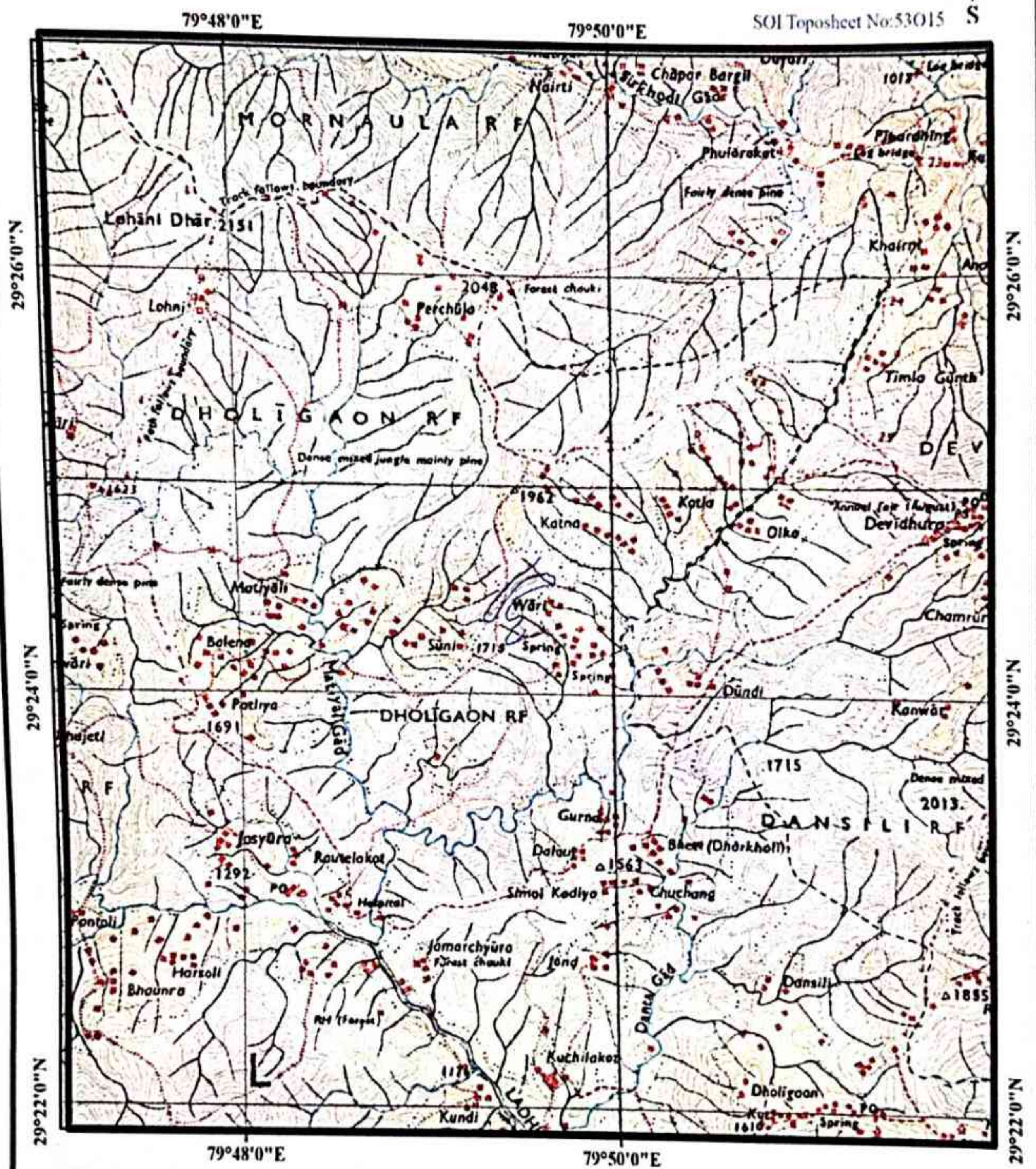
Soil Moisture Conservation works in the forest area are primarily carried out on watershed approach. This approach is aimed at enhancing land productivity and to increase the moisture availability for a longer period.

About the project

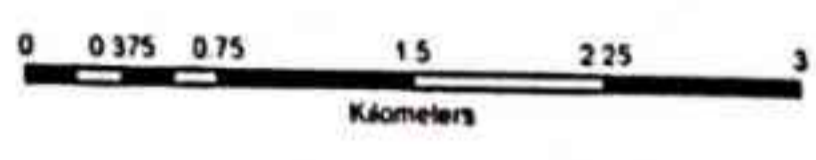
PWD, Bhawali has proposed a motor road in 1.53 hec of forest land for non-forestry purposes for the construction of the Katna to Wari motor road in Okhalkanda Block of Nainital District. This proposed road is situated in Devidhura Range of Champawat forest division. People of Vari village are benefited by this project.


प्रणालीय वन अधिकारी
नर्मदा वन प्रभाग चम्पावत

डिजिटल मैप- जनपद नैनीताल के ब्लॉक ओखलकांडा में कटना से वारी तक मोटर मार्ग का निर्माण।(1.850 किमी०)



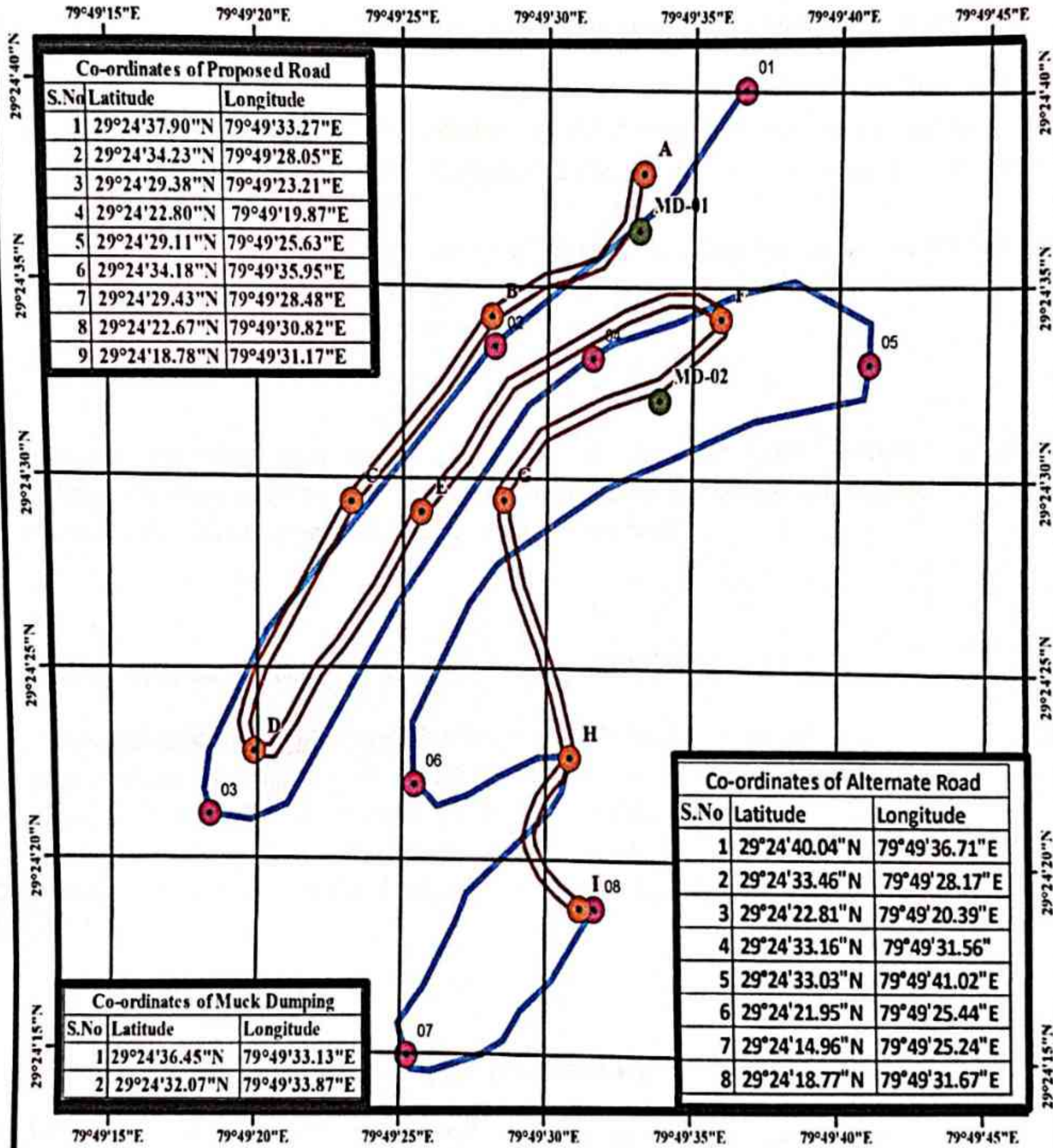
- Legend**
- Propose Road
 - Alternate Road
 - Division_Boundary
 - Range_Boundary
 - Reserve Forest Area
 - Reserve Forest Boundary



(Signature)
 प्रभागीय वन अधिकारी
 चम्पावत वन प्रभाग चम्पावत

Prepared by:UFTA, Haldwani

जियोरेफरेंसिंग मैप- जनपद नैनीताल के ब्लॉक ओखलकांडा में कटना से वारी तक मोटर मार्ग का निर्माण (1.850 किमी0)



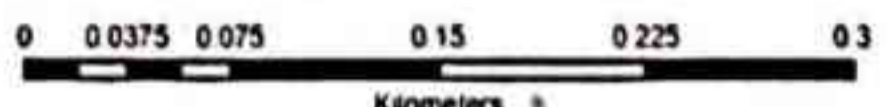
Co-ordinates of Proposed Road		
S.No	Latitude	Longitude
1	29°24'37.90"N	79°49'33.27"E
2	29°24'34.23"N	79°49'28.05"E
3	29°24'29.38"N	79°49'23.21"E
4	29°24'22.80"N	79°49'19.87"E
5	29°24'29.11"N	79°49'25.63"E
6	29°24'34.18"N	79°49'35.95"E
7	29°24'29.43"N	79°49'28.48"E
8	29°24'22.67"N	79°49'30.82"E
9	29°24'18.78"N	79°49'31.17"E

Co-ordinates of Muck Dumping		
S.No	Latitude	Longitude
1	29°24'36.45"N	79°49'33.13"E
2	29°24'32.07"N	79°49'33.87"E

Co-ordinates of Alternate Road		
S.No	Latitude	Longitude
1	29°24'40.04"N	79°49'36.71"E
2	29°24'33.46"N	79°49'28.17"E
3	29°24'22.81"N	79°49'20.39"E
4	29°24'33.16"N	79°49'31.56"E
5	29°24'33.03"N	79°49'41.02"E
6	29°24'21.95"N	79°49'25.44"E
7	29°24'14.96"N	79°49'25.24"E
8	29°24'18.77"N	79°49'31.67"E

Legend

- Propose Road GPS Coordinate
- Muck Disposal
- Alternate Road GPS Coordinate
- Propose Road
- Alternate Road



Scale - 1:4800

प्रभागीय वन अधिकारी
चम्पावत वन प्रभाग चम्पावत

Prepared by:UFTA, Haldwani

Impact of proposed road on sustainability of forest

The construction of this project will invariably affect the wildlife as well as the biodiversity of that area. Forest roads can have a variety of impacts on the sustainability of forests, including:

1. **Fragmentation-** Adding more roads can split a forest into more "edges" and "interior" habitats, which can lead to weedier habitats and the introduction of invasive species.
2. **Pollution-** Roads can pollute water through both chronic and acute sources, and can also alter floodwater patterns.
3. **Deforestation-** Roads can help farmers establish small-scale agricultural plots, which can be more destructive to the land than selective logging. One study found that deforestation rates were highest within one kilometer of open old roads.
4. **Noise-** Road construction can create noise that disrupts wildlife.

However, sometime it is essential to construct a road in public interest through forest area. Mitigation measures can also be implemented during the design, construction, hauling, and maintenance of roads to reduce many of the negative impacts.


