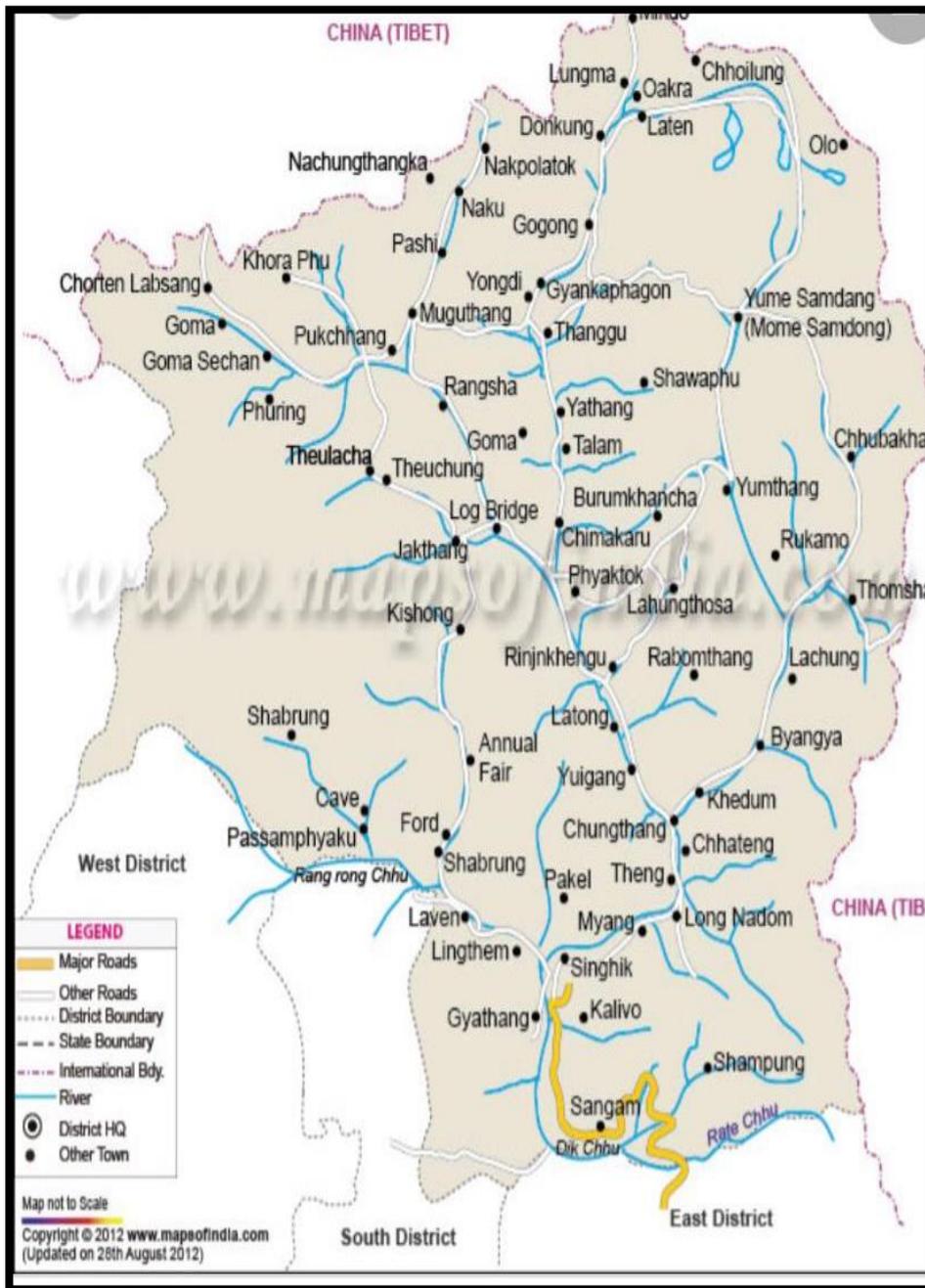


**District Environment Plan for North District
State of Sikkim**



**Office of District Administration
District Collector North District
Office: North Sikkim, Mangan
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PREAMBLE

Hon’ble National Green Tribunal in O.A. No. 710/2017 dated 15.07.2019, further in O.A. No. 360 /2018, (M.A. No. 823/2018) (SLP(Civil)No.2959/2014), dated 26/09/2019 ordered to form the District Committee (as a part of District Planning Committee under Article 243ZD) for the preparation of District Environment plan as a Constitutional provision under Articles 243 G, 243W, 243ZD read with Schedules 11 and 12 and Rule 15 of the Solid Waste Management Rules, 2016.

In the above said order, it is stated that among others *“Chief Secretaries may personally monitor compliance of environmental norms (including BMW Rules) with the District Magistrate once every month. The District Magistrates may conduct such monitoring twice every month.*

“We find it necessary to add that in view of Constitutional provisions under Articles 243 G, 243 W, 243 ZD read with Schedules 11 and 12 and Rule 15 of the Solid Waste Management Rules, 2016, it is necessary to have a District Environment Plan to be operated by a District Committee (as a part of District Planning Committee under Article 243 ZD) with representatives from Panchayats, Local Bodies, Regional Officers, State PCB and a suitable officer representing the administration, which may in turn be chaired and monitored by the District Magistrate. Such District Environment Plans and Constitution of District Committee may be placed on the website of Districts concerned. The monthly report of monitoring by the District Magistrate may be furnished to the Chief Secretary and may be placed on the website of the district and kept on such websites for a period of one year. This may be made operative from 1.08.2019. Compliance of this direction may also be seen by the Chief Secretaries of the States/UTs. This may not only comply with mandate of law but provide an institutional mechanism for effective monitoring of environment norms.”

In this regard, Member secretary to State Population Control Board, Government of Sikkim, vide letter No. 938/SPCB/2179 dated 02/12/2019 requested District Collectors to prepare District Environment Plans by constituting District Committee (as a part of District Planning Committee under Article 243 ZD) with representing the administration, which may in turn be chaired and monitored by the District Collector/District Magistrate twice every month accordingly.

In view of these directions, District collector of North Sikkim District constituted District Committee with representatives from Village Panchayats, Municipal Council, Regional Offices, Sikkim State Pollution Control Board, Dept of Environment and an officer representing the administration for preparing District Environment plan. This District Committee chaired and monitored by the North Sikkim District Magistrate.

The members of District Environment Committee for North Sikkim District formed as under.

Table 1. District Committee – North Sikkim District

| Sl.no | Name | Designation |
|-------|---|-------------|
| 1. | District Magistrate – North Sikkim District | Chairman |
| 2. | Chief Medical Officer North Sikkim | Member |
| 3. | Addition District Collector (Development) | Member |
| 4. | Municipal Executive Officer (Mangan Municipal Council) | Member |
| 5. | Divisional Chief Engineer Water resource department | Member |
| 6. | Divisional Chief Engineer Public Health Department | Member |
| 7. | North District Forest Officer (Social Forestry) | Member |
| 8. | North District Forest Officer (Environment and soil conservation) | Member |
| 9. | SHO’s (North Sikkim) | Member |

A meeting of the District Environment Committee to formulate the District Environment Plan for North Sikkim District was held on 22/ 06/2021. This DEP has been prepared in line with the model District Environment Plan (DEP) of CPCB and covers following thematic areas.

District Profile

North district is the largest of the four districts of Sikkim. It lies between Lat: N 27° 31'12.00" and Long: E 88° 31'48.00". Exquisite, thrilling and vibrant: these are the three words that describe North Sikkim. It offers adventurers and nature lovers with a vast treasure of alpine beauty; valleys covered with flowers and a showcase of vibrant ethnic communities that resides in the high-altitude mountains. North Sikkim is sometimes compared to the Swiss Alps by many visitors to the region; this complement alone gives credence to the ethereal beauty of this place that has to be seen to be believed. The region provides magnificent views of the mountain ranges of which Khangchendzonga is also the third highest peak of the world located on the border of Sikkim with Nepal and it is included in the UNESCO World Heritage Site; treks through gentle meadows overlooking the snow laden mountain and the mystical Gurudongmar Lake are truly a divine experience. In addition, the rural scenery filled with monasteries, meadows and lush green forest creates an ambiance of paradise on earth. Mangan is the district headquarters of North Sikkim. A gateway to unparalleled beauty. The northern most parts of the district merge with the Tibetan plateau and lend a unique character to the region and some animals like the Tibetan wild ass called Kiang can be found in the northernmost areas. Places of Interest around North Sikkim, Kabi Lungchok. It is located 17 km from Gangtok along the North Sikkim Highway.

a. District Administrative Set-up

North district is divided into four Sub - Divisions Mangan, Dzongu, Kabi and Chungthang and also have five Nagar Palika under Mangan Nagar Panchayat (MNP). These are 1. Lower Mangan Bazaar 2. Power Colony 3. Rinzing Namgyal 4. Pentok 5. Upper Mangan Bazaar.

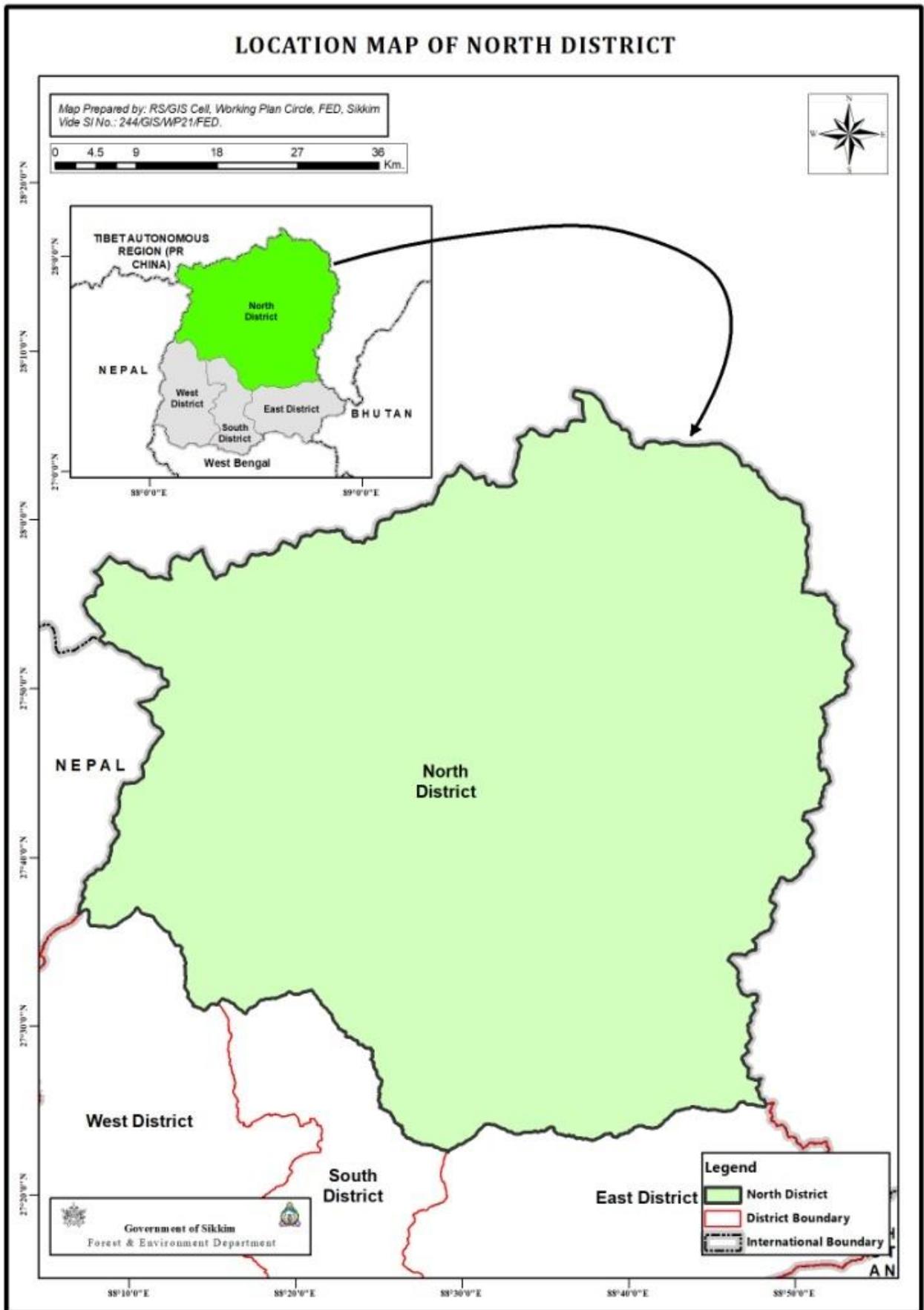
b. Local Institution

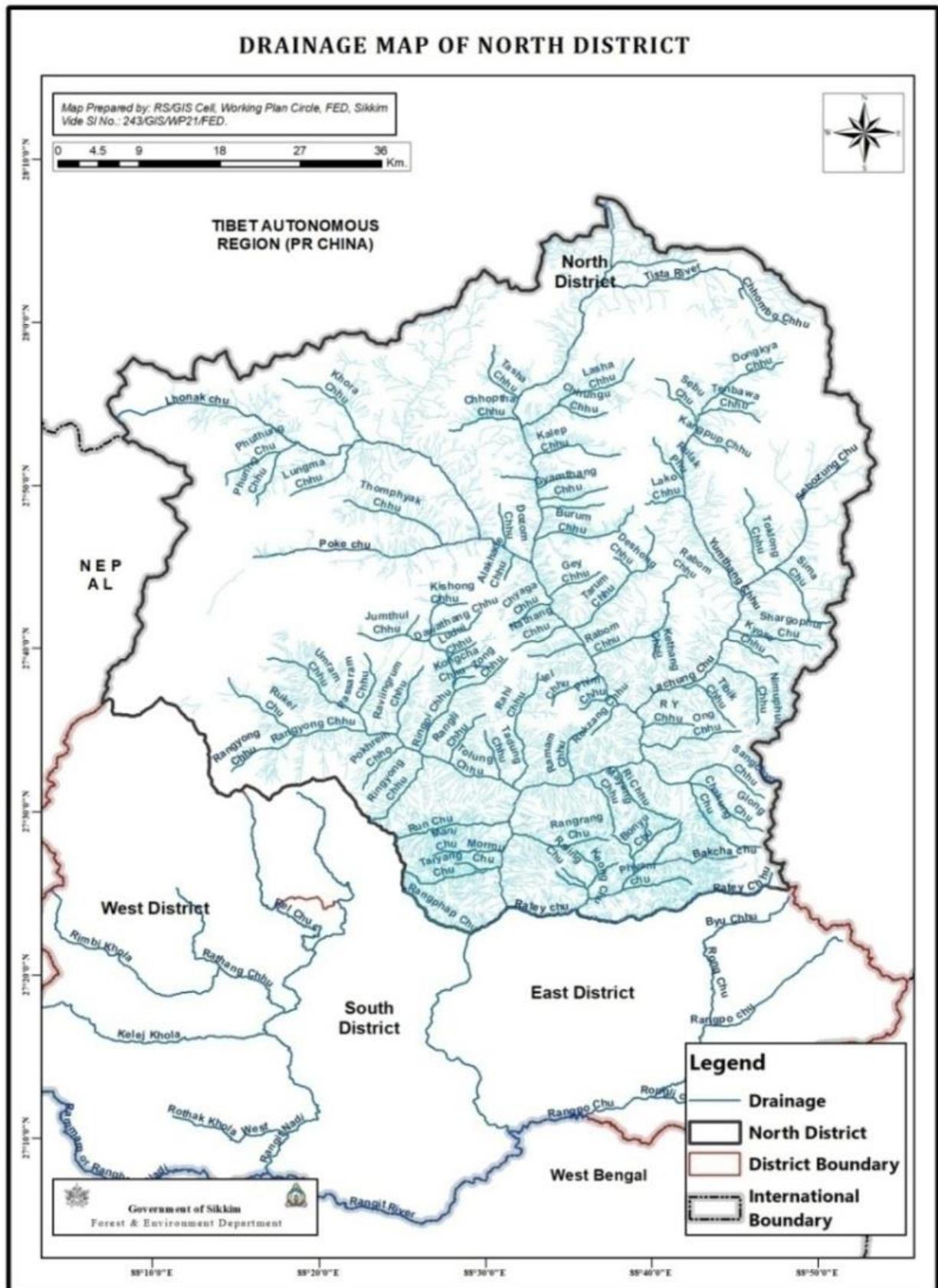
As the headquarter of north district, Mangan has head offices of different departments and is one of the sub-divisional administrative offices and stations 5 Nagar Palika under Mangan Nagar Panchayat.

The place is of historical importance to the Sikkimese because it was the venue where the treaty for brotherhood was affirmed between the Lepcha Chieftain Thekong Thek and the Bhutia chieftain named Khye Bhumsa. Amidst a dense cover of forest, the historical treaty is marked by a memorial stone. The Phensang Monastery is built on a hill slope that runs from Kabi Lungchok to Phodong and is adorned with beautiful landscapes. It was built in 1721 and belongs to the Nyingmapa sect. Phodong Monastery is located 38 km from Gangtok and is one among the six important Buddhist monasteries in Sikkim. It was built by Chogyal Gyurmed Namgyal in the eighteenth century.

c. Natural Resources

(i)Water bodies: The North District has consistent with preservation of Himalayan values, heritage, Natural resources, spectacular natural beauty and distinctive culture tradition of the area. Natural resources are vital components for sustaining the life support system on earth due to increasing pressure of population and consumption life styles, the natural resources have been dwindling over years. It is known fact that more than 300 plus Natural Lake/pond/Glaciers in Sikkim but more than 170 are found in North District and highest in the state. Most of these lakes are shrinking/drying up due to climate change, human interference, pollution and excess field exercise by Indian Army. Therefore, need to be conserved for sustainable wetlands/ponds. The famous wetland/Lake of North District are Kessung Lake and Tingkyong pond (Dzongu), TosarLake, Tingchim lake, Tembao, YanchenTso (Lachung) and Gurudongmar, Gyamtsona (Lachen). The lakes fed melting snows are the habitat of number of resident and migratory water fowls and for birds. These lakes and glaciers/rivers provide for source of drinking water to the whole of North District as well as other part of the State.





District Environment Plan [North]

Availability of Resources

| Sl. No. | Name of Wetland Identified | Status | | Area in (Ha) | Sub Division | GPS Coordinates | | | Signification of Water bodies/Lake/Pond | Ecological disturbances/ Risk/Threat to Water bodies/Lake/Pond |
|---------|----------------------------|---------|--------|--------------|--------------|-----------------|---------------|-----------------------|---|--|
| | | Private | Forest | | | Latitude | Longitude | Elevation (in meters) | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 10 | 11 | 12 | 13 | 14 |
| 1 | TembaoChho | | Forest | 28.88 | Chungthang | 27° 54' 2.8" | 88° 46' 53.5" | 5126 | Teesta river source | Shrinkage of lake area due to falling debris, boulders and heavy siltation |
| 2 | ChhoLhamo | | Forest | 106.95 | Chungthang | 28° 0' 48" | 88° 45' 34" | 5100 | It is worshipped by the Yak Herders as a Goddess Lake and also a source to Teesta river | Mass biotic interference |
| 3 | YangchenChho | | Forest | 4.73 | Chungthang | 27° 50' 52.6" | 88° 52' 05.2" | 4937 | It is a sacred site & source to Teesta River. | Heavy deposition of silt in the lake due to avalanches and floods. Need to conserve for sustainable wetland. |
| 4 | Chhumzomai Chhokha | | Forest | 26.05 | Chungthang | 27° 41' 48" | 88° 43' 5" | 4320 | Human & wild habitat water source | Falling of debris and boulders |
| 5 | Gurudogmar | | Forest | 132.38 | Chungthang | 28° 1' 38" | 88° 42' 48" | 5160 | It is a sacred site & source to Teesta River. | Threats posed are tourism influx, excess field exercises by army and civilians around the lake, grazing. |
| 6 | GyamChhona | | Forest | 49.81 | Chungthang | 28° 3' 36" | 88° 37' 50" | 4930 | | Currently this wetland is almost dry due to biotic interference. |
| 7 | Jackchem | | Forest | 3.06 | Chungthang | 27° 43' 26" | 88° 40' 42" | 4300 | Source to Teesta River. | Falling of debris and boulders |
| 8 | KhoraChhobuk | | Forest | 76.46 | Chungthang | 27° 56' 51" | 88° 20' 8" | 5060 | Wild habitat water source/Teesta River source | A glacial lake with falling debris and boulders |
| 9 | LhonakChho | | Forest | 6.86 | Chungthang | 27° 55' 4" | 88° 10' 19" | 5480 | Teesta river source | Shrinkage of lake area due to falling debris and boulders |
| 10 | SebuChho | | Forest | 22.7 | Chungthang | 27° 55' 22" | 88° 40' 37" | 5140 | Teesta river source | Shrinkage of lake area due to falling debris and boulders |
| 11 | Sebu La | | Forest | 4.4 | Chungthang | 27° 56' 10" | 88° 39' 45" | 5200 | Source to Teesta River. | Falling of debris and boulders |
| 12 | TosaChho | | Forest | 21.3 | Mangan | 27° 27' 58.7" | 88° 45' 0.18" | 4056 | Human & wild habitat water source | A glacial lake with falling debris and boulders. Road construction by Army & BRO, Soil erosions etc. |
| 13 | SarchokGumpa Area | Private | | 0.0297 | Chungthang | 27° 41' 20.9" | 88° 45' 08.5" | 2733 | Water source of Sarchok public | Biotic Interference |
| 14 | Theng | Private | | 0.0122 | Chungthang | 27° 35' 56.8" | 88° 39' 16.5" | 1511 | Water source of Theng Public | Biotic Interference |
| 15 | Choten | Private | | 0.013 | Chungthang | 27° 35' 10.0" | 88° 39' 28.0" | 1650 | Water source of Choten Public | Biotic Interference |
| 16 | Bop | Private | | 0.0027 | Chungthang | 27° 36' 56.0" | 88° 39' 24.0" | 1950 | Water source of Chungthang Public | Biotic Interference |
| 17 | Polay | Private | | 0.0092 | Chungthang | 27° 37' 14.0" | 88° 40' 12.0" | 1866 | Water source of Bop Public | Biotic Interference |