Scope of soil & moisture conservation works

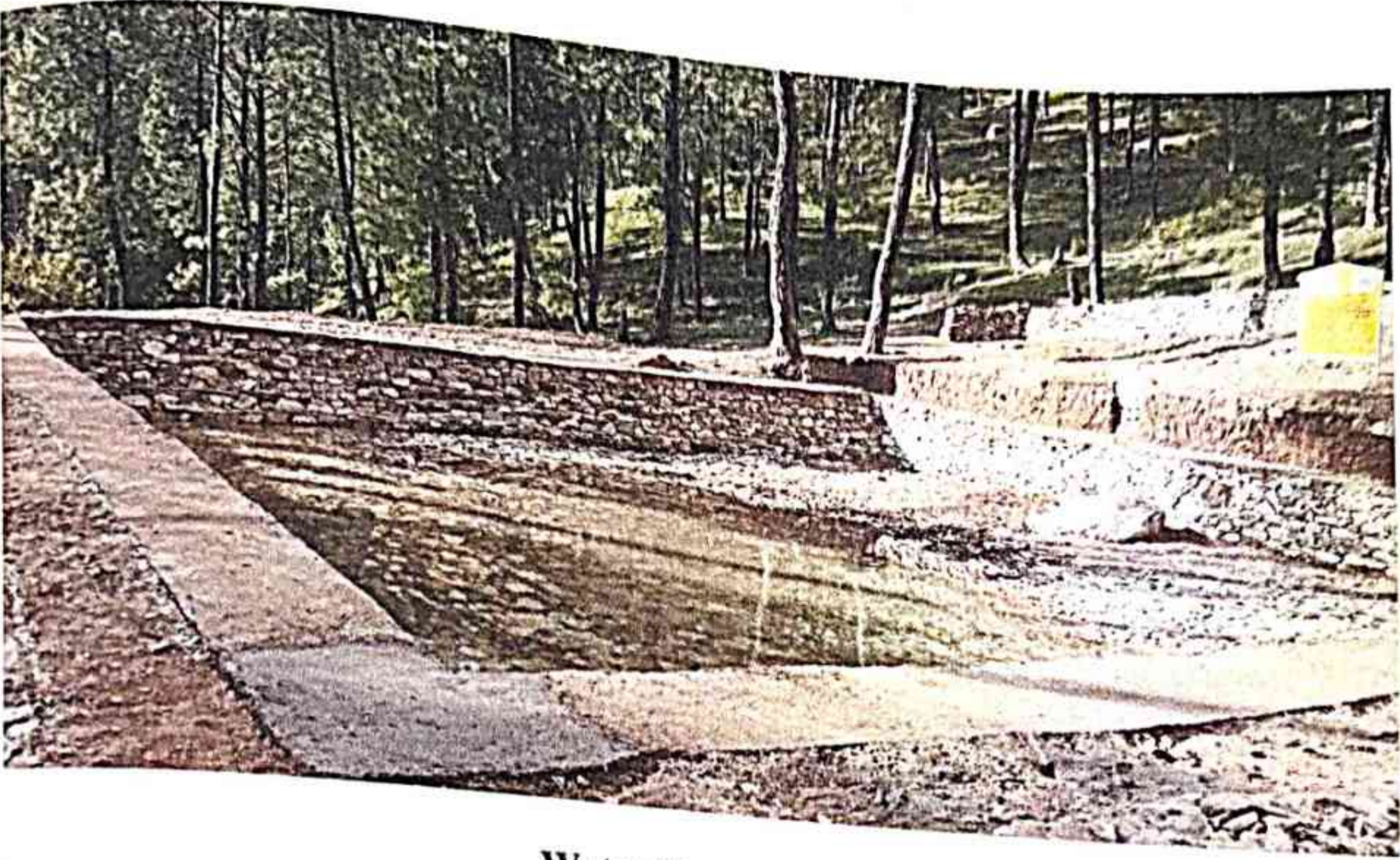
This proposed road is going through the Reserve forest land in devidhura range. The area around the proposed site is covered with mixed forest. Reserve forest land will get effected from the construction of this road. To mitigate the ill effect of the project soil & moisture conservation related work could be done in this region. Soil and moisture conservation work involves practices that reduce water loss from soil and help maintain soil moisture which leads to rejuvenate degraded forests.

Activities to be undertaken for soil and moisture conservation

With the aim of soil and moisture conservation, following activities shall be undertaken: -

- i. Contour trenches
- ii. RR dry check dam
- iii. Gully plugging
- iv. Vegetative check dam
- v. Waterholes/ Jalkund


प्रभागीय वन अधिकारी
दम्याखत वन प्रभाग चम्पावर



Water Harvesting Tank



Jal Kund


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प्रधानीय वन अधिकारी
चम्पावन वन प्रभाग चम्पावन



Contour Trench



Check Dam

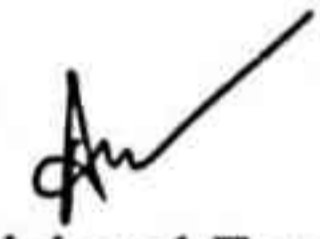

प्रभागीय वन अधिकारी
चम्पावत वन प्रभाग चम्पावत

Proposed soil and moisture conservation plan

As per the Guide line dated 07-06-2022, the user agency shall pay 0.50% of project cost for soil and water conservation work. As the estimated project cost of this proposed project is only Rs. 399.24 lakh, 0.5% of project cost come only Rs. 2 Lac., which is very small amount to propose significant soil & moisture conservation works. Treatment area for SMC is primarily proposed to be the stabilization of the area disturbed by the construction of the project. Hence, certain soil and moisture conservation works, as mentioned below, shall be adopted.

Physical and financial targets for soil & moisture conservation works			
Target Activities	Physical Target (ha / Nos./ Cum)	Rate (Rs.)	Financial (Rs.)
Digging of Contour trenches & planting of rich grasses	1000 m	67/rmt	67000.00
Vegetative check dam	5 nos	6500	32500.00
Gully plugging	4 nos	7000	28000.00
RR dry check dam	3 nos	10000	30000.00
Chal-khal/ Kachha jalkund	2 nos	35000	70000.00
		total	227500

वन संरक्षक
अतरी कुमाऊँ वृत्त, उत्तराखण्ड
अल्मोड़ा


Divisional Forest Officer
Champawat Forest Division

WILDLIFE MANAGEMENT PLAN



Uttarakhand Forest Department

Project Name-

Diversion of 1.53 hec of forest land for non-forestry purposes for the construction of the Katna to Wari motor road in Okhalkanda Block of Nainital District.

Devidhura Range

Champawat Forest Division

Project Cost: Rs. 9.45 lakh

USER AGENCY- PWD, BHAWALI.

Wildlife Management Plan

Project Name	- Diversion of 1.53 hec of forest land for non-forestry purposes for the construction of the Katna to Wari motor road in Okhalkanda Block of Nainital District.
Proposed area	- 1.53 Ha
Range	- Devidhura Range
Project Cost	- Rs. 399.24 lakh
Wildlife Management Plan (2%)	- Rs. 9.45 Lakh


Introduction

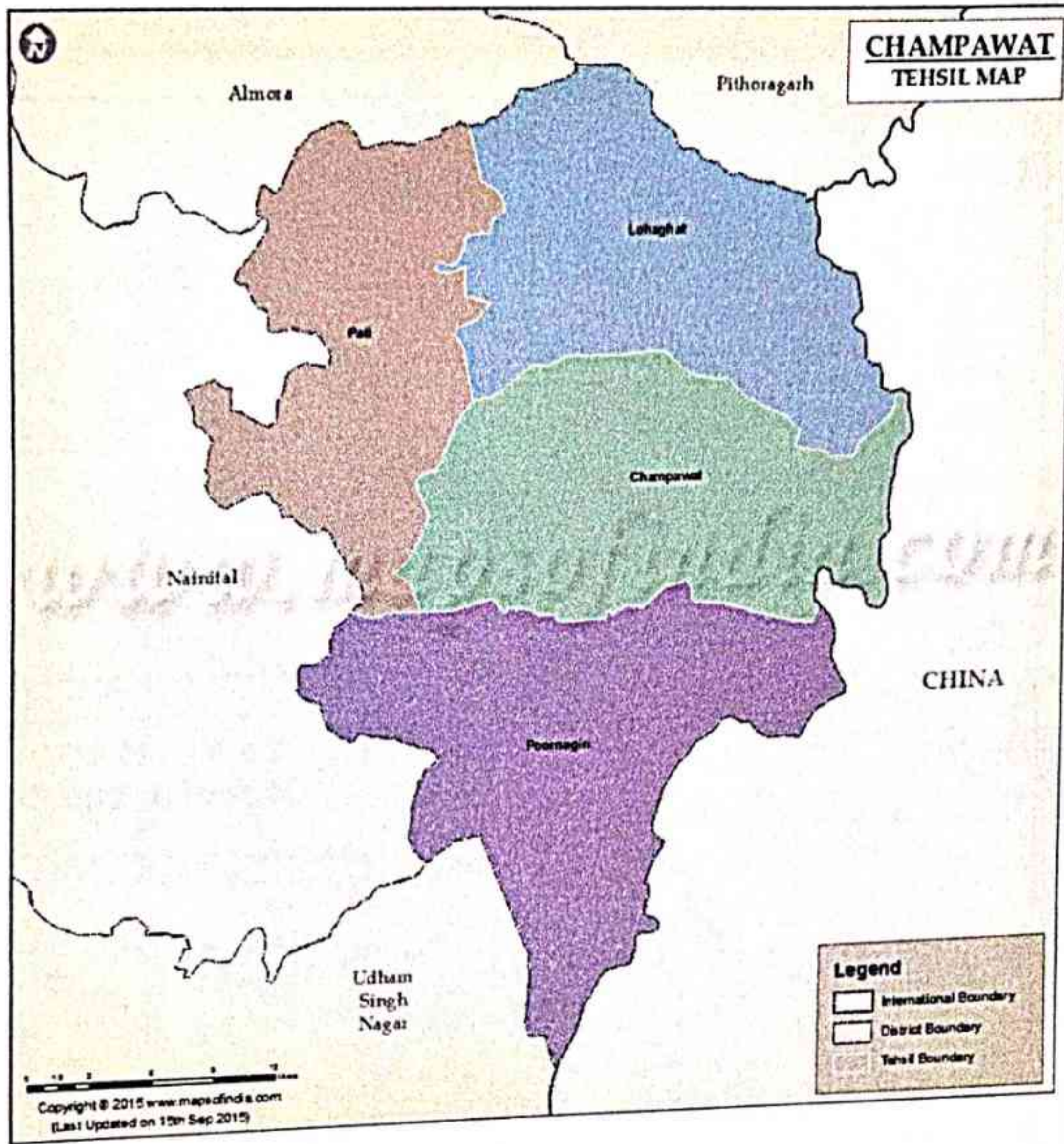
Wildlife management is a science and art of maintaining/changing the characteristics and interactions of habitats, wild animal populations and activities of people in order to achieve specific goals of conservation. The Wildlife Science is of recent origin in India and scientific information base is developing slowly. Wildlife management in India is integral to mainstream forest management, yet, as a resource needing scientific management. Management of wild life is essentially multidisciplinary and the success of strategies lies in ensuring multidisciplinary inputs to the extent needed. Wildlife conservation aims to prevent the loss in the earth's by taking into consideration ecological principles such as carrying capacity, disturbance, succession and environmental conditions such as physiological geography, pedology and hydrology with the aim of balancing the needs of wildlife with the needs of people.

Champawat

Champawat lies in the southeast of the North Indian state of Uttarakhand. It is in the eastern part of the Kumaon Himalayas at an average elevation of 1,615 metres (5,299 ft). It is located at 29.33°N 80.10°E and covers an area of 5 square kilometres (1.9 sq mi). The city of Champawat lies in the Champawat district of Uttarakhand, which was carved out from the Pithoragarh district by the Government of Uttar Pradesh in 1997.

Champawat is a region steeped in history and heritage, with a wealth of attractions for tourists and history buffs alike. From its ancient temples and monuments to its lush tea plantations, this district is a must-visit for anyone interested in exploring the rich history and cultural heritage of Uttarakhand. The historical pillars, monuments, rest houses, manuscripts, archaeological collections, and folklore are testimony to the historical significance of Champawat. Over the years, different dynasties have ruled the area, including the Chand dynasty and the British Empire, leaving behind significant remnants of their respective reigns that now serve as tourist attractions.


प्रभागीय वन अधिकारी
चम्पावत वन प्रभाग चम्पावत



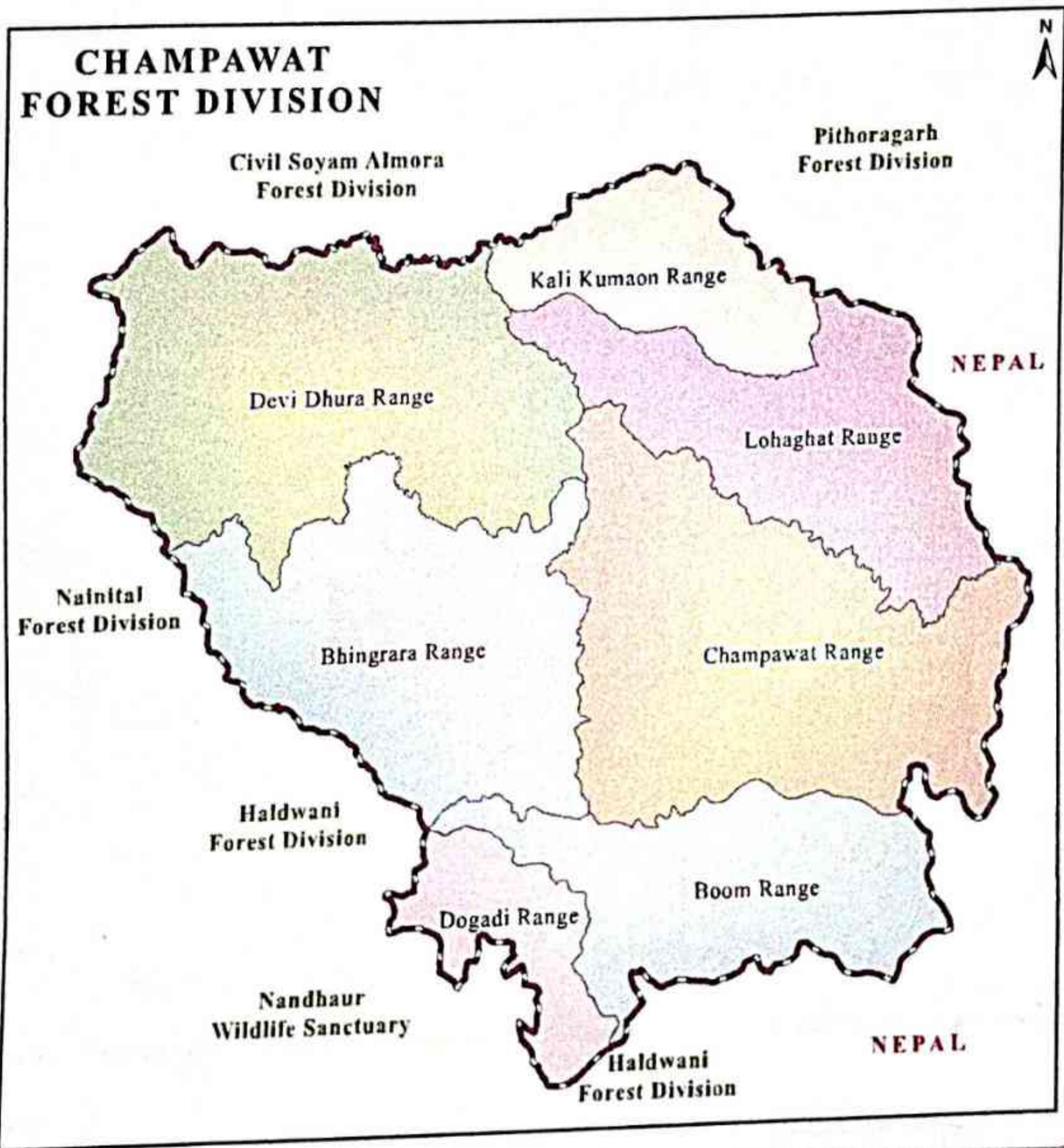
About Champawat Forest Division

Champawat Forest Division is situated in Uttarakhand, covering an area of 62098.32 Hec. It is bounded by Pithoragarh forest division in the north and the Kali River, forming the international boundary with Nepal, to the east. To the south, it is delineated by the Sharda River, Nanda Wildlife Sanctuary and areas of Haldwani and Tarai east Forest Division, while it shares its western boundary with the Almora forest division and Nainital forest division.