District Environment Plan [North]

| | | | | | | | | | | |
|----|-----------------------|---------|----------------|--------------|------------|----------------|----------------|------|---|--|
| 18 | Neydo | Private | | 0.0092 | Chungthang | 27° 36'14.0'' | 88° 38'47.0'' | 1612 | Water source of Chungthang Public | Biotic Interference |
| 19 | Rail-chu | Private | | 0.0044 | Mangan | 27° 32'30.4'' | 88° 37'27.1'' | 1369 | Water source of Toong/Naga Public | Biotic Interference |
| 20 | Naga | Private | | 0.002 | Mangan | 27° 32'39.3'' | 88° 37'57.5'' | 1367 | Water source of Naga Public | Biotic Interference |
| 21 | Manul | Private | | 0.005 | Mangan | 27° 30'59.5'' | 88° 34'48.5'' | 1476 | Water source of Sinchit Public | Biotic Interference |
| 22 | Chuba | Private | | 0.0081 | Mangan | 27° 29'53.8'' | 88° 33'53.1'' | 1419 | Water source of Malling Public | Biotic Interference |
| 23 | RafomSemsar | Private | | 0.0055 | Mangan | 27° 29'55.8'' | 88° 32'49.1'' | 1421 | Water source of Malling Public | Biotic Interference |
| 24 | NampatamKhol | Private | | 0.0055 | Mangan | 27° 28'15.7'' | 88° 30'20.2'' | 2022 | Water source of Nampatam Public | Biotic Interference |
| 25 | Naktang | Private | | 0.0097 | Mangan | 27° 26'56.7'' | 88° 31'56.4'' | 1310 | Water source of U/Mangshila Public | Biotic Interference |
| 26 | DamaiDara | Private | | 0.0097 | Mangan | 27° 26'56.6'' | 88° 31'57.1'' | 1349 | Water source of Lower Josing Public | Biotic Interference |
| 27 | GairiGoan | Private | | 0.0097 | Mangan | 27° 27'10.3'' | 88° 32'01.0'' | 1321 | Water source of L/Mangshila Public | Biotic Interference |
| 28 | Tingchim Lake | | Community land | 2.56 | Mangan | 27° 29'13.81'' | 88° 33'18.04'' | 960 | Source of stream water | Sacred lake, heavy pollution in lake due to frequent visiting by local & tourist need immediate conservation to improve water regime. |
| 29 | KhesungDho(Lake) | - | Forest KNP | Not recorded | Dzongu | N27°45'0.45'' | 88°20'0.10'' | 6970 | Culturally sacred lake of Sikkim. | Human interferences, & natural calamities like floods, landslides etc. Un-natural melting of glacier due to Global warming. |
| 30 | LungdhoDho | - | Forest | - | Dzongu | N27°29'19'' | 88°26'16'' | 4500 | Culturally sacred lake of Sikkim. | - |
| 31 | MaalungDho | - | Forest | - | Dzongu | N27°33'26'' | 88°29'05'' | 5200 | Culturally sacred lake of Sikkim. | - |
| 32 | Lungming Dho | - | Forest | - | Dzongu | N27°32'11'' | 88°35'58'' | 4700 | Culturally sacred lake of Sikkim. | - |
| 33 | Paki Dho | - | Forest | - | Dzongu | N27°34'12'' | 88°24'55'' | 6242 | Culturally sacred lake of Sikkim. | - |
| 34 | RonganDho | - | Forest | - | Dzongu | N27°35'20'' | 88°23'18'' | 6500 | Culturally sacred lake of Sikkim. | - |
| 35 | TingkyoungDho | - | BMC Community | 0.0650 ha. | Dzongu | N27°28'27'' | 88°30'44'' | 4100 | Culturally sacred lake of Sikkim. Habitat of rare fish species.(Dengnulek) Water sources for drinking. Proposed for BHS. | Conservation scheme must be implemented for sustainable of water bodies. |
| 36 | TashoDho | - | Forest | - | Dzongu | N27°38'12'' | 88°27'33'' | - | Culturally sacred lake of Sikkim | - |
| 37 | Hans Pokhari (Tamzey) | | Forest | 8.86 Ha | Kabi | 27° 25' 54.76" | 88° 46' 13.55" | 3952 | Lake | Due to formation of road cutting by Army/BRO heavy deposition of silt in Tamze lake, Soil erosion. Need immediate Conservation of this wetland to improve the water regime. Since this lake is the only drinking source of Gangtok & surrounding |

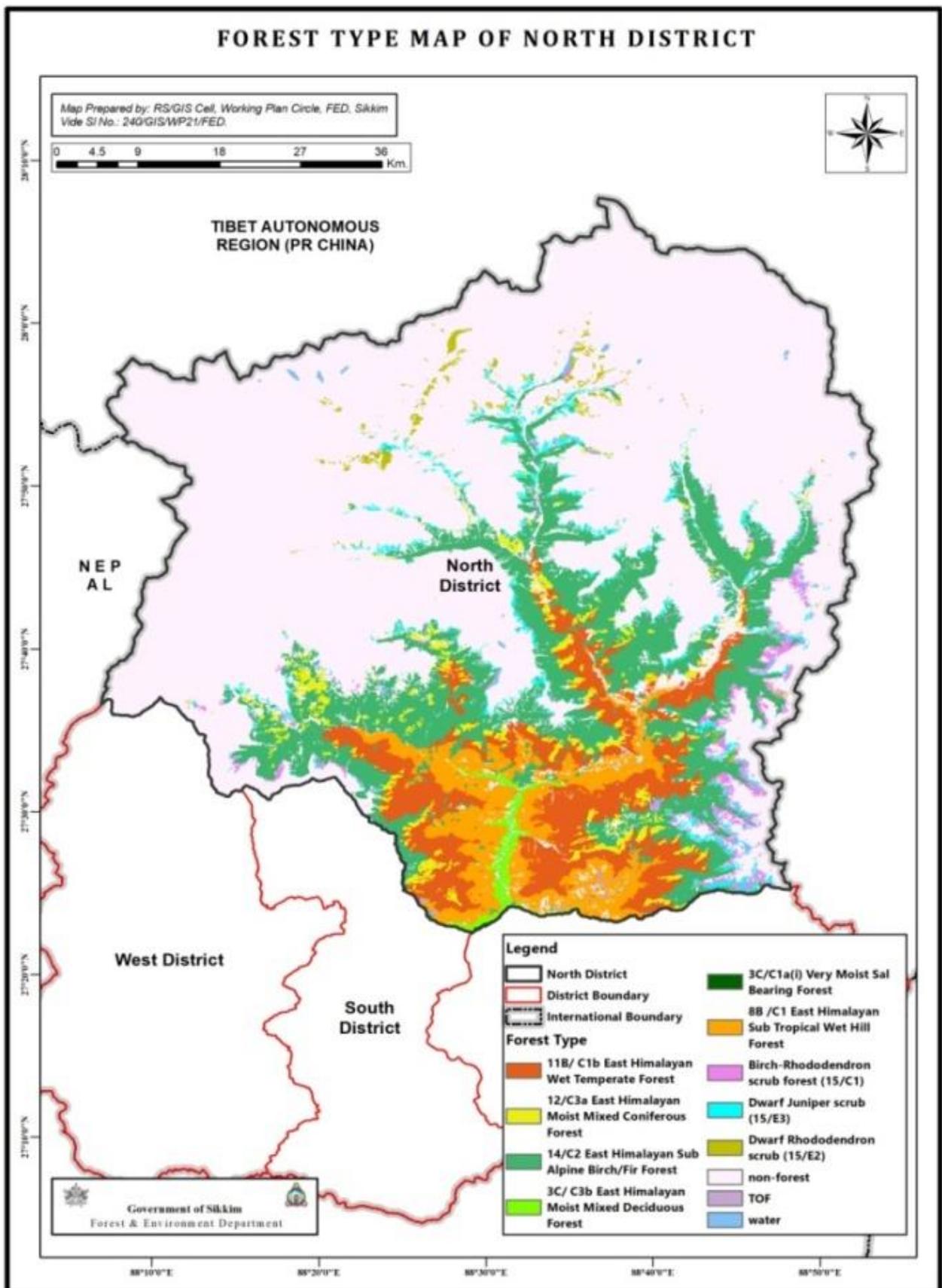
District Environment Plan [North]

| | | | | | | | | | | area. |
|----|-----------------------|---------|--------|---------|------|----------------|---------------|------|------|---|
| 38 | Nakuchu (KaloPokhari) | | Forest | 10.7 Ha | Kabi | 27° 26' 24.23" | 88° 45' 4.54" | 4066 | Lake | shrinkage of lake due to snow avalanches and floods |
| 39 | Tsoring Lake | | Forest | 0.02 Ha | Kabi | 27° 25' 25.7" | 88° 34' 6.07" | 1946 | Lake | Biotic interference |
| 40 | Yungthang Pond | Private | | 0.03 Ha | Kabi | 27° 24' 25.5" | 88° 37' 30.4" | 1477 | Pond | Land Diversion |
| 41 | Chothangka Pond | Private | | 0.01 Ha | Kabi | 27° 33' 48.1" | 88° 36' 54.5" | 1464 | Pond | Land Diversion |
| 42 | Thekarsha Pond | Private | | 0.02 Ha | Kabi | 27° 22' 42" | 88° 32' 54" | 1459 | Pond | Land Diversion |
| 43 | Lower Lingchom Pond | Private | | 0.01 Ha | Kabi | 27° 23' 41.8" | 88° 37' 06.3" | 1344 | Pond | Land Diversion |

PS - A total of 43 (Forty-Three) water bodies/lakes/pond have been identified as threatened due to continuous human interference and need conservation and restoration of lakes/water bodies in North District of Sikkim.

(ii) Forest Coverage

In Sikkim more than 87 % of geographical area is under forest and North District alone has 4226 sq km. The forest cover of North District is 1284.05as per FSI 2019 report. Climatically Sikkim experiences variable temperature with summer in the foot hills and freezing winter on the high mountains. The climate of the state has been divided roughly into the tropical, temperate and alpine zone. The forest of North District of Sikkim exhibit diversified variety of flora and fauna. The myriad life forms of both plants & animals that characterize this bio-geographical region are unique in India and the whole world. North District is renowned for its Rhododendron and Orchids also high-altitude *Primulas*, *Meconopsis* and blue pappies. The flora is also esteemed for several medicinal plants and also rich in faunal wealth and Himalayan animals such as snow leopard, musk deer, blue sheep, Himalayan Tahr and rare Pheasant found in several parts of the pristine spots and virgin forest of the North District and recently there has been sighting of Takin, (Bhutanese National Animal) in Sebo Reserve Forest of Lachung adding another feather in biodiversity of Sikkim.



d. Geography & Demography

As per the Population Census 2011 data, following are some quick facts about North District

| Particulars | Total | Male | Female |
|--------------------|--------|--------|--------|
| Children (Age 0-6) | 4,677 | 2,425 | 2,252 |
| Literacy | 78.01% | 75.13% | 62.55% |
| Scheduled Caste | 982 | 536 | 446 |
| Scheduled Tribe | 28,715 | 14,741 | 13,974 |
| Illiterate | 13,259 | 6,151 | 7,108 |

Sex Ratio – North District:

The Sex Ratio of North District is 767. Thus for every 1000 men there were 767 females in North District. Also as per Census 2011, the Child Sex Ratio was 929 which are greater than Average Sex Ratio (767) of North District.

Population Density – North District:

The total area of North District is 4,226 km². Thus the density of North District is 10 people per square kilometer. As per the initial provisional data of Census 2011, around 2 sq. km. area is under urban region while 4,224 sq. km. is under rural region.

Urban/Rural Population – North District:

As per the Census 2011, Out of 43,709 total population of North District, 10.62% people lived in urban regions while 89.38% in rural areas. The total figure of population of urban population was 4,644 out of which 2,456 were males while remaining 2,188 were females. In rural areas of North District, male population was 22,274 while female population was 16,791.

The average sex ratio in urban regions of North District was 891 females per 1000 males. Also, the Child (0-6 age) sex ration of urban areas in North District was 893 girls per 1000 boys. Thus, the total children (0-6 age) living in urban areas of North District were 585 which is 12.6% of total urban population. Similarly, the average sex ratio in rural areas of North District was 754 females per 1000 males. The Child sex ratio of rural areas in North District was 934 girls per 1000 boys. The average literacy rate in North District for urban regions was 83.81 percent in which males were 87.8% literate while female literacy stood at 79.34%. The total literate population of North District was 30,450. Similarly in rural areas of North District, the average literacy rate was 77.34 percent. Out of which literacy rate of males and females stood at 82.82% and 69.89% respectively. Total literates in rural areas of North District were 27,048.

| Particulars | Rural | Urban |
|---------------------------|--------|--------|
| Population % | 89.38% | 10.62% |
| Total population | 39,065 | 4,644 |
| Male population | 22,274 | 2,456 |
| Female population | 16,791 | 2,188 |
| Sex ratio | 754 | 891 |
| Child sex ratio (0-6 age) | 934 | 893 |
| Child population | 4,092 | 585 |
| Literates | 27,048 | 3,402 |
| Average literacy | 77.34% | 83.81% |
| Male literacy | 82.82% | 87.80% |
| Female literacy | 69.89% | 79.34% |

e. Land-use Pattern

Despite its small area, Sikkim is geographically diverse due to its location in the Himalayas. The climate ranges from subtropical to high alpine. AS per Census 2001, the total population of the state is 0.54million of which the rural population is 88.9%. The population density is 76 persons per km. The scheduled Tribes constitute 20.6% of the population. The projected population of the state is 0.60million (as projected by the Office of RGI for 20091. The livestock population of the state is 0.34 million (livestock Census 2003), which has decreased by nearly 14% since the census of 1992. Of the total geographical areas, about 30% is under permanent snow cover, glaciers and steep rocks where tree growth is not possible due to physical and climatic limitations.

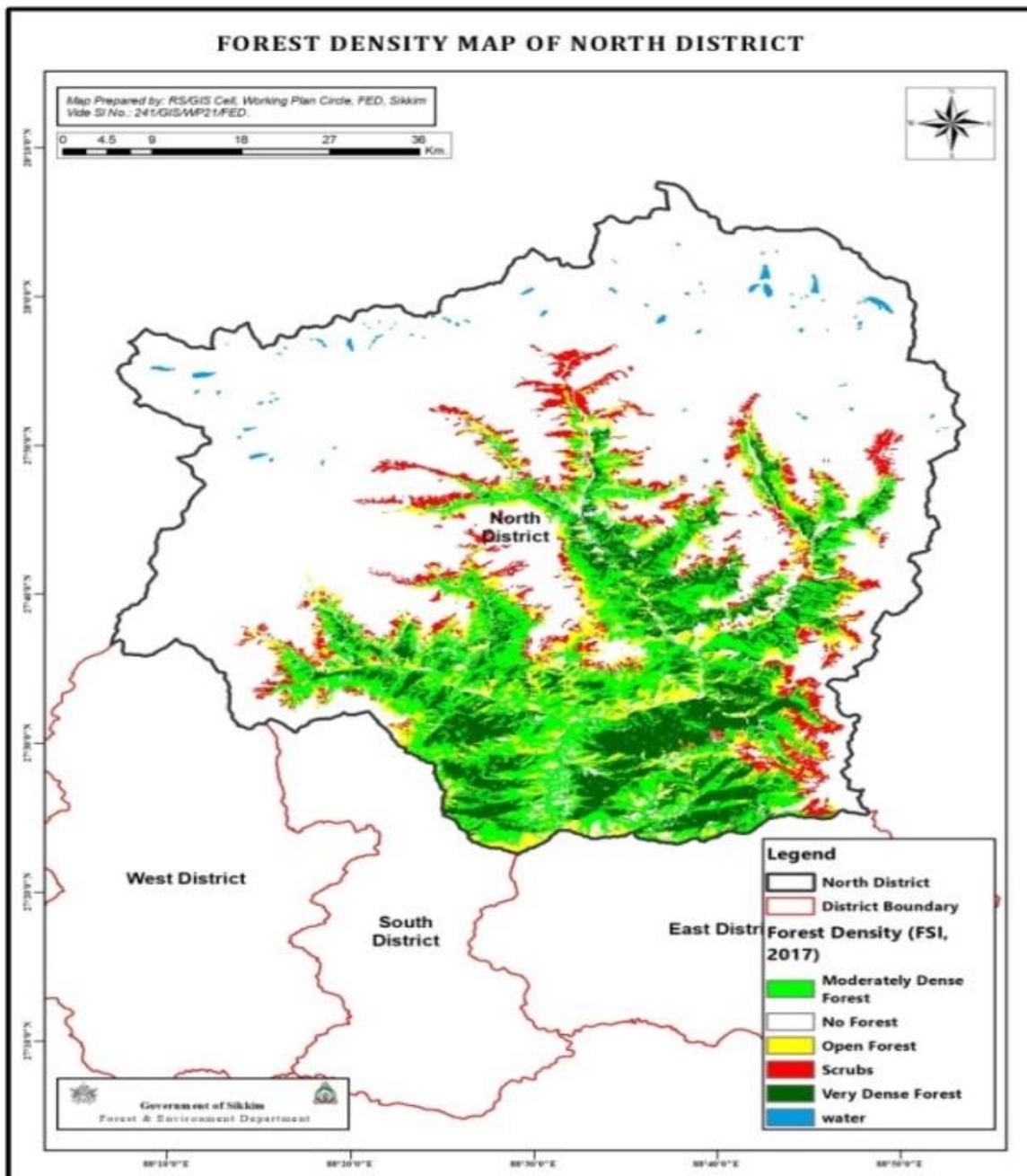
Land use pattern of the state is given below

| Land Use | Area in '000 ho | Percentage |
|--|-----------------|--------------|
| Total geographical area | 710 | |
| Reporting area for land utilization | 442 | 100 |
| Forests | 336 | 76.02 |
| Not available for cultivation | 10 | 2.26 |
| Permanent pastures and other grazing lands | | |
| Land under misc. tree crops & groves | 4 | 0.91 |
| Culturable wasteland | 4 | 0.91 |
| Fallow lands other than current follows | 4 | 0.91 |
| Current follows | 7 | 1.58 |
| Net area sown | 77 | 17.41 |

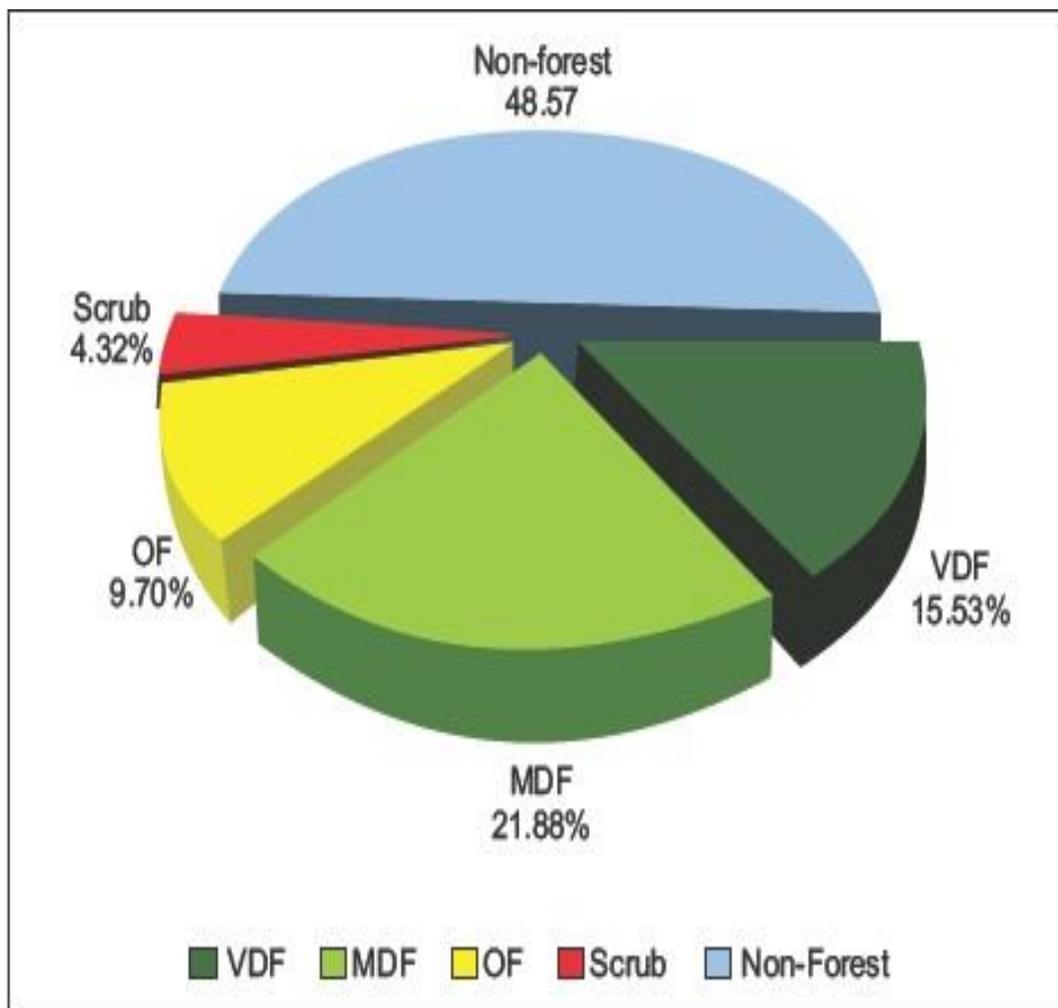
Forest cover

The forest cover (tree cover) in the State, based on interpretation of satellite data of November 2017, is 3,3,42.49km; which is 47.11% of the state's geographical area. In terms of forest canopy density classes, the state has 1,101.96km² moderately dense forest and 688.22 km² open forest. The distribution of forest cover of the state is shown 1.51 km² comparison of the current forest cover (satellite data of Nov 2017) with the previous assessment (satellite data of Dec. 2006) shows that there are light changes in forest cover and its density.