The division was established in 2002 through the South Pithoragarh forest division (excluding Pithoragarh range). Its geographical coordinates lie between $79^{\circ} 44'30''\text{E}$ and $80^{\circ} 19'10''\text{E}$ longitude and $29^{\circ} 03'15''\text{N}$ and $30^{\circ} 31' 30''\text{N}$ latitude.

The area of reserved forest within the division covers 62098.32 Hec, comprising 86 blocks and 854 compartments. There are total 568 Van Panchayat in this division with total area 22527.357 Hec and Civil forest with total area 19835.357 Hec.

प्रधान वन अधिकारी
चम्पावत वन प्रभाग चम्पावत



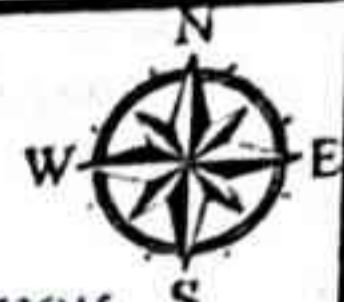
Location Map of Champawat Forest Division

प्रधानिय वन अधिकारी
 चम्पावत वन प्रभाग चम्पावत

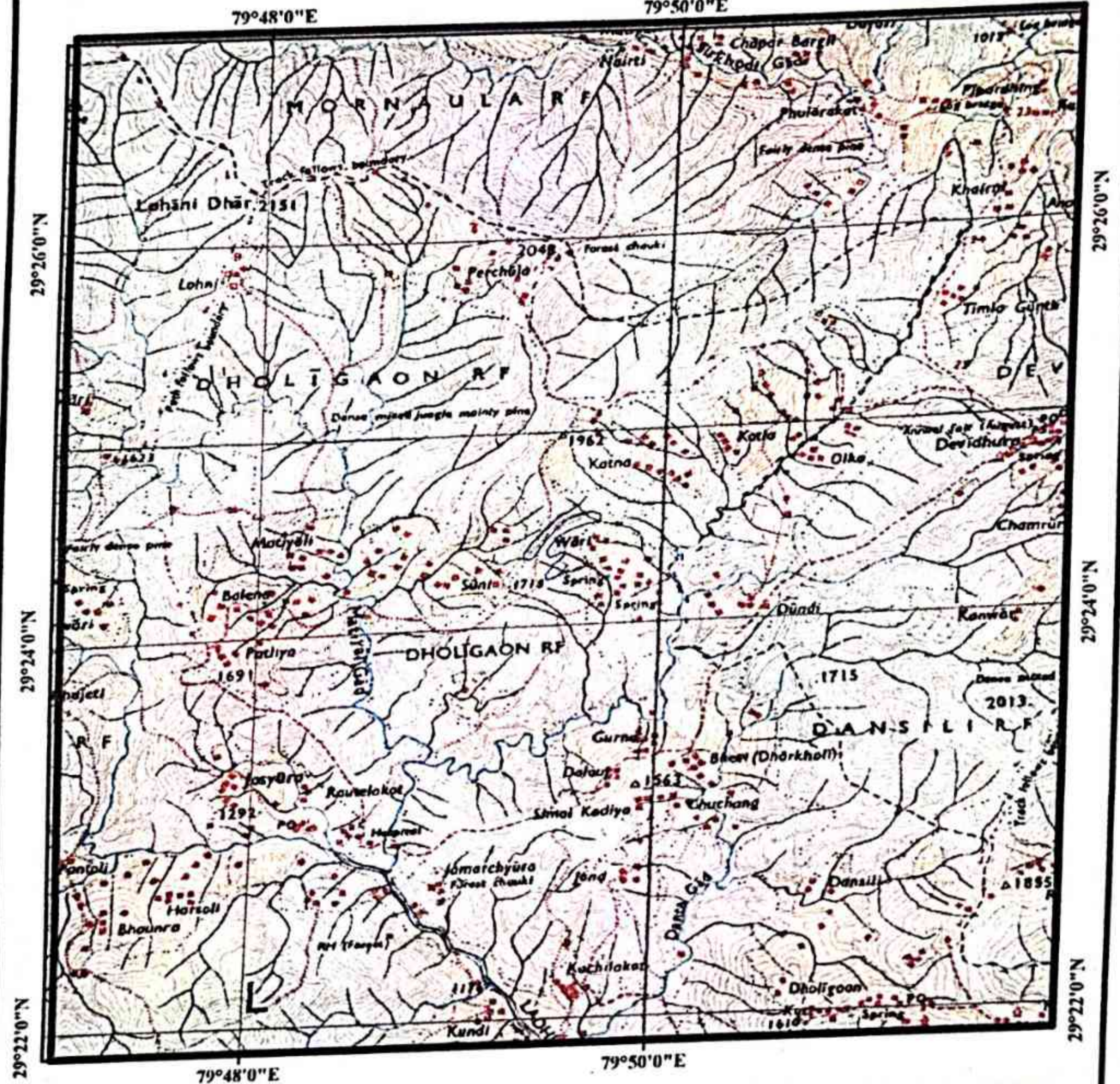
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SOI Toposheet No: 53015



Legend

- Propose Road
- Alternate Road
- Division_Boundary
- Range_Boundary
- Reserve Forest Area
- Reserve Forest Boundary

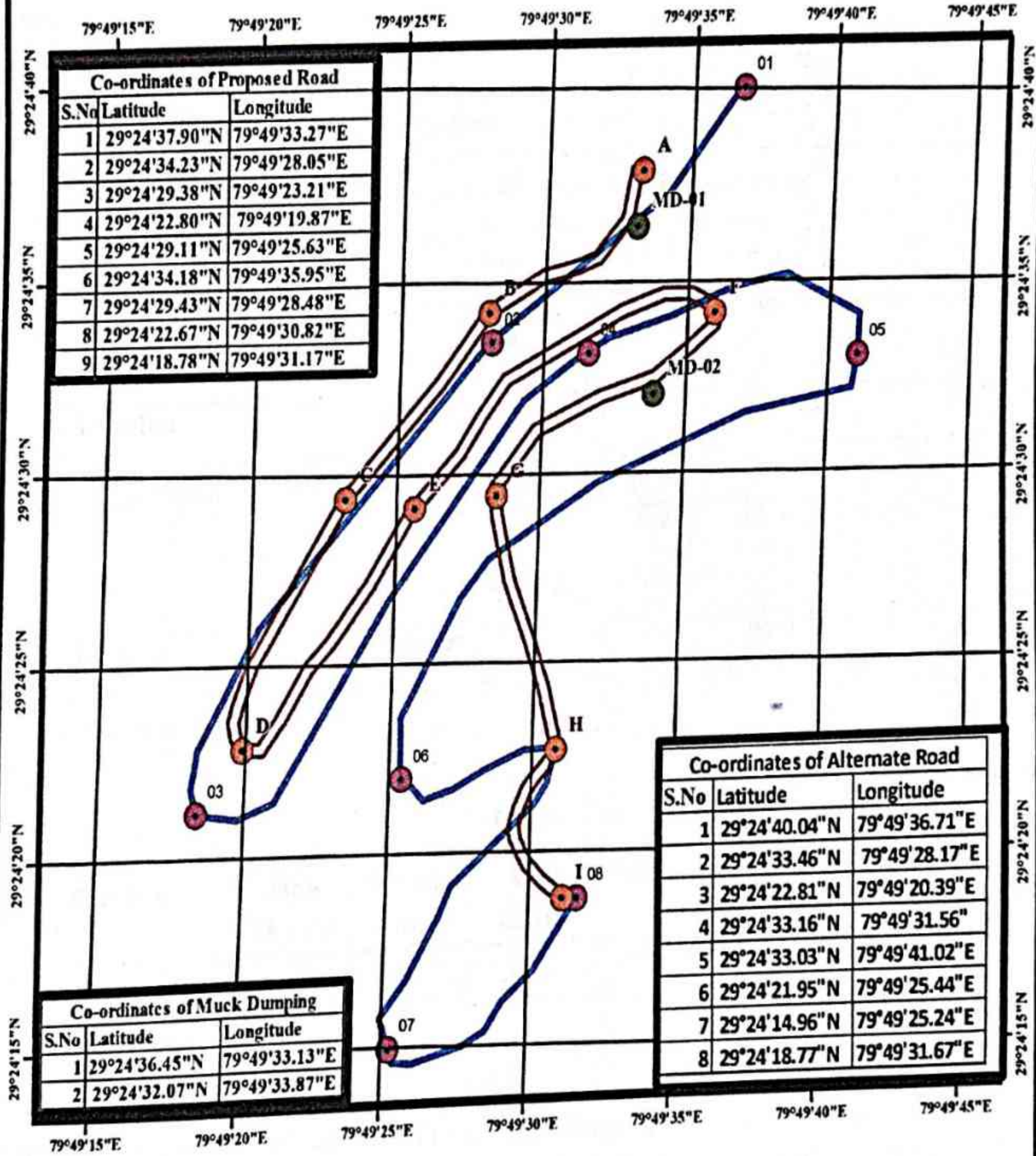


प्रधानिय वन अधिकारी

जनपद नैनीताल के ब्लॉक ओखलकांडा में कटना से वारी तक मोटर मार्ग का निर्माण। (1.850 किमी०)

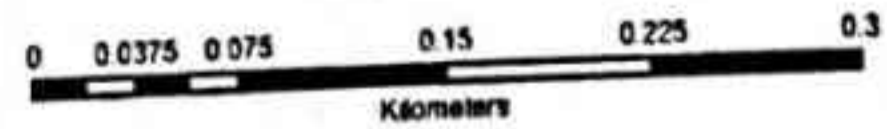
Prepared by: UFTA, Haldwani

जियोरेफरेंसिंग मैप- जनपद नैनीताल के ब्लॉक ओखलकांडा में कटना से वारी तक मोटर मार्ग का निर्माण।(1.850 किमी०)



Legend

- Propose Road GPS Coordinate
- Muck Disposal
- Alternate Road GPS Coordinate
- Propose Road
- Alternate Road



Scale - 1:4800

प्रभागीय वन अधिकारी
जिला वन प्रशासन, नैनीताल

Prepared by: UFTA, Haldwani

Wildlife diversity

The proposed project lies in the Devidhura Range of Champawat Forest Division. As per the wildlife population estimation carried out in 2008 wild animals like monkey (*Macacamulatta*), langur (*Presbytis entellus*), leopard (*Pantherapardus*), barking deer (*Muntiacusmuntjak*), wild boar (*Sus scrofacristatus*) were enumerated. The results of the estimation were as given in table below:

Species	Nos.
Leopard	50
Black bear	71
Barking deer	96
Wild Boar	1855
Sambar deer	43
Himalayan Griffon	135

Source- WILDLIFE POPULATION ESTIMATION 2008

Tiger

Division	2018-19	2022-23
Champawat	9	11

Source - All India Tiger estimate 2022

Leopard

Division	2008-09	2022-23
Champawat	50	90

Source - WII

Monkey

Division	Male (Adult)	Female (Adult)	Sub adult	Infant	Unknown	Total
Champawat	949	1060	761	676	495	3941

Source - WII

It is pertinent to mention that, unlike All India Tiger Estimation exercise which used intensive use of camera trapping in reserve forests and protected areas, no such method exists for estimation/counting of other animal species. Therefore, actual wildlife population is expected to be far higher than the result of 2008 wildlife estimation. Further, the forest affected in above project has presence of wild animals like Jungle Cat, Leopard Cat, hare and other reptiles. It is clear from data that proposed project area has rich wildlife population.

प्रभागीय वन अधिकारी
चम्पावत वन प्रभाग चम्पावत

Human-wildlife conflict

Champawat is primarily an interior district which shares international border with Nepal. Champawat is primarily a rural district. As per CENSUS OF INDIA 2011, only 14.8% of total population is urban population while 85.2% of the population lives in villages or rural areas. There are 717 villages in Champawat. The villages in Champawat are widely spread and are surrounded by forest in most cases. The people are dependent on forest for fodder, grazing, water, minor forest produce, timber in form of rights and concessions etc. Human Wildlife interaction and human wildlife conflict is frequent. The loss of crops, livestock and/or human life has huge social and economic costs and has negative effects on wildlife conservation efforts of the department. Human-wildlife conflict mostly manifests itself in form of human death/injury, livestock death, crop damage and property damage.

HUMAN-WILDLIFE CONFLICT



When encounters between humans and wildlife lead to negative results, such as loss of property, livelihoods, and even life

Causes of HWC

- Agricultural Expansion
- Urbanization
- Infrastructure Development
- Climate Change
- Wildlife Populations Growth and Range Expansion

Impacts of HWC

- Grave injuries, Loss of life
- Damage to farms and crops
- ↑ violence against animals

WWF India during 2003-2004 developed the Sonitpur Model by which community members were connected with Assam Forest Dept and given training on how to drive elephants away from crop fields and human habitations safely.

In 2020, the SC upheld Madras HC's decision on the Nilgiris elephant corridor, affirming the right of passage of the animals and closure of resorts in the area.