District wise forest cover in different canopy density classes and scrub is shown below.



FOREST COVER



f. Climate

The rainfall patterns for Mangan, of which some data are available, are presented here. The year can be roughly divided into three rainy seasons. Monsoons, which last from June to October, dry season from November to February and the pre-monsoon from March to May. The rainfall data for 6 years 2013-14 to 2018-19 are shown in the below table. From the data, the annual rainfall during this period was about 3000 mm a year. Monsoon months (June to October) account for about 68% of the annual rainfall while the dry months (November to February) account for 4% of the annual rainfall whereas the pre monsoon season (March to May) accounts for 28% of the annual total. June is the rainiest month whereas December is the driest month of the year. During the monsoons in the Himalaya, it rains most at the foothills and the rainfall decreases as you move northward into the high mountains with very scanty precipitation in the rain shadow areas north of the high peaks. Rainfall at places like Jaldhaka and Kurseong (foothills) is very high during the monsoons as compared to Mangan.

| Rainfall at Mangan, North Sikkim 2013-2019 | | | | | | | | | | | | | |
|--|-------|-----|------|------|-----|------|-----|-----|-----|-----|-----|-------|-------|
| Year | April | May | June | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb | March | Total |
| 13-14 | 213 | 560 | 380 | 448 | 301 | 296 | 213 | 65 | 10 | 3 | 40 | 174 | 2703 |
| 14-15 | 160 | 399 | 690 | 523 | 617 | 235 | 27 | 15 | 14 | 19 | 34 | 150 | 2883 |
| 15-16 | 164 | 675 | 659 | 414 | 740 | 264 | 110 | 39 | 52 | 98 | 37 | 275 | 3527 |
| 16-17 | 260 | 437 | 622 | 502 | 323 | 463 | 95 | 0 | 0 | 6 | 25 | 205 | 2938 |
| 17-18 | 277 | 222 | 611 | 403 | 410 | 345 | 179 | 5 | 0 | 11 | 77 | 174 | 2714 |
| 18-19 | 206 | 366 | 665 | 633 | 406 | 951 | 157 | 61 | 16 | 19 | 109 | 220 | 3809 |
| Ave. | 213 | 443 | 605 | 487 | 466 | 426 | 130 | 31 | 15 | 26 | 54 | 200 | 3096 |

The trend is opposite during the winter and pre monsoon season and rainfall is much higher during these months in Mangan than in the foothills or stations further south. Though data is not available, it is expected that precipitation (rain or snow) further North at higher altitudes will be as high if not higher than that in Mangan during these non -monsoon months. The non-monsoon precipitation is primarily driven by Westerlies.

The district suffers intense rain spells when the monsoon trough moves close to the Himalaya (usually during the closing phases of the monsoon). For instance, Mangan recorded 576 mm in 5 days (19 to 23 September 2012) and 661 mm in 6 days (9 to 14 September 2018) and 610 mm in 4 days (24 to 27 June 2020) which caused damage to life and property. The Mangan area recorded a cloudburst (heavy concentrated rain in a very small area due to localized meteorological conditions) on August 1st, 2016 when about 90 mm rainfall fell in about 45 minutes.

The frequency of these large rainfall events seems to be increasing aggravating the vulnerability of the district to landslides. The Mangan Landslide, located in the lower part of the town, which is a translational landslide in the colluviums was reactivated by the September 2012 rains and started accelerating in September 2018 and caused damage to Building and property in 2020.

The June 2020 rains also activated two major debris flows in Barfok and Passingdang. Debris flows are the most destructive type of landslide to life and property in North Sikkim and are usually induced by heavy rains in the shorter but can be caused by other factors in the longer streams which have their sources in snowbound areas. Some of the major glacial lakes are now being monitored by various agencies as Glacial Lake Outburst Flows (GLOF) has historically caused damage in North Sikkim. It has experienced a number of spectacular and damaging rock falls in the recent past. Earthquake induced rock falls caused loss of life and property during the 2011 earthquake and the Mantam, Tingchim and Yumthang rock falls caused property damage though fortunately no lives were lost.

Mangan at an altitude of about 4000' (1200m) has a subtropical climate with summer temperatures crossing 30 degrees centigrade. Winter temperature falls into single digits but never falls below 0 degrees. Villages like Lachen/Lachung which are about 8000' to 9000' (2400 to 2750 m) high are colder by 10 to 15 degrees and have copious winter snowfall.

INTRODUCTION

As per Hon'ble NGT Order dated 26/09/2018 in O.A 360/2018, inventory have been generated for action areas of North Sikkim District, format developed by CPCB "O.A 360 NGT District information plan.xlsx".

APPROACH METHODOLOGY

The data used for preparing District Environment Plan is based on the data provided by all ADC Development (RDD) and Mangan Municipal Councils in the format given by CPCB, as well as data provided by relevant departments viz. Directorate of Mines Geology, Water resource department (WRD), Sikkim state pollution control board (SSPCB), Urban Development and housing department (UD&HD), Medical officer (Health Department) and forest department of Sikkim.

Village Panchayats and Municipal councils have provided the required data (DEP format prescribed by CPCB) regarding prevailing conditions of environment, solid waste management etc. In duly filled format the population data is census data of year 2011 (as per DEP). However, the action plan for each component of theme has been delineated considering the population of year 2018 as well as projected population for next.

The detailed duly filled formats for all Municipal councils and Village Panchayats are enclosed as Annexure and the outcome of the inventory is being discussed in subsequent paragraphs.

2.0 Indicative Gap Analysis and Action Plans for complying with Waste Management Rules

(i) Solid Waste Management

(a) Current Status related to Solid Waste Management

Solid Waste Management is one of the most important services for maintaining the quality of life in urban as well as rural areas and for ensuring better standards of health and sanitation. Due to rapid growth in population of India, this service falls short of the desired level as the systems adopted are inefficient. Institutional weakness, shortage of human and financial resources, improper choice of technology, inadequate coverage and lack of short- and long- term planning are responsible for the inadequacy of services.

Solid waste management has emerged as an urgent issue to both human settlement and the environment because of its evolving nature. Century old method of managing solid waste has resulted in numerous human rights and environment violations. Solid Waste Management Rules, 2016 clearly defines a decentralized approach to waste management. However, the concept of Decentralized approach to solid waste management is not new to Sikkim. Ministry of Tourism, Government of India along with the support of UNDP initiated Endogenous Tourism projects across India during 2006-08. Lachen in North Sikkim was one of the villages identified under this national level project. Lachen with the support of Endogenous Tourism Project followed Zero Waste to address the waste issue in the tourism destination. It was improved and expanded with the support of Gram Panchayat Unit and Local NGOs. It was the first initiative of Zero Waste in Sikkim. Many NGOs and other community-based organizations in Sikkim who were already working on the issue of waste, geared up and consolidated the state level campaign to Zero Waste Sikkim where Government of Sikkim joined the movement. The Mountain Initiative, WWF – India, KCC- Yuksam and Sikkim were forefront of the movement to build Zero

District Environment Plan [North]
Waste Sikkim.

- * North district village called Lachung with is the gate way for the top tourist destination in Sikkim has banned the entry of PET bottles and decided to installed waste dispensers in every Hotels of north District.
- * Monastery has banned the use of plastic bottles/pet bottles and offering wrapped in the plastic packets and for the devotees the monastery has decided to install waster dispensers.



Solid wastes, which include bio-medical, municipal and hazardous wastes are a major concern and an eye sore in the urban areas. Unregulated disposal of wastes may affect the quality of groundwater in the area through infiltration of water-soluble substances.

The Ministry of Environment, Forest & Climate Change, and Govt. of India has notified SWM Rules 2016. As per these rules, the role of local body has been specified in rule 15 of SWM 2016, and as per rule 16 of the said rules Sikkim State Pollution control board shall enforce these rules through local bodies in respective jurisdiction.

North Sikkim District comprises of 1 Municipal Councils and 25 Village Panchayats. The quantity of waste generated by them is given in table below.

Waste generation by Talukas of North Sikkim District

| | Urban Local bodies | No. of Wards | No. of Households | Population | Solid Waste Generated per day |
|---|---------------------------|---------------------|--------------------------|-------------------|--------------------------------------|
| 1 | Mangan Nagar Panchayat | 5 | 1054 | 4644 | 700kg per day |

| | Local Bodies | No. of Village Panchayats / Blocks | No. of Households | Population | Solid Waste Generated per day |
|---|-----------------------------|---|--------------------------|-------------------|--------------------------------------|
| 2 | Block/Taluk/ Mandal Tehsils | 4 | 8629 | 35273 | 1127.00 kg/day |
| 3 | Village/Gram Panchayats | 25 | 8629 | 35273 | 1127.00 kg/day |

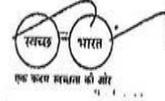
In line with the SWM Rules, 2016 issued by the Ministry of Environment and Forests, Government of India, the solid waste is managed by the North Sikkim District efficiently. The door-to-door waste collection system is efficient in the North Sikkim district. In all Municipal Councils it is achieved as 100%.

In all Municipal Council source segregation is in practice and the segregated wet waste is collected daily and dry waste twice in a week. While in village Panchayats it is picked up daily or alternate day else on demand.

Auto tippers are the primary collection vehicles used for collection of household waste, which are loaded at predestinated nodal point in the wards of MCs. The Compactor/ mini trucks collect the waste from the hotels, restaurants and marriage halls directly. There is no uniform system followed by all the Village Panchayats in managing the solid waste. In Village Panchayats, waste collection and management system vary based on their topographical and physiological setup.

Dry waste is taken to landfill facility at Chadey. All the recyclable waste from the Municipal Council is transported to dry waste processing plant through a collecting agency and further segregated and sold to the vendors. However, non-recyclable wastes need to be baled and transported to cement factories after baling. This will be completed by December 2021.

As per honorable NGT order dated 15.07.2019 in O. A. No 710-713/2017, O.A. No. 606/2018 the duties and responsibilities of various stake holders to make the solid waste management plan, which should be successful and implementable.



RURAL MANAGEMENT & DEVELOPMENT DEPARTMENT
GOVERNMENT OF SIKKIM
GANGTOK - 737101

No: 192/RM&DD

Dated: 16/12/2016

CIRCULAR

Different Initiatives are being taken by various GPUs for collection of Solid waste in the villages, It has been noticed that the GPUs are purchasing large numbers of Plastic dustbins and installing them for collecting solid waste at the community level and it is further presumed that other GPUs will also be procuring such Plastic dustbins soon. It is also seen that these plastic dustbins are hard to maintain and becomes heavy after they are filled up, leading to more filth in the area.

As an alternative eco friendly bamboo baskets (DOKOs) which are locally produced have been installed by many GPUs. These locally produced bamboo baskets (DOKOs) are found to be cleaner and easier to maintain, cost effective and eco friendly. Buying and using local eco friendly products would also help boost the local economy.

Henceforth all districts/ blocks and Gram Panachayat Units are directed not to procure/ install plastic dustbins for collection of waste in village areas and instead procure and install the locally available bamboo baskets (DOKO) in its place.

Sd/-
(D.R.NEPAL)
SECRETARY-RMDD

Copy to

1. All district collectors
2. Principal P.S to Principal Secretary to HCM
3. Principal P.S to Chief Secretary
4. All ADC (developments)
5. All BDOs
6. O/c

SECRETARY-RMDD

Circular from the Office of the Secretary, RM & DD to use locally made, eco-friendly 'Dokos'

a. Identification of gaps and Action Plan:

| Sl.No | Action points for villages / blocks/town municipalities /City corporations | Identification of gap | Action Plan | Responsible agencies | Timeline for completion of action plan |
|-----------|--|--|--|---|--|
| 1. | Segregation | | | | |
| (i) | Segregation of waste at source | 1. 100% collection of solid waste from various sources of generation household and bulk waste etc. | 1. To encourage individuals on ill effects of waste, to mobilize the community to comply on SLW action plan | Gram Panchayat / RDD/ Mangan Nagar Panchayat. The Department of Environment | 3 Months |
| 2. | Sweeping | | | | |
| (i) | Manual Sweeping: Not initiated in rural areas. | Example: Sweeping along the roads & streets 1. % or length of road not covered for regular sweeping. 2. Gaps in manpower 3. Gap in availability of sweeping tools/equipment. 4. Availability of suitable PPEs | 1. Action plan for Reducing gap: Volunteerism to keep village / town clean and green 2. 100% manual sweeping twice a day(morning/night) sweeping tools used (broomstick with handle, handle cart, fluorescent jacket) | Gram Panchayat / RDD/Mangan Nagar Panchayat | Continuous process |
| | | - Approx. 80 % or length of road not covered for regular sweeping - Gaps in man power - Gap in availability of sweeping tools/equipment: Sanitary Workers not available in rural areas Availability of suitable PPEs: Not available | Including method cleaning, frequency of sweeping, etc. :is having regular sweeping system, rural areas practicing volunteerism | Nagar and Gram Panchayat | 4-5 Months |
| (ii) | Mechanical Road Sweeping & Collection: Not initiated | Gaps if any in achieving targeted area or length of road identified for Mechanical Road Sweeping. : Not available | Projected growth/intended action plan with timelines: Possibilities can be taken place in urban areas. | District Administration | 6-8 Months |
| 3. | Waste Collection | | | | |
| (i) | 100% collection of solid waste: Initiated_ | Whether 100% collection Achieved? Not Achieved | Action plan to improve existing Collection: | District ULBs and RLBs | 3 Months |

District Environment Plan [North]

| | | | | | |
|-------|---|--|---|-------------------------|----------|
| | | | <ol style="list-style-type: none"> 1. Rural Areas also to practice cent percent waste collection 2. 100% collection of solid waste can be initiated. 3. Composting is highly suitable in rural areas for waste management. | | |
| (ii) | Arrangement for door-to-door collection: | <ol style="list-style-type: none"> 1. Arrangement for door to door is Partially covered; 2. 25 % of blocks/wards covered | <ol style="list-style-type: none"> 1. Maximum villages are not covered with door-to-door collection, 2. 100% arrangement of door-to-door collection can be covered. 3. It also maintains proper records for door-to-door collection. 4. Minimization of waste 5. Circulate pamphlets to citizens to generate public awareness on the necessity of door-to-door collection. | Gram Panchayat | 6 Months |
| (iii) | Waste Collection trolleys with separate Compartments: | <ol style="list-style-type: none"> 1. All blocks have covered 2. Check availability and adequacy and if it needs upgradation: Need for upgradation | Action plan for procurement if required: Needs to improved and sufficient Resource Recovery Centres. | District RDD | 6 Months |
| (iv) | Mini Collection Trucks with separate compartments: | <p>Check if adequate or needs upgradation or not required:</p> <ol style="list-style-type: none"> 1. Available in some villages 2. Its need of upgradation | <p>Action plan for procurement if required</p> <ol style="list-style-type: none"> 1. Providing such facilities by procuring waste collection vehicle to each Conner of the district | District Administration | 6 Months |

District Environment Plan [North]

| | | | | | |
|-----------|---|---|--|---------------------------------------|-----------|
| (v) | Waste Deposition centers (for domestic: | <ol style="list-style-type: none"> 1. Compost Pits are facilitated by the Gram / under different central/ state schemes Number of deposition centres required and nos available: 2. No of Waste Deposition Centres: 10 3. No. of centres required: 15 | <ol style="list-style-type: none"> 1. Details of existing practice and scope for improvement 2. As per the requirement, number of waste deposition centre can be increased. 3. Compost pits can be promoted in all rural areas. | District Administration | 4 Months |
| | Hazardous wastes: | <ol style="list-style-type: none"> 1. Partly Available in Gram Panchayat or Any alternate Arrangement 2. Rag pickers are permitted to collect the same | Implement adequate system: not initiated | District Administration | 6 Months |
| 4. | Waste Transport | | | | |
| (i) | Review existing infrastructure for waste Transport. | <ol style="list-style-type: none"> 1. Transportation is carrying out by some Gram Panchayat with the use of waste collection van/ truck 2. Check (i) whether existing fleet is adequate (ii) check whether segregated waste transport Possible, etc. Such facilities to be extended in all the rural areas also | Action plan for short comings identified. : in compliance to the guidelines of Central and State Government the district is improving its short coming | District Administration | 6 Months |
| (ii) | Bulk Waste Trucks: | [check adequacy] Insufficient | [action plan for procurement if required] : Procurement can be done in need based | District Administration | 6 Months |
| (iii) | Waste Transfer points: | [check whether available/ adequacy]: Yet not practiced | Action plan for installation if required] : Construction can be done in need based | District Administration | 6 Months |
| 5. | Waste Treatment and Disposal | | | | |
| (i) | Wet-waste Management: On-site composting by bulk waste generators (Authority may decide on requirement as per Rules): | <ol style="list-style-type: none"> 1. Household level and community level compost pits are Available 2. Whether number of bulk waste generators identified for installation: Yet not practiced | Action for getting onsite composting plants commissioned: Can be improved as per the needs and availability of resources | District Administration | 6 Months |
| (ii) | Wet-waste Management: Facility(ies) for central Biomethanation /Composting of wetswaste: | <ol style="list-style-type: none"> 1. Households and community based rural composting is in practices. 2. Whether facility exists/functional / Needs upgradation? Need to be upgradation | If not action plan for developing /upgradation of bio-methanation or composting facility: Such facility is being developing through convergence with | District Rural Development Department | 10 months |

District Environment Plan [North]

| | | | | | |
|--------|---|--|--|---|----------|
| | | | different departments and government institutions | | |
| (iii) | Dry-Waste Management: Material Recovery for dry-waste fraction: | 1. Initiated Whether MRF facility exists? / Is there any arrangement to sending the dry-waste to any Common MRF or sent to Waste to energy plant or % dry-waste converted as RDF or Need to set-up own Waste to Energy plant? | Action plan for use of dry segregated waste in MRF operation: to be extended in ULBs | District Administration | 6 Months |
| (iv) | Disposal of inert and non-recyclable wastes: Sanitary Landfill: | 1. Initiated Does the agency still disposing waste in dumpsites? Whether sanitary landfill available? / Plan for constructing sanitary landfill or arrangement with ULBs: identification of landfill completed | Action plan (i) to construct sanitary landfill If required: required for rural areas (ii) Action plan to minimize land filling: sufficient Resource Recovery Centres can be initiated | District Administration | 6 Months |
| (v) | Remediation of historic / legacy dumpsite: | 1. Needed Whether existing old dumpsite if any required Remediation as per rules?: Needed | Action plan for remediation of legacy / historic dumpsite. : Sanitary Landfill to be constructed | | |
| (vi) | Involvement of NGOs: | 1. N.A. Whether involvement of NGOs envisaged | NGOs can be involved for management of solid waste campaign | | |
| (vii) | EPR of Producers: Linkage with Producers /Brand Owners: | Not available As per rules, producers and brand-owners should facilitate in collection of packaging waste | Action plan for linkage of all producers/brand owners or their PROs for collection of plastic waste | | |
| (viii) | Authorization of Waste Pickers: | Initiated, Yes | List of authorized waste pickers should be available Upgradation | | |
| (ix) | Preparation of own by-laws to comply with SWMRules2016 | Yes, Implementation of By-laws Submission to the concern authority | If not prepared action plan for preparation of by-laws which may be applicable in cantonment Board jurisdiction | Each GPU has already complied the By laws | 1 Month |

[Action plan should cover all village Panchayats/blocks/town municipalities/City corporations. Action plan need not be prepared in Tabular form as above. Action plan may dwell upon other relevant action points not mentioned in above table. If required budgetary requirement and provisions may also be mentioned]

(ii) **Plastic waste management**

(a) **Current Status related to Plastic Waste Management**

Present Scenario in the District

The plastic waste generated in North Sikkim is around 23% of dry waste. Around 0.26 metric tons of plastic waste generate per day in whole state Sikkim as per report. Being the tourist destination, the generation of dry waste and plastic waste is comparatively more in the district. Major tourist destinations such as Gurudongmar, Yumthang valley, etc., are located in North district of Sikkim.

Plastic waste to be managed in accordance with the Plastic Waste Management (Amendment) Rules, 2018 with an emphasis on the 3R/4R principles of Reduce, Reuse and recovery. Segregated dry wastes from Municipal Councils are dumb in land fill located at Chadey 8km from the town of Mangan. Lachung is the first village to ban on entry of plastic bottles.