Data on HWC

- Tigers killed 125 humans between 2019 and 2021
- Death of 329 tigers due to poaching, natural and unnatural causes.
- Elephants killed 1,579 humans in three years
- Death of 307 elephants due to poaching, electrocution, poisoning and train accidents

Advisory for HWC Management (Standing Committee of the National Board of Wildlife)

- Gram Panchayats empowered to deal with problematic wild animals (WPA 1972)
- Compensation against crop damage due to HWC (PM Fasal Bima Yojna)
- Local/State depts. to adopt early warning systems and create barriers
- Paying a part of ex-gratia as interim relief within 24 hours of the incident to the victim/family

State - Specific Initiatives

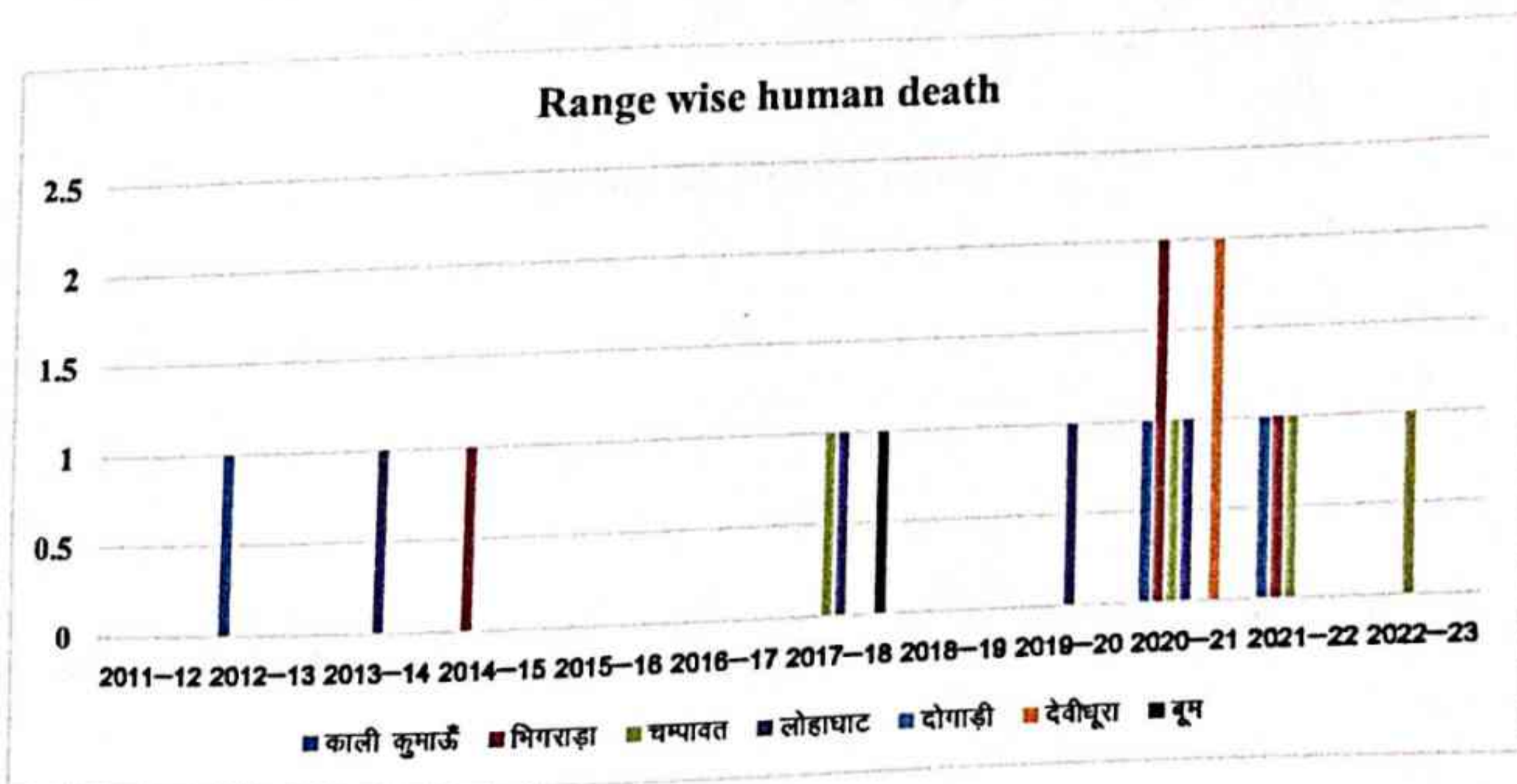
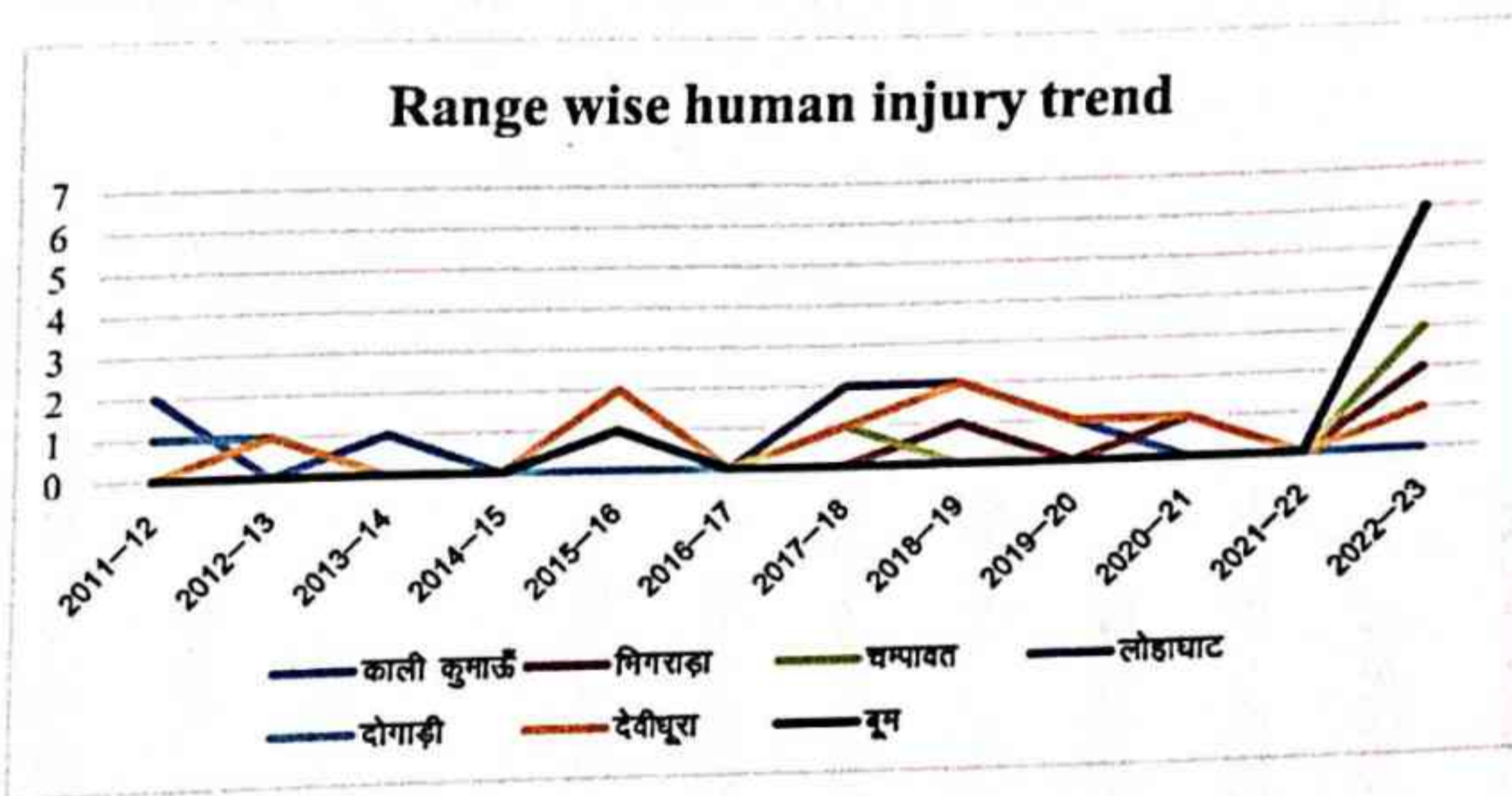
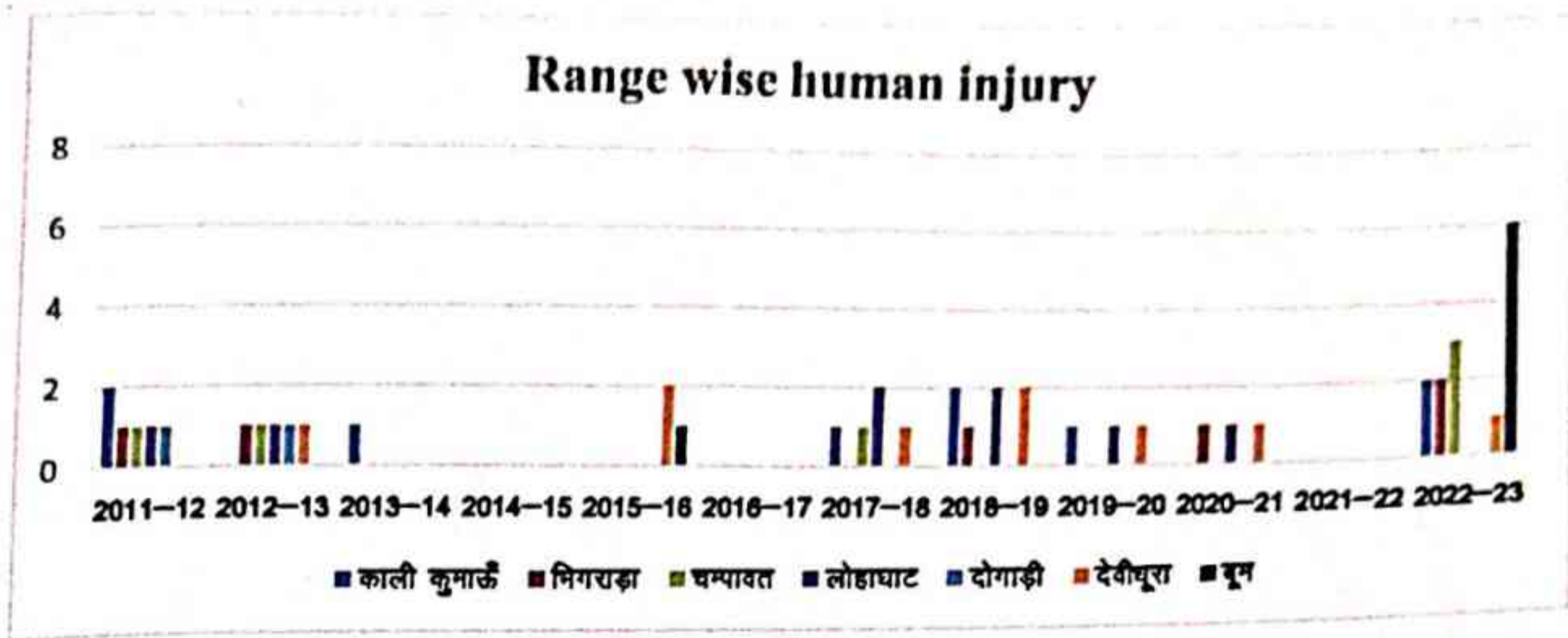
- UP - Man-animal conflict under listed disasters (in State Disaster Response Fund)
- Uttarakhand - Bio-fencing carried out by growing various species of plants in areas
- Odisha - Casting seed balls inside different forests to enrich food stock for wild elephants