Mangan Nagar Panchayat Instals Pet Bottle Shredding Machine.

MANGAN NAGAR PANCHAYAT INSTALS PET BOTTLE SHREDDING MACHINE.

As part of the Nagar Panchayat's efforts to find a solution to the Plastic waste management problem in the city, a pet bottle shredder machine which was first in the state inaugurated today at Mangan Bazaar by Minister Roads & Bridges Department cum area MLA Lachen Mangan, Samdup Lepcha in presence of DC North, TT Kaleon, Chairman Welfare Commission, Nim Tsh Lepcha, Additional Pol Secretary to HCM, Tshering Wangyal Bhutia, MEO, Tempo Tashi Bhutia, officials and Councilors.

The shredding machine is open to be used by citizens for processing the PET bottles into smaller flakes or pieces making the waste management easier and sustainable. It is one of its kinds in the state Sikkim. Urban Local Body of Mangan has initiated the installation of the 1st PET bottles shredding Machine in the whole State thereby inspiring other ULBs.

The SPCB has granted 'registration to 35 plastic manufacturing units under rule 13 of Plastic Waste Management Rules, 2016 amended in 2018. According to new notification given below.

4 THE GAZETTE OF INDIA: EXTRAORDINARY [PART II—SEC. 3(i)]
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
NOTIFICATION

New Delhi, the 12th August, 2021

G.S.R. 571(E).—Whereas the draft rules to amend the Plastics Waste Management Rules, 2016, were published in the Gazette of India, Extraordinary, dated the 11th March, 2021 vide notification number

GSR 169 (E), inviting objections and suggestions from all persons likely to be affected thereby within a

period of sixty days from the date copies of the Gazette containing the said draft rules were made available

to the public;

And whereas, copies of the Gazette containing the said draft rules were made available to the public on the 11th March, 2021;

And whereas, objections and suggestions received within the aforesaid period have been duly considered by the Central Government;

Now, therefore, in exercise of the powers conferred by sections 6, 8 and 25 of Environment (Protection) Act 1986, (29 of 1986), the Central Government hereby makes the following rules to amend the Plastic Waste Management Rules, 2016, namely:-

1. (1) These rules may be called Plastic Waste Management (Amendment) Rules, 2021.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Plastic Waste Management Rules, 2016 (hereinafter referred to as the said rules), in rule 2, in sub-rule (1), after the word "Importers", the words, "brand-owner, plastic waste processor (recycler, co-processor, etc.)" shall be inserted.

3. In the said rules, in rule 3,

(i) after clause (n), the following clause shall be inserted, namely:-

„(na) "Non-woven plastic bag" means Non-woven plastic bag made up of plastic sheet or web structured fabric of entangled plastic fibers or filaments (and by perforating films) bonded together by mechanical or thermal or chemical means, and the "non-woven fabric" means a flat or tufted porous sheet that is made directly from plastic fibres, molten plastic or plastic films;"

(ii) after clause (q), the following clause shall be inserted, namely: -

„(qa) "Plastic waste processing" means any process by which plastic waste is handled for the purpose of reuse, recycling, co-processing or transformation into new products;"

(iii) after clause (v), the following clauses shall be inserted, namely: -

„(va) "Single-use plastic commodity" mean a plastic item intended to be used once for the same purpose before being disposed of or recycled;"

„(vb) "Thermoset plastic" means a plastic which becomes irreversibly rigid when heated and hence cannot be remoulded into desired shape;"

„(vc) "Thermoplastic" means a plastic which softens on heating and can be moulded into desired shape; "

4. In the said rules, in rule 4, -

(a) in sub-rule (1),-

(i) for the words "importer stocking", the words "import, stocking" shall be substituted;

(ii) in clause (c), for the words "fifty microns in thickness", the words, figures, letters and brackets "seventy-five microns in thickness with effect from the 30th September, 2021 and one hundred and twenty (120) microns in thickness with effect from the 31st December, 2022" shall be substituted;

(iii) in clause (h), after the words, "carry bags", the words "and commodities" shall be inserted;

[भाग II—खण्ड 3(i)] भारतकारा िपत्र : असाधारण 5

District Environment Plan [North]

(iv) in clause (h), after the words, “compostable plastic carry bags”, the words “or commodities or both” shall be inserted;

(v) after clause (i), following clause shall be inserted, namely: -

“(j) non-woven plastic carry bag shall not be less than 60 Gram Per Square Meter (GSM) with effect from the 30th September, 2021.”;

(b) after sub-rule (1), the following sub-ules shall be inserted, namely:-

“(2) The manufacture, import, stocking, distribution, sale and use of following singleuse plastic, including polystyrene and expanded polystyrene, commodities shall be prohibited with effect from the 1st July, 2022:-

(a) ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene [Thermocol] for decoration;

(b) plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films around sweet boxes, invitation cards, and cigarette packets, plastic or PVC banners less than 100 micron, stirrers.

(3) The provisions of sub-rule (2) (b) shall not apply to commodities made of compostable plastic.

(4) Any notification prohibiting the manufacture, import, stocking, distribution, sale and use of carry bags, plastic sheets or like, or cover made of plastic sheets and multilayered packaging and single-use plastic, including polystyrene and expanded polystyrene, commodities, issued after this notification, shall come into force after the expiry of ten years, from the date of its publication”.

5. In the said rules, in rule 5, in sub-rule (1), in clause (d), for the figures “2000”, the figures “2016” shall be substituted.

6. In the said rules, in rule 6, in sub-rule (2), after clause (a), following clause shall be inserted, namely: -

“(aa) ensuring that the provisions of these rules, as amended, are adhered to;”.

7. In the said rules, in rule 7, in sub-rule (1), after clause (a), following clause shall be inserted, namely : -

“(aa) ensuring that the provisions of these rules, as amended, are adhered to;”.

8. In the said rules, in rule 9, in sub-rule (1), after the words, “local body concerned”, the words “as per guidelines issued under these rules from time to time” shall be inserted.

9. In rule 11, sub-rule (1), -

(i) after the words “plastic carry bag”, the words, “plastic packaging” shall be inserted;

(ii) in clause (a), after the word “manufacturer”, the words “producer or brandowner” shall be inserted, and after the words “carry bag”, the words “and plastic packaging used by the brand owner” shall be inserted;

(iii) in clause (b), after the words “multilayered packaging”, the words “excluding multi-layered packaging used for imported goods” shall be inserted;

(iv) in clause (c), after the words “name and certificate number”, the words “of producer” shall be inserted.

10. In rule 12, -

(i) in sub-rule (2), after the words “waste generator,” ,the words “restriction or prohibition on” shall be inserted;

(ii) in sub-rule (3), after the words “waste generator,” ,the words “restriction or prohibition on” shall be inserted.

6 THE GAZETTE OF INDIA : EXTRAORDINARY [PART II—SEC. 3(i)]

11. In rule 13, in sub-rule (1), after the words “Union Territory concerned”, the words “or the Central Pollution Control Board” shall be inserted.

[F. No. 17-2-2001 (Pt)-Part I -HSMD]

NARESH PAL GANGAWAR, Jt. Secy.

Note: The principal rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Subsection

(i), *vide* number GSR 320 (E), dated the 18th March, 2016 and subsequently amended *vide* notification number GSR 285 (E), dated the 27th March, 2018.

SIKKIM



GOVERNMENT **GAZETTE**

**EXTRAORDINARY
PUBLISHED BY AUTHORITY**

Gangtok Saturday 28th May, 2016 No. 194

GOVERNMENT OF SIKKIM
HOME DEPARTMENT
GANGTOK

No: 25/Home/2016.

Dated: 19/05/2016

NOTIFICATION

There has been rampant use of packaged drinking water during departmental meetings and functions, which is creating a huge quantity of garbage which adds to the burden of the landfill.

Therefore, in order to reduce creation of garbage in the form of used drinking water plastic bottles, it is notified that the packaged drinking water bottles may not be used during any government meetings or functions. As an alternative, it is suggested and encouraged to all the departments to use filtered water or water from large reusable water dispensers or to use reusable water bottles in government functions, thereby, avoiding the use of packaged/bottled drinking water.

By order and in the name of the Governor of Sikkim.

Alok K. Shrivastava, IAS
Chief Secretary
Government of Sikkim
File No. GOS/RMDD/2015-16/157/SAN

Notification on ban on use of packaged drinking water during Departmental meetings and functions.

| | | |
|--|---|-------------------|
| SIKKIM | | |
| GOVERNMENT |  | GAZETTE |
| EXTRAORDINARY PUBLISHED BY AUTHORITY | | |
| Gangtok | Saturday 28 th May, 2016 | No. 195 |
| GOVERNMENT OF SIKKIM HOME DEPARTMENT GANGTOK | | |
| No: 26/ Home/2016. | | Dated: 19/05/2016 |
| NOTIFICATION | | |
| <p>Whereas the Government has been initiating various measures to manage the waste and maintain a clean environment, it has been found that a lot of disposable styrofoam items are being rampantly used not only in the bazaar areas but also in the rural areas. The result is that a huge quantity of municipal waste is created in the form of used Styrofoam and other disposable products. These products are environmentally hazardous and occupy a huge space in our landfill. It is also not healthy to eat especially hot items in the styrofoam containers.</p> | | |
| <p>Therefore, the government is pleased to ban the sale and use of disposable items, such as, cups, plates, spoons, containers etc made from Styrofoam throughout the state with immediate effect.</p> | | |
| By order and in the name of the Governor of Sikkim. | | |
| <p>Alok K. Shrivastava, IAS Chief Secretary Government of Sikkim File No. GOS/RMDD/2015-16/157/SAN</p> | | |
| <hr/> <small>S.G.P.G. -195/ Com. 6/Gazette /200 Nos./ Dt:-28.05.2016.</small> | | |

Notification on ban on sale and use of Styrofoam products

SIKKIM

GOVERNMENT



GAZETTE

EXTRAORDINARY PUBLISHED BY AUTHORITY

Gangtok, Wednesday, 8th July, 1998

No. 145

GOVERNMENT OF SIKKIM

URBAN DEVELOPMENT & HOUSING DEPARTMENT GANGTOK.

No. GOS/UD&HD/97-98/6(85)

Dated: 4th June 1998

NOTIFICATION

In exercise of the powers conferred by sub-section (1) of Section 8 of the Sikkim (Repeal and Miscellaneous Provisions) Act, 1985, the State Government hereby makes the following rules further to amend the Sikkim Trade Licence and Miscellaneous Provisions Rules, 1985, namely:

(1) These rules may be called the Sikkim Trade Licence and Miscellaneous Provisions (Amendment) Rules, 1998.

(2) They shall come into force on the date of their publication in the Official Gazette.