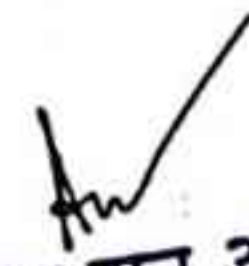

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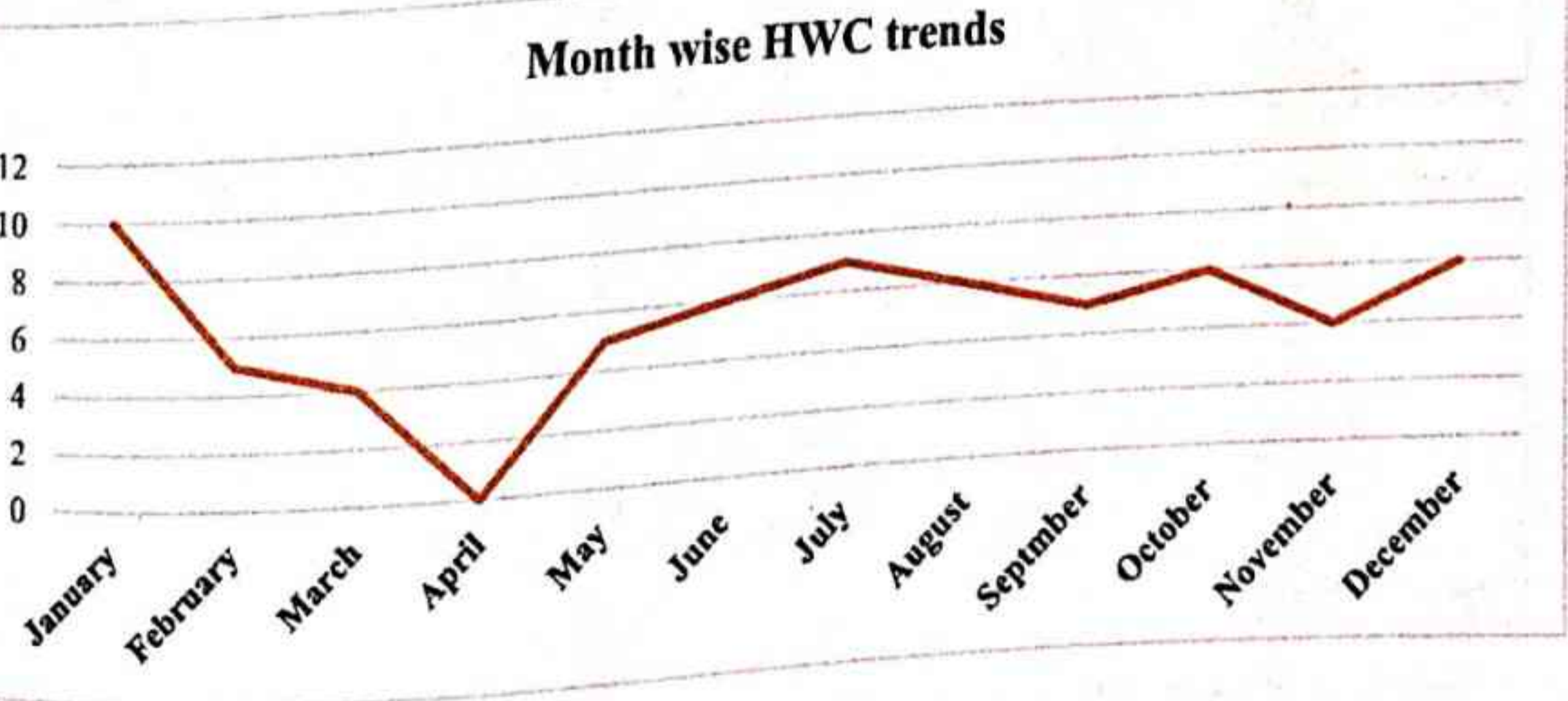
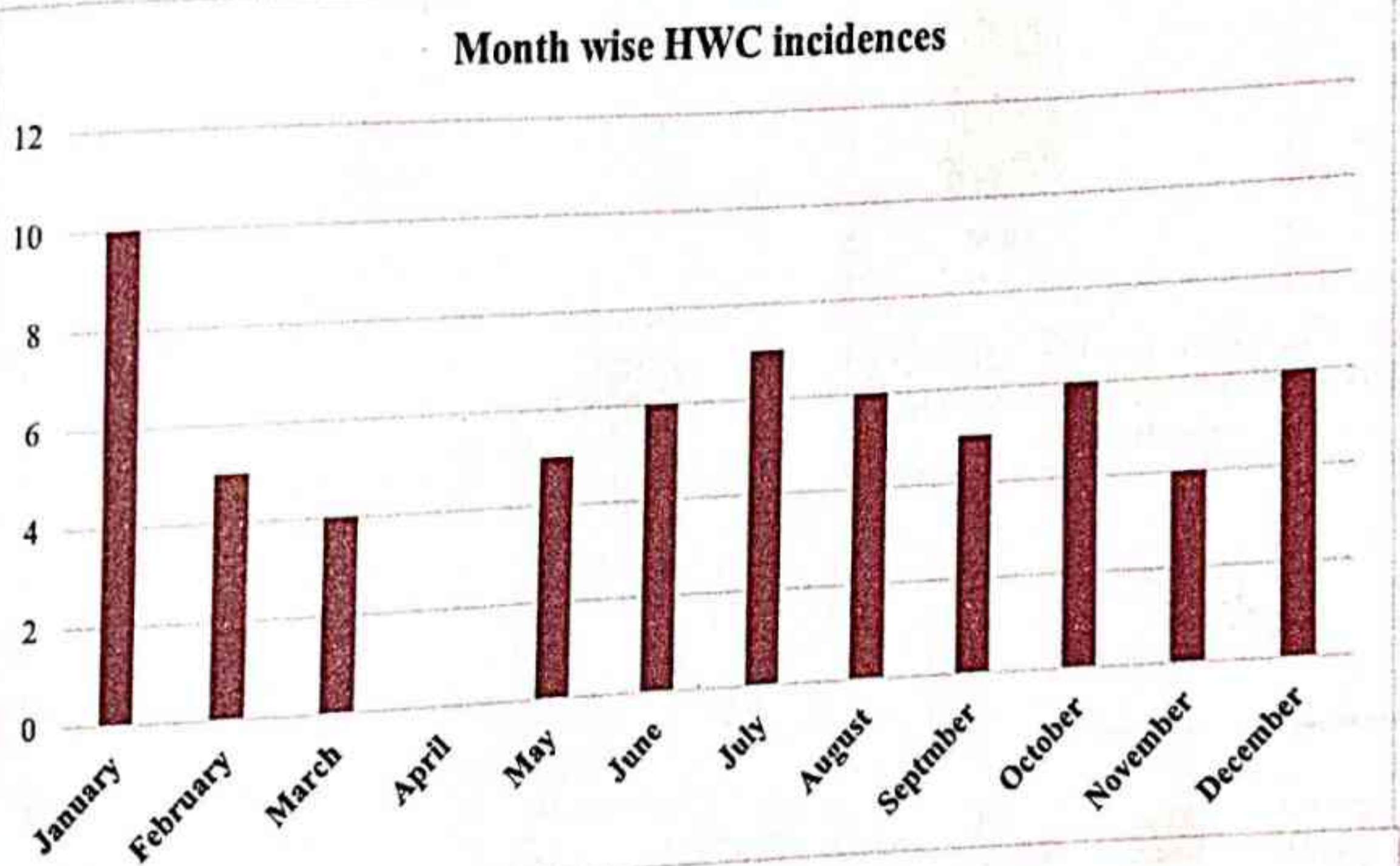
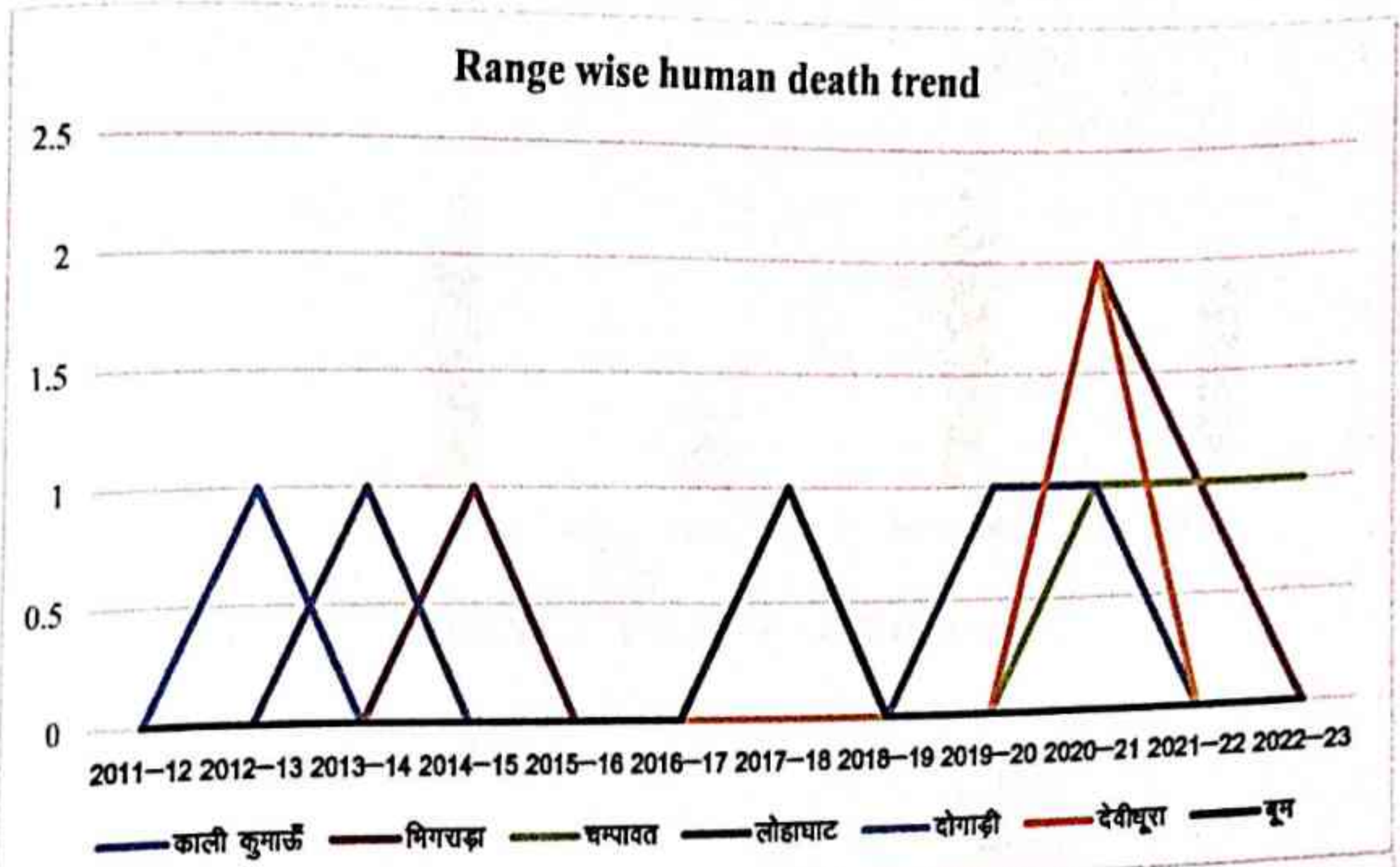
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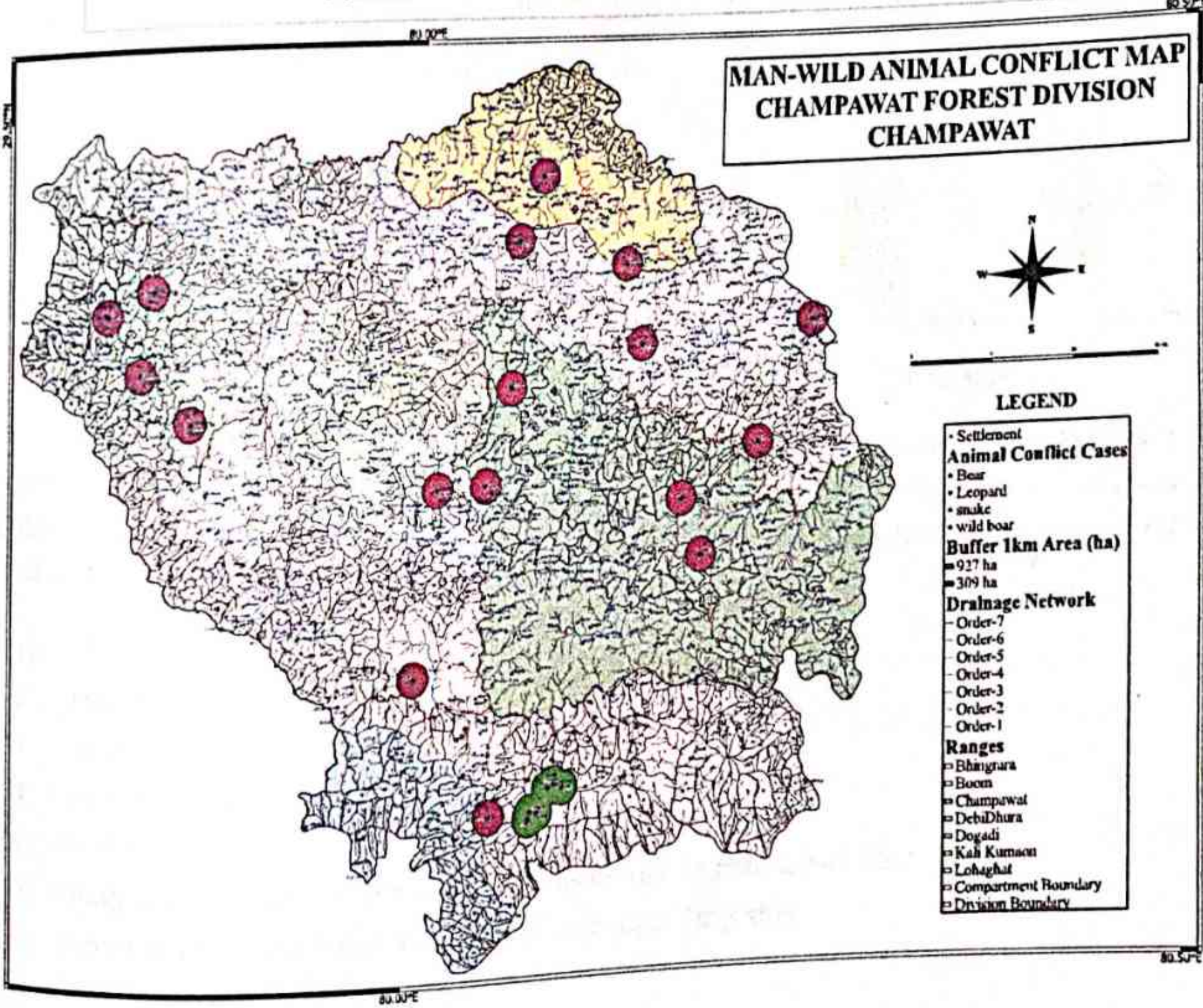
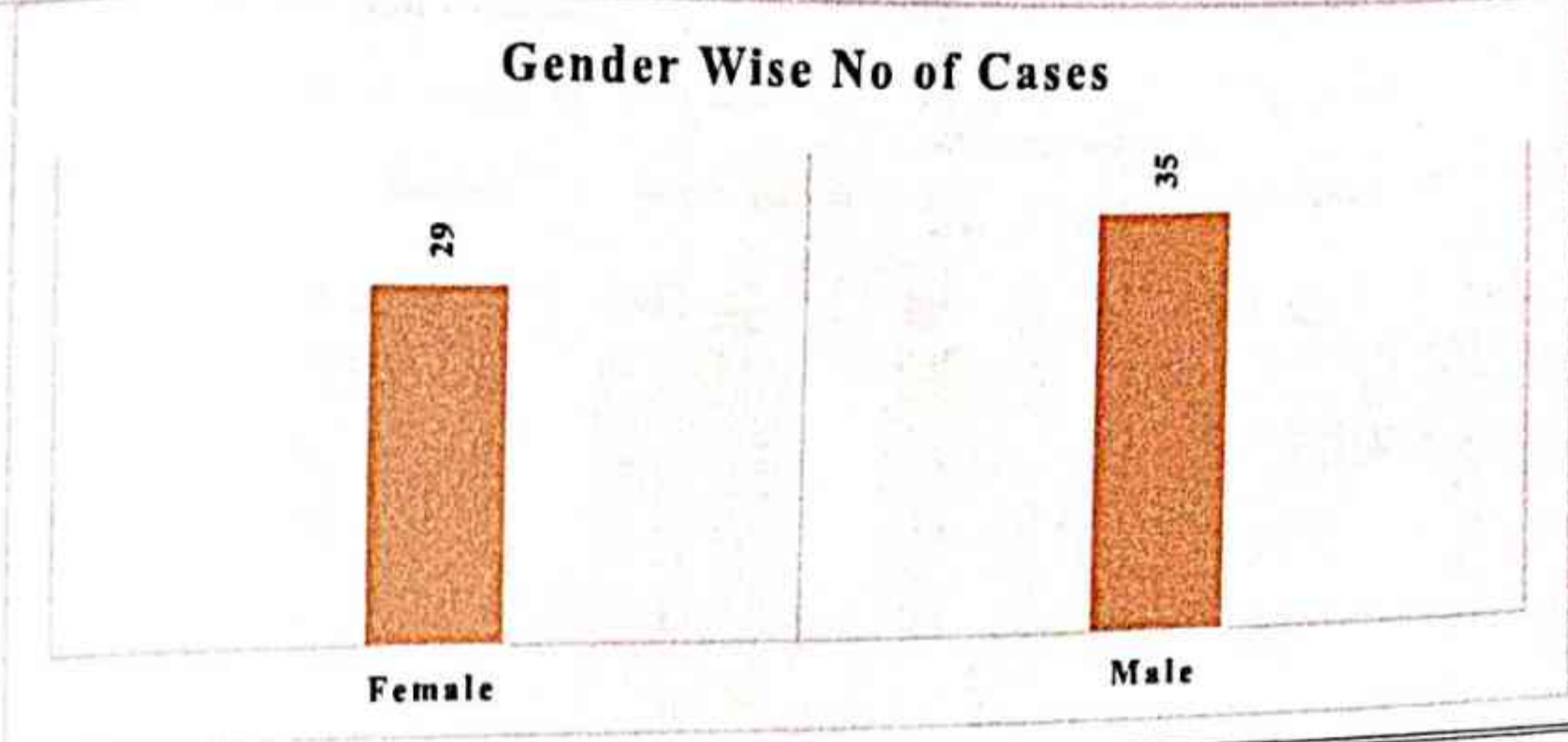
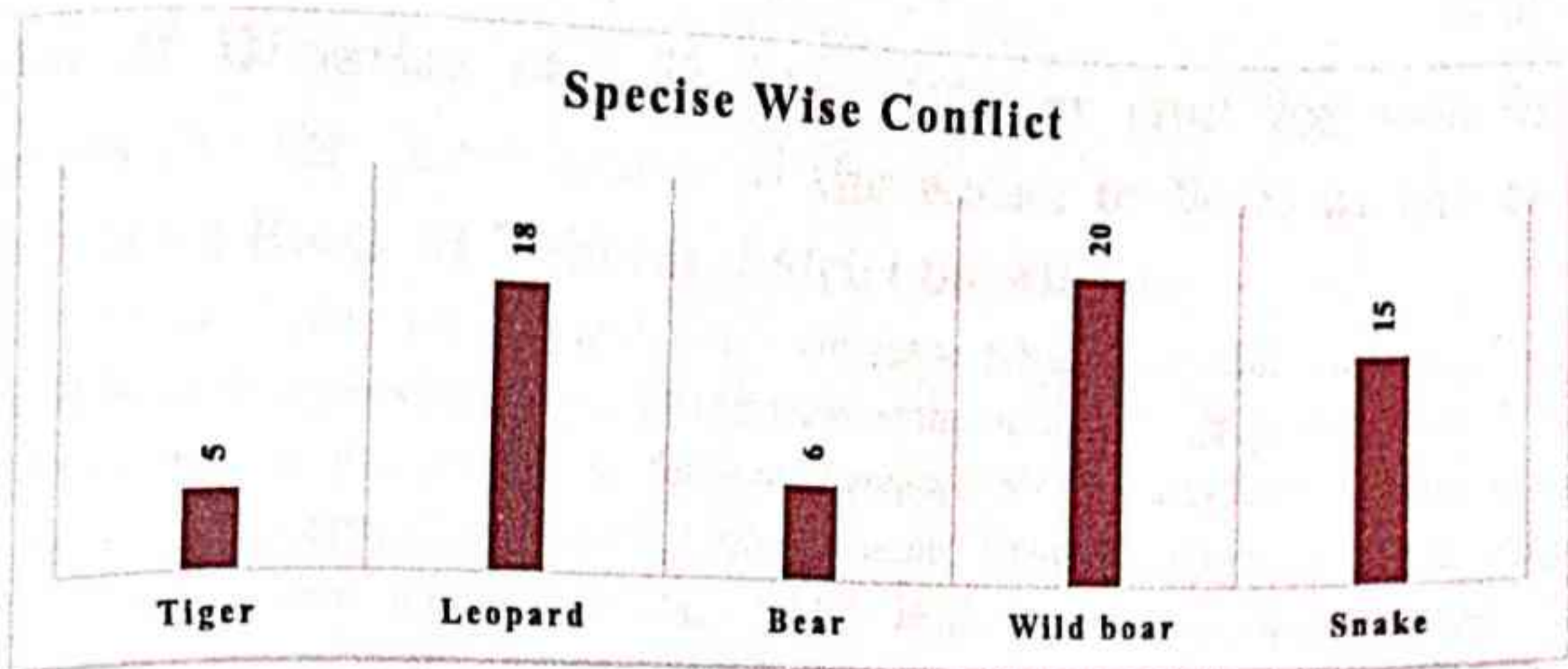
Range wise breakup of number of cases of human death and human injury since 2011-12:-




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Impact of Diversion of 1.53 hec of forest land for non-forestry purposes for the construction of the Katna to Wari motor road in Okhalkanda Block of Nainital District on wildlife

The construction of road will invariably lead to increase in vehicular traffic and vehicle speed as mentioned by project proponent in the justification of the need of the present project. This would have direct impact of wild animals in form of increased wildlife accidents, habitat degradation during construction, obstruction to wildlife movement etc. Obstruction to wildlife movement leads to them venturing into human habitation which leads to increase in crop loss, livestock depredation, and human injury/casualty.


Taxa	MAJOR IMPACTS														
	Habitat loss			Habitat fragmentation			Disturbance-induced behavioural changes			Injury/mortality			Impediment to movement		
	≡	🚗	🦋	≡	🚗	🦋	≡	🚗	🦋	≡	🚗	🦋	≡	🚗	🦋
Mammals	Large mammals	High	High	High	High	High	High	High	High	High	High	High	High	High	High
	Medium and small mammals	High	High	High	High	High	High	High	High	High	High	High	High	High	High
	Arboreal animals/guilders	High	High	High	High	High	High	High	High	High	High	High	Possible	High	High
Birds	High	High	High	High	High	High	High	High	High	High	High	High	High	High	
Reptiles	High	Possible	High	High	High	High	High	High	High	High	High	High	High	High	
Amphibians	High	Possible	High	High	High	High	High	High	High	High	High	High	High	High	
Invertebrates	High	High	High	High	High	High	High	High	High	High	High	High	High	High	

Key: High impact (Dark Green), Moderate impact (Medium Green), Possible impact (Light Green)

Ecological Impacts of Linear Infrastructure on Different Animal Groups

As per the report "Eco friendly measures to mitigate impact of linear infrastructure on wildlife" published by Wildlife Institute of India in collaboration with Ministry of Environment Forest and Climate Change, the impact of linear infrastructure on the wildlife is mentioned below-

1. Direct loss of habitat and fragmentation
2. Degradation of habitat quality
3. Noise induced psychological and behavioural change
4. Negative impact of headlight glare on wildlife
5. Road avoidance by wildlife
6. Injury and mortality of wildlife as well as human in road accidents
7. Barrier effect where wildlife stops crossing road altogether
8. Increased human animal conflict


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Proposed wildlife management intervention

The objective of this project is to minimize the impact of road construction on wildlife by habitat improvement, enhancement of protection for wildlife present in this area and to minimize the human wildlife conflict in and around the area. To achieve these objectives the following important interventions have been proposed: -

I. Habitat improvement


Habitat improvement is one of the important components of wildlife management. The prime objective is to improve the existing wildlife habitat by both eliminating the existing adverse conditions and by improving the existing conditions. Some of the interventions are as follows:-

- Remove unwanted species to enhance the ecological integrity of the landscape and planting/sowing of palatable grass.
- Develop and implement habitat restoration plans.
- Strengthen the overall resilience of the habitat to support diverse flora and fauna.

II. Wildlife protection

Wildlife protection is one of the basic components of wildlife management. Historically this landscape is very much sensitive for various types of wildlife poaching and trade. Many cases were registered in past years from this area. Proximity to international border also makes this region very sensitive and vulnerable for wildlife protection. This project addresses these issues by various interventions. To enhance protection, regular short range and long range patrolling are very much essential. For patrolling in the region, proper patrolling kits for frontline staffs are very much essential, hence procurement of such kits has been provided. Improvement of basic facilities such as repairing of existing forest infrastructure and provision of solar lightings in nearby areas has been provided. Important component of public engagement and sensitisation of different stake holders is also envisaged. Installation of signages for regulation of speed, wildlife awareness along the road and nearby sensitive areas will also be taken up.

III. Measures to alter human behaviour / Regulatory or prescriptive measures


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- i. Signage for regulation of speed at sensitive locations.

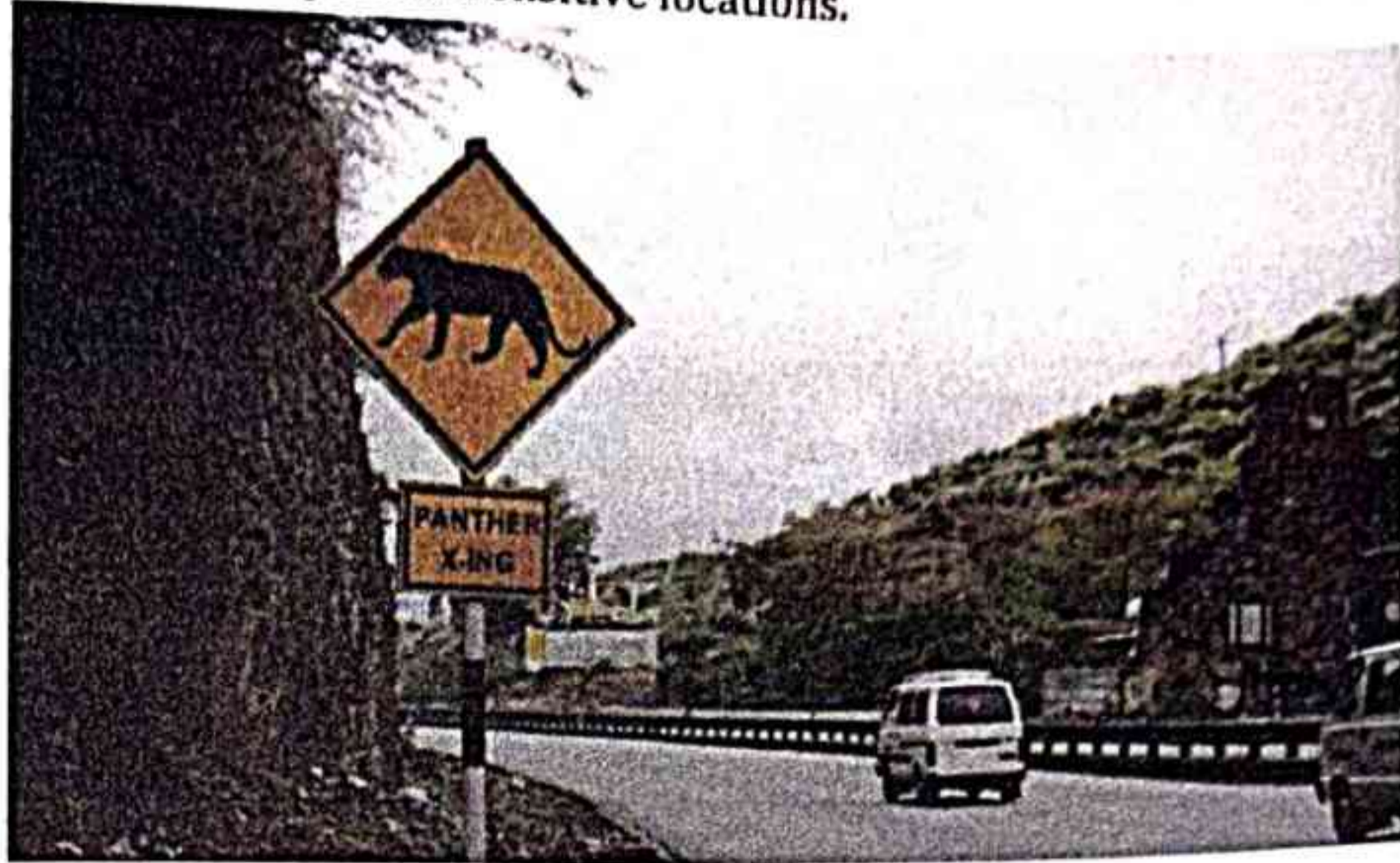


Figure 1 Sample Signboard 1

- ii. Signage to stop feeding of wild animals especially langur / monkey on the road.



Figure 2 Sample signboard 2

- iii. Signage to prevent accumulation of waste at sensitive locations along the road.

IV. Measures to alter animal responses / on-site construction and habitat restoration

- i. Provision of wildlife crossings
a. Retrofitting and enrichment of the existing culverts along the road.

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Modified culverts (culverts with furniture)

Additional features such as walkways or planks should be installed on the interior walls of the underpass, to encourage small and medium-sized mammals to use culverts built on natural drainage sites.

Similarly, in pipe culverts, guard rails or wooden planks may be installed to facilitate movement of small mammals and reptiles through the culvert.

Furniture can and should be added to all types of crossing structures.



Source: Photograph from Ovinger and Huffer 2011

Figure 3 Modified Culverts

Pipe culverts

These are typically round pipes of relatively small diameter (<1.5 m), made of smooth steel, corrugated metal, or concrete. Although their primary purpose is to convey water under roads or railways, a variety of wild animals has been observed using them as passageways. They are often used by small mammals, reptiles and amphibians. They have also been used as fish passages.

Design considerations:

- Single or multiple pipes should be placed at an appropriate spot.
- Native vegetation should be established on both sides of the culvert to provide cover.



Source: Photograph by Public works Department, Government of the Netherlands.

Figure 4 Pipe Culvert

b. Construction of canopy bridge for monkey/langur crossings.

Canopy bridge

This is a rope, pole, rope or wooden ladder or walkway suspended above the road or railway, either from vertical poles or trees, and installed for tree-dwelling species.

Design considerations:

- The bridge should be located in areas having important populations of arboreal species with a high risk of mortality.
- Structures should be taut and wide enough for animals to walk on.
- Each end of the bridge should be connected to trees or bushes for cover.

A thin rope above the bridge can prevent predation of small arboreal mammals by birds.



Figure 5 Canopy bridge

ii. Measure to reduce use of road surfaces by snakes for thermoregulation.

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Thermoregulation has been found to be the primary factor influencing the number of snakes on roads or the time spent on the road surface (Brattstrom 1965; Moore 1978; Sullivan 1981; Bernardino & Dalrymple 1992; Ashley & Robinson 1996). Pragatheesh and Rajvarshi (2013) thus recommend placing strips of different surfaces that may be attractive to thermoregulating snakes next to the road in areas known to have high mortality (Figure 9.8), and testing their effectiveness in diverting snakes from the road surface. Results and practical application of these trials should significantly reduce the mortality of snakes of high conservation importance, including the Indian rock python and Russell's viper.

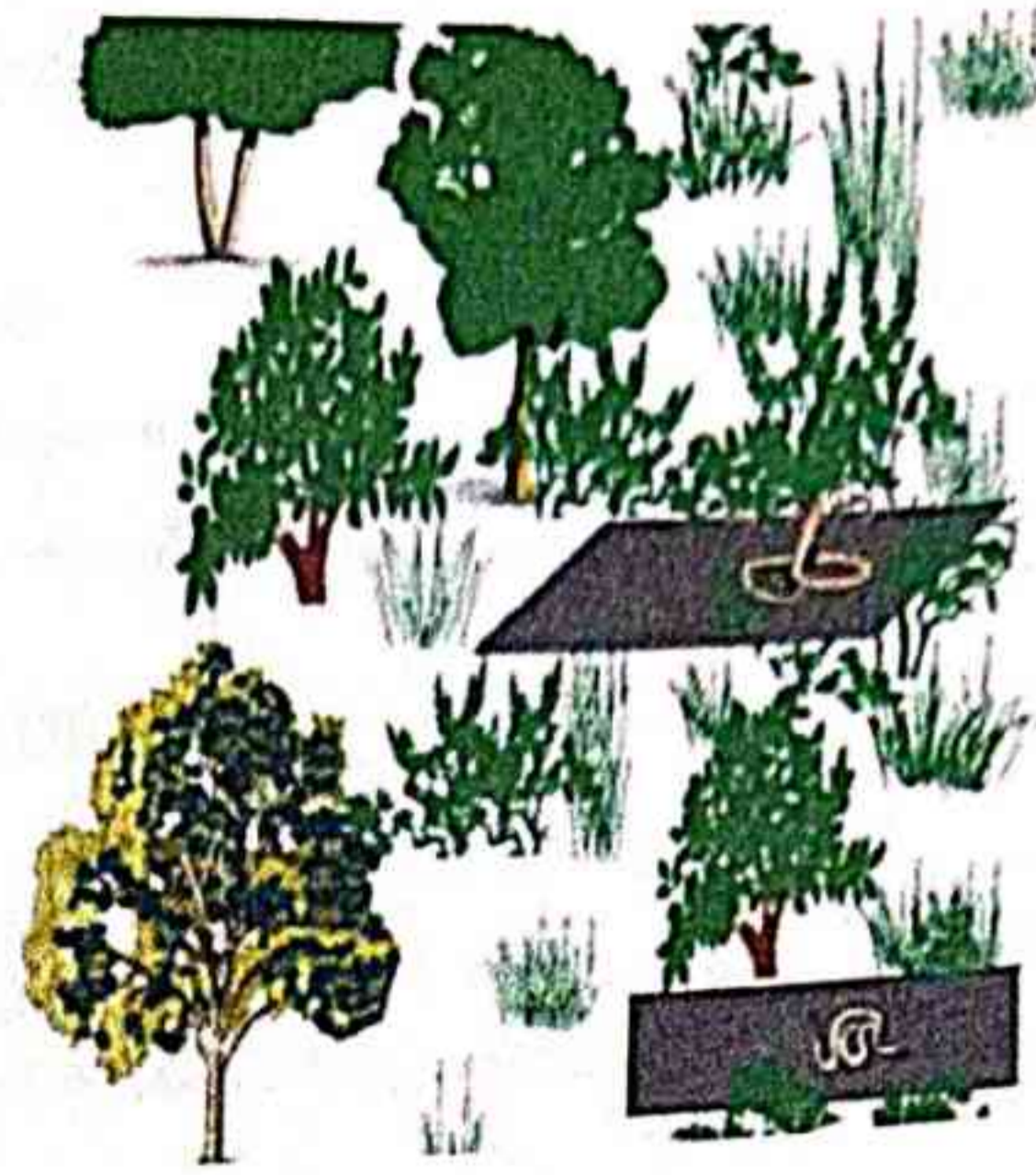


Figure 6 Thermoregulation surface for reptiles

- iii. Augmenting the factors of habitat
 - a. Clearing vegetation in the 5m belt on both sides of the road.
 - b. Creation of water holes at appropriate location inside forest.
- iv. Impact monitoring
 - a. Changes in movement of wild animals to be monitored by establishing a separate monitoring wing in Almora Range. This wing also acts as Rapid Response Team / wildlife rescue team. The team will be trained in wildlife rescue, response and mitigation of HWC.
- v. Augmenting the factors of habitat
 - a. Clearing vegetation in the 5m belt on both sides of the road.
 - b. Creation of water holes at appropriate location inside forest.
- vi. Impact monitoring
 - a. Changes in movement of wild animals to be monitored by establishing a separate monitoring wing in Almora Range. This wing also acts as Rapid Response Team / wildlife rescue team. The team will be trained in wildlife rescue, response and mitigation of HWC.

V. HWC management and mitigation

In recent years human wildlife conflict has become one very sensitive issue in this region. Many such cases related to human-leopard and human-bear conflict were registered in this landscape. These conflicts lead to growing resentment among the local villagers. Hence addressing this sensitive issue is very much essential. In this project, by various interventions, following objectives will be achieved:

- Identify and mitigate conflict hotspots through strategic intervention.
- Implement advanced technologies for early warning systems to reduce HWC incidents.
- Reducing the response time to address the issue.
- Effective monitoring for proactive management strategies.
- Promote community awareness and engagement to foster harmonious coexistence.

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- Deployment of QRTs (Quick Response Team) for handling HWC situations and timely intervention.
- Awareness generation among local public & sensitizing them for prevention of conflicts.
- Capacity building of staff for handling HWC cases.
- Equipping the staff with rescue kits, field monitoring equipment, etc for tackling HWC cases.

Proposed Wildlife Mitigation Plan

As per the guidelines issued by Government of India, the state government should submit Wildlife Management Plan, along with detail cost of its implementation into the account of CAMPA along with the Stage-I compliance.

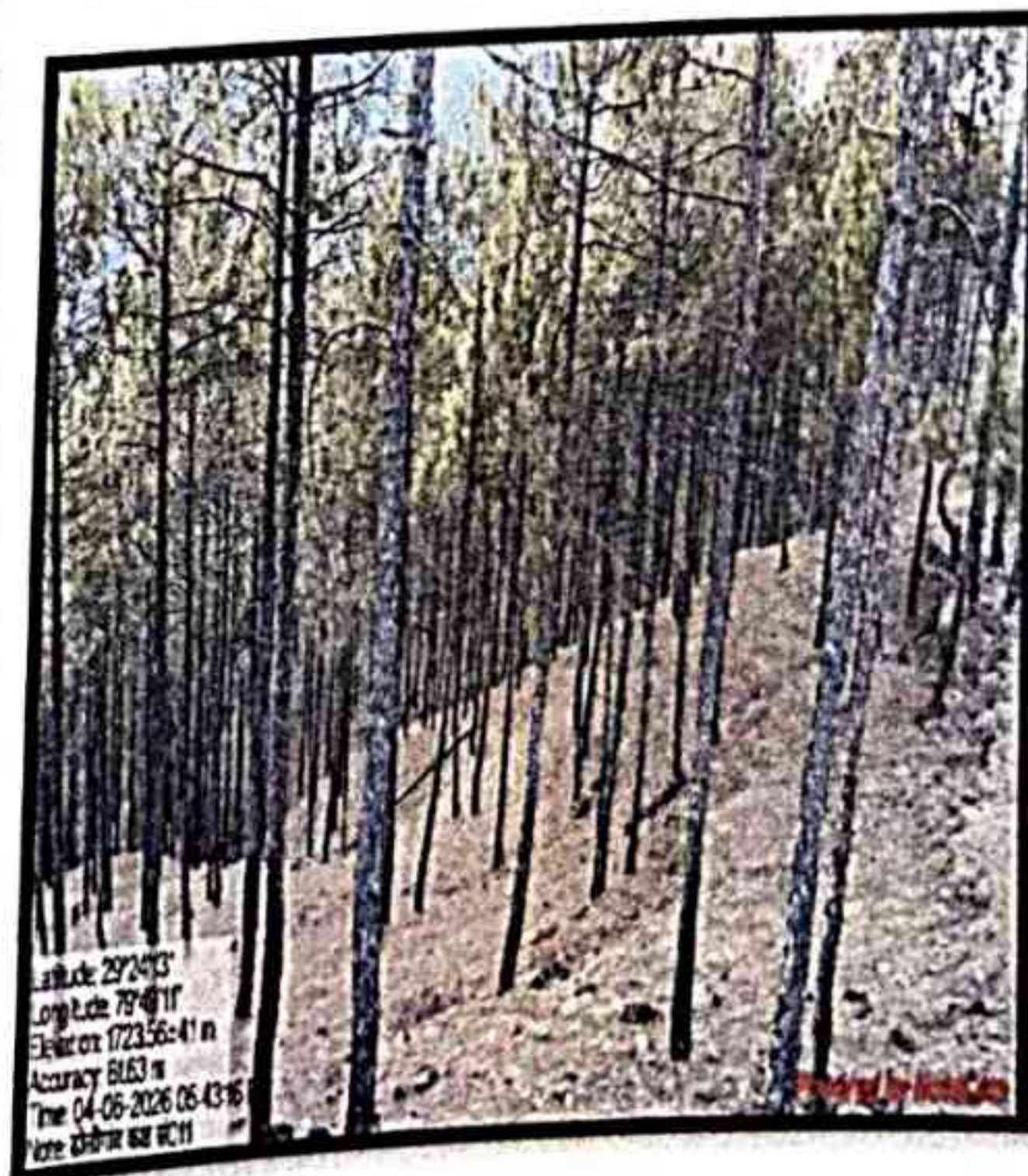
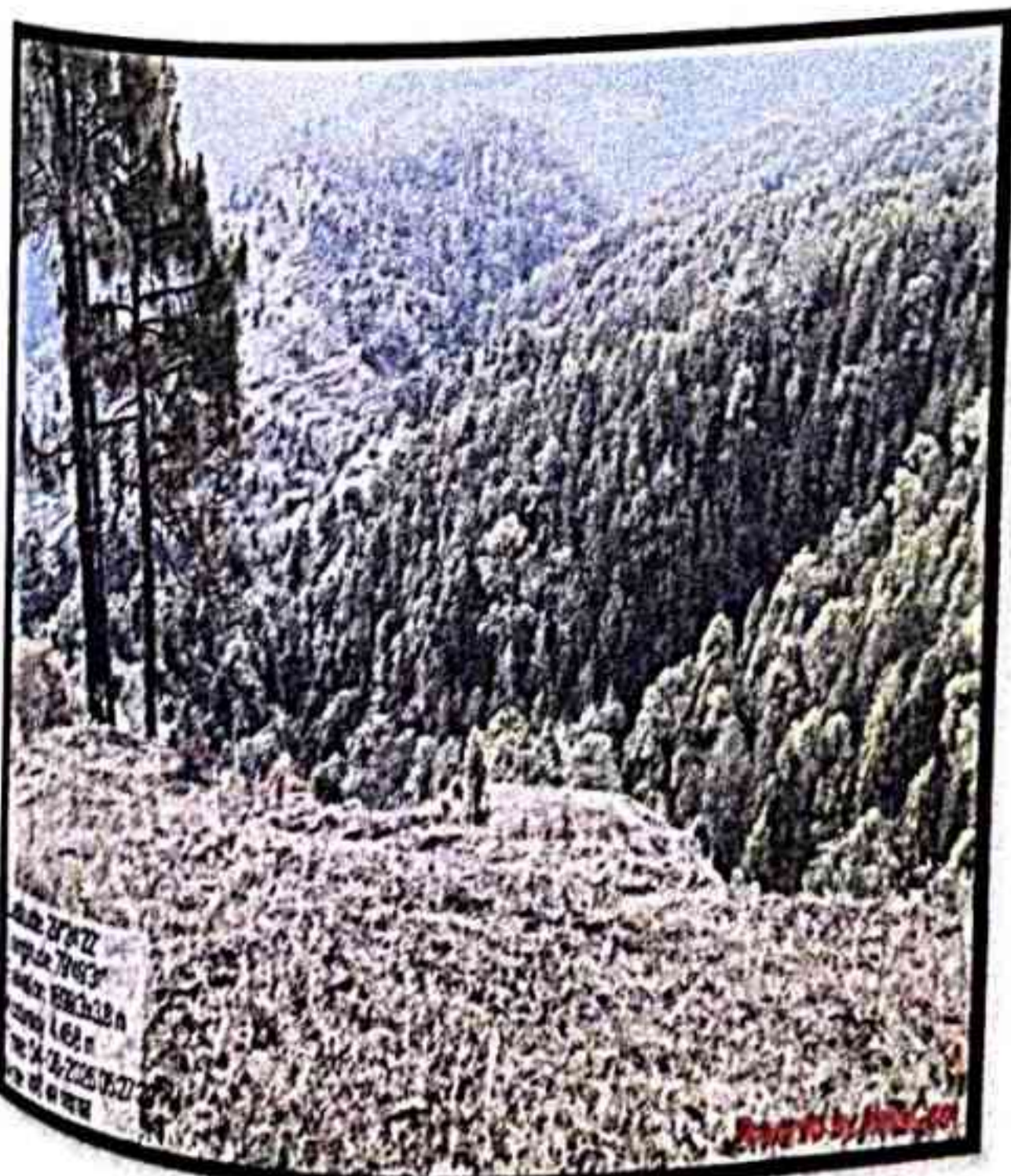
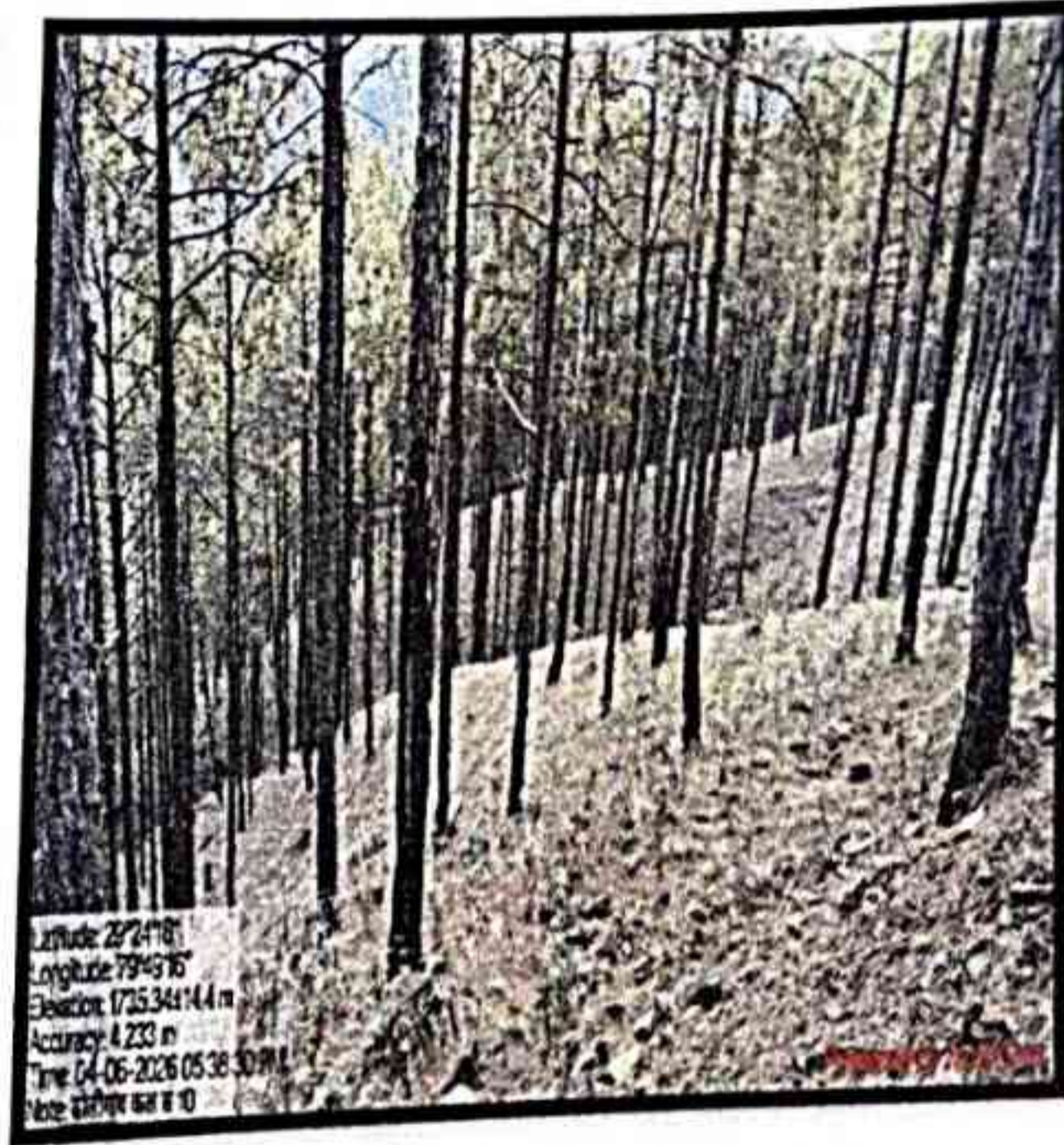
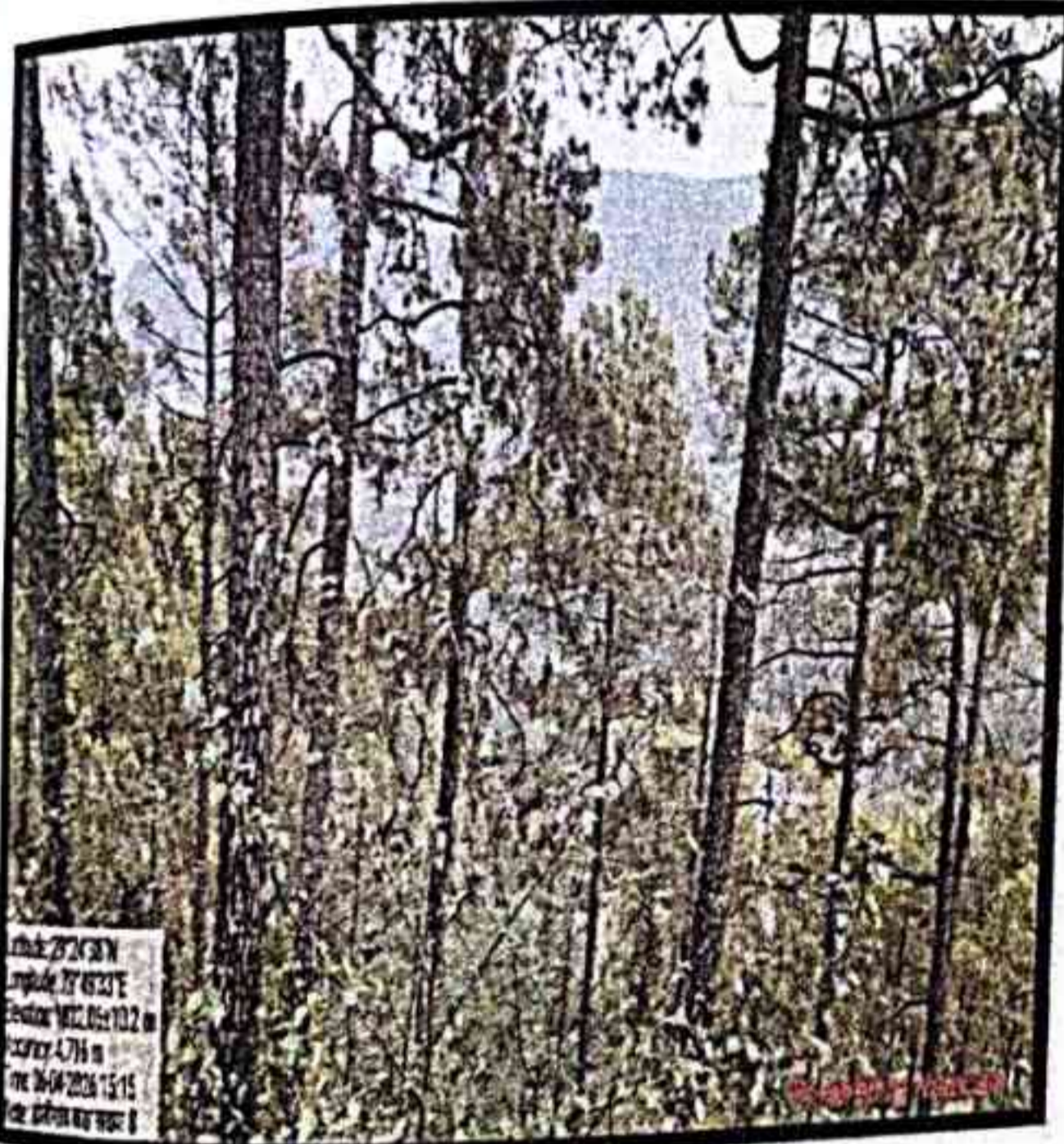
- 2% of total project cost towards the cost of implementation of the Wildlife Management Plan and/or 0.5% of the project cost towards the cost of implementation of Soil and Moisture Conservation Plan, as the case may be, shall be charged from the user agency and deposited into the account of CAMPA and the same may be intimated to the MoEF&CC for the purpose of obtaining approval under the The Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.
- In respect of linear projects, the stipulated norms of 2% and 0.5% towards the cost of Wildlife Management Plan and Soil and Moisture Conservation Plan, as provided in the Ministry's guidelines dated 8.06.2022, will be proportionate to the extent of forest land involved instead of total project cost or actual cost of implementation of such Plans, whichever is more, should be charged from the user agency.
- The provisions of Wildlife Management Plan or Soil Moisture Conservation Plan shall be approved by the competent authority in the State and accordingly, the deficit amount, if any, from the money already realized from the user agency to the tune of 2% and/or 0.5% of project cost proportionate to the extent of forest land involved, shall be paid by the user agency, and the same shall be deposited in to the CAMPA account.

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Scope of Wildlife Management related works

This Project is proposed on Reserve forest land in Devidhura Range. The area around the proposed site is covered with mixed forest. Vari van panchayat, Dholigaon Reserve forest is the nearby forest of the proposed site. To mitigate the ill effect of the project wildlife management related works including weed eradication, wildlife habitat development etc work could be done in this whole region. Awareness programme will be conducted in nearby villages.

Range	Site name	Geo Coordinates
Devidhura	Vari Van panchayat	29°24'23" N, 79°49'30" E
		29°24'22" N, 79°49'31" E
	Dholigaon RF compart 11	29°24'13" N, 79°49'11" E
	Dholigaon RF compart 10	29°24'18" N, 79°49'16" E
	Dholigaon RF compart 8	29°24'38" N, 79°49'33" E
	Dholigaon RF compart 9	29°24'23" N, 79°49'25" E



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Wildlife Management Plan Champawat forest division Diversion of 1.53 hec of forest land for non-forestry purposes for the construction of the Katma to Wart motor road in Okhalkanda Block of Nainital District.														
S.N.	Target activities	Unit	1st Year		2nd Year		3rd Year		4th Year		5th Year		Total	
			Phy. (Ha/No.)	financial	Phy. (Ha/No.)	Fin.	Phy. (Ha/No.)	Fin.	Phy. (Ha/No.)	Fin.	Phy. (Ha/No.)	Fin.	Phy. (Ha/No.)	Fin.
1	HABITAT IMPROVEMENT WORKS													
1.1	A.N.R. of Oak													
1.1.1	A.S.W.	142,160	0.3	42648										0.5
1.1.2	Plantation	26,390			0.3	7917								0.5
	plantation maintenance 1	17,660												0.5
	plantation maintenance 2	17,660					0.3	5298						0.5
	plantation maintenance 3	17,660							0.3	5298				0.5
	TOTAL			42648						0.3	5298			0.5
1.2	Removal of Lantana grass nearby (ha.)	12175	1	12175	1	12175	1	12175	1	12175	1	12175	5	66459
1.3	Bho Fencing	78	1000	78000	150	11700	100	7800	100	7800	100	7800	1450	60875
	SUB TOTAL HABITAT IMPROVEMENT WORKS			132823		31792		13098		25273		25273		113100
2	WILDLIFE PROTECTION WORKS													
2.1	Maintenance of Patrolling/Bridle Path	50,000	1	50000	1	50000	0	0	0	0	0	0	0	2
2.2	Solar Lights for Chaukis	100000	1	100000	0	0	0	0	0	0	0	0	0	1
2.3	Purchase of First Aid Kits, Equipment & Uniforms	Ls	Ls	50000	Ls	50000	0	0	Ls	0	Ls	0	Ls	100000
2.4	Hiring of QRT/ Ex-Servicemen for Patrolling	90,000	1	90000	0	0	0	0	0	0	0	0	0	1
2.5	Long Distance Patrolling	25,000	1	25000	1	25000	1	25000	1	25000	1	25000	5	125000
	SUB TOTAL WILDLIFE PROTECTION WORKS			315000		125000		25000		25000		25000		515000
3	HUMAN-WILDLIFE CONFLICT													
3.1	Procurement of Camera Traps	25000	1	25000	1	25000	0	0	0	0	0	0	0	2
3.2	Promotion of Eco-tourism activity	Ls	Ls	20000	Ls	20000	Ls	0	Ls	0	Ls	0	Ls	40000
3.3	Awareness & Publicity	Ls	Ls	25000	Ls	25000	Ls	0	Ls	0	Ls	0	Ls	50000
3.4	Signages	Ls	Ls	20000	Ls	20000	Ls	10000	Ls	0	Ls	0	Ls	50000
	SUB TOTAL HUMAN-WILDLIFE CONFLICT MANAGEMENT			90000		90000		10000		10000		0		190000
	GRAND TOTAL			537823		246792		48098		50273		50273		945434

प्रमुख वन संरक्षक (वन्य जीव)
मुख्य वन्य जीव प्रतिपालक
उत्तराखण्ड

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व्यक्ती कुमारुं वृत्त, उत्तराखण्ड
अल्मोड़ा

उत्तराखण्ड वन अधिकारी
व्यक्ती वन प्रभाग चम्पावत