In Rule 2 of the Sikkim Trade Licence and Miscellaneous Provisions Rules, 1985 (hereinafter referred to as the said rules), after clause (m), the following clause shall be added, namely: "(n) "Non-biodegradable garbage" means the garbage as defined under clause (e) of section 2 of the Sikkim Non-Biodegradable Garbage (Control) Act, 1997". In Form No. II of the said rules, under the heading CONDITION OF LICENCE:

(a) for item 9, the following item shall be substituted, namely:

" That you shall maintain two separate empty tins for the disposal of biodegradable garbage and non-biodegradable garbage respectively. The tin for the biodegradable garbage shall be painted green and the tin for the non-biodegradable garbage shall be painted black. The Medical and Pharmaceutical Clinics shall, in addition, keep a separate tin which shall be painted yellow, for medical and clinical waste, and such waste shall, under no circumstances, be deposited in any of the other two tins."

(b) The existing items 10, 11, 12 and 13 shall be renumbered as items 11, 12, 13 and 14 respectively, and

(c) after item 9, the following item shall be inserted, namely:

10. That you shall not deliver any goods or materials purchased or otherwise to any person, firm shop, company or any other agency or organisation in plastic wrappers or plastic bags"

L.B. RAI Secretary
Urban Dev. & Housing Deptt.
Govt. of Sikkim

Notification banning use of all single-use plastic wrappers and plastic bags

| a | Urban Local bodies | Estimated quantity of Plastic Waste Generated per day |
|---|---|---|
| 1 | Municipal corporations (Nagar Nigam or Maha Nagar Palika) | 0.19 (for the whole state) |
| 2 | Municipalities (Nagar Palikas) | 0.19 (for the whole state) |
| 3 | Nagar panchayats (Town area Councils) | 0.19 (for the whole state) |

| b | Local Bodies | Plastic Waste Generated per day |
|---|-----------------------------|---------------------------------|
| 1 | Block/Taluk/ Mandal Tehsils | 0.07 (for the whole state) |
| 2 | Village/Gram Panchayats | 0.07 (for the whole state) |

(b) Identification of gaps and Action Plan:

| Sl. No. | Action points for village Panchayats/block s/municipalities /corporations | Identification of gap | Action Plan | Responsible Agencies | Target time for Compliance |
|---------|--|--|--|--|----------------------------|
| 1. | Door to Door collection of dry waste including PW | partial 50% | 1. If not 100 %, action plan for door-to-door collection of SW: 2. Land identification in under progress for construction of RRC and PWM unit | Block | 6 Months |
| 2. | Facilitate organized collection of PW at Waste transfer point or Material: | 1. Partly covered This infrastructure is linked to SW management. May check gaps with respect to: 2. Plastic Waste Collection are not well setup due to lack of PWM units | Within the district out line specific plans for Each village Panchayat/block/municipality/ Nagar Panchayat: need to be setup at least one within the Block. Proposal for same has been submitted to State Authority | Identify agencies at local and district level to Implement And monitor: District Administration and VWSC Committee in villages | 2023 |
| | Recovery Facility: | <ul style="list-style-type: none"> • Availability of transfer points and material recovery facility: Initiated • Involvement of informal sector /NGO.: Initiated • Registering waste pickers: | Rag pickers to be registered. Linkage with PW recycler to be done. | District Administration | 2023 |

District Environment Plan [North]

| | | | | | |
|----|---|--|--|---|--------------------|
| | | <p>Not started</p> <ul style="list-style-type: none"> • Linkage with PW recyclers: Not started • Involvement of producers and brand-owners: Not started | | | |
| 3. | PW collection Centres | <ol style="list-style-type: none"> 1. Local Bodies may set-up own centres and also involve producers and brand-owners or their PROs to facilitate setting up of collection centres: 2. Initiated and proposal has been submitted to state authority. | <p>Plastic waste collection centre should be established in adequate numbers.</p> <p>Coordination with State Urban Department may be necessary:</p> <ol style="list-style-type: none"> 1. Initiated and proposal has been submitted to state authority | Urban Development Department, Rural Development Department | 2023 |
| 4. | Awareness and education programs implementation | <p>Review existing gaps in creating awareness among public for minimizing and recycling PW:</p> <ol style="list-style-type: none"> 1. SHGs/ NGOs are mobilized to produce waste to useful products | <p>Education through mass media, schools, Producer / brand owner campaigns and other channels:</p> <ol style="list-style-type: none"> 1. Green Mission, Awareness & Training on SLWM is provided | District Administration | Continuous process |
| 5. | Access to Plastic Waste Disposal Facilities | <p>Check if District has access to PW recycling /utilization or disposal facilities: Initiated</p> | <p>Check if PW recycling facilities available at reasonable distance; Channel for sending PW</p> <p>Collected to cement plants for processing; Availability of waste plastic oil producing facilities; Linkage with PWD for usage of PW in road making. Action plan at district should involve Urban and Rural Local bodies: Not Started</p> | State Pollution Control Board, Urban Development Department, Rural Development Department | 2023 |

(ii) C & D Waste Management

a. Current Status related to C & D Waste

The Construction & Demolition (C & D) Waste: The waste comprising of building materials, debris and rubble resulting from construction, re-modeling, repair and demolition of any civil structure produced in the district is presently being dumped on Roadside and mostly filled in low lying areas.

***Data not Available**

| Details of Data Requirement | Present Status |
|---|----------------|
| Total C & D waste generation in MT per day (As per data from Municipal Corporations/Municipalities) | Not Assessed |
| Does the District have access to C & D waste recycling facility? | Not available |

b. Identification of Gaps and Action Plan:

| S. No. | Action points for blocks / town municipalities/ City corporations | Identification of Gaps | Action Plan | Responsible agency | Timeline for completion of action plan |
|--------|---|---|---|--|--|
| 1. | Arrangement for separate collection of C&D waste to C&D waste deposition point. | Not available Check gaps w.r.t: - Separate collection point of C&D Waste - Identification of common C&D waste deposition points : Collection unit not available | Action plan for every local body in district. District may identify common C & D waste deposition points: Yet not estimated | District Administration, Forest and Environment Department | |
| 2. | Whether local authority have fixed user fee on C & D waste and Introduced permission system for bulk waste generators who generate more than 20 tons or more in one day or 300 tons per project in a month? | Not Estimated Check gaps with respect to: - Local by-laws to pay user fee - Implementation of a system to permit bulk generators (>20 tons in one day or 300 ton per project): Collection unit not available | Common by-laws may be implemented in District. Local C&D waste management plans can be integrated to develop common collection and recycling facilities | District Administration, Forest and Environment Department | |
| 3. | C & D recycling Facility: | Not available Check whether district has any C & D waste recycling facility: Not available | Action plan for setting up C & D recycling facility in the District or tie-up with any other district or ULB for setting up common facilities. Plan should ensure viable operation of C & D plant including assured market For C & D products.: to be initiated | District Administration, SPCB, UDD, GOS | |

District Environment Plan [North]

| | | | | | |
|----|--|---|--|---|--|
| 4. | Usage of recycled C & D waste in non-structural concrete, paving blocks, lower layers of road pavements, colony and rural roads: | Not available Is there any policy on usage or promotion on usage of C & D waste? Not available | Local authority may make give appropriate incentives on usage of C & D waste. A % of usage in public works may be specified/ any Other scheme; to be initiated | District Administration, All Govt. Departments, UDD & SPWD, GOS. Commerce & Industries Deptt. | |
| 5. | ICE on C & D Waste Management: | Initiated Is there any sustained system of creating awareness created among local communities.: No such system lunched | Action plan for awareness and education | District Administration | |

[Action plan for C & D waste management should cover all village Panchayats/blocks/town municipalities/City corporations. Action plan need not be prepared in Tubalur form as above, however all the components mentioned should be addressed for overall C & D waste management].

Action plan may dwell upon other relevant action points not mentioned in above template. If required budgetary requirement and provisions may also be mentioned.

(iii) Biomedical Waste Management

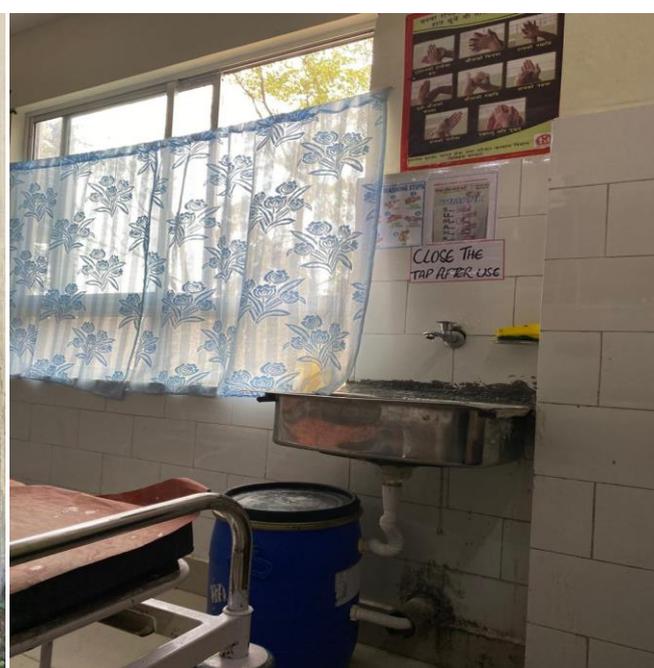
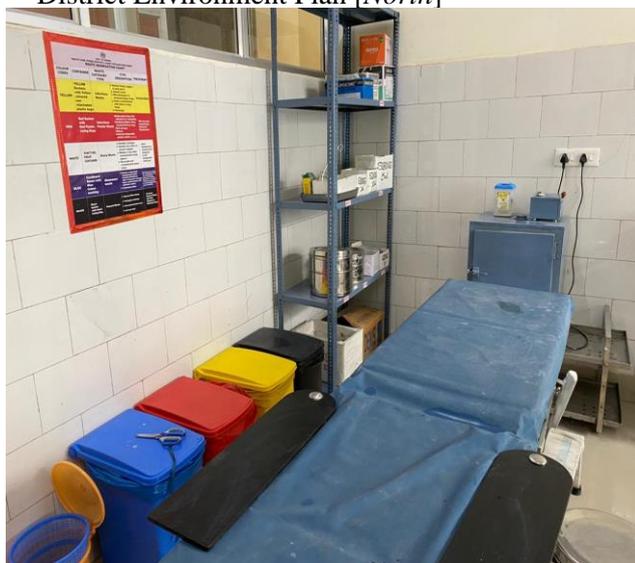
a. Current Status related to Biomedical Waste

Biomedical Waste' (BMW) means any waste, which is generated during the diagnosis, treatment or immunization of human beings or animals or research activities.

Health Care Facilities (HCFs') in the State generate about 35 kgs of BMW per day and are being disposed-off as per the provision of the Bio-medical Waste Rules, 2018. The Health Care Facilities (HCFs') are disposing the waste generated in (i) Deep-burial pits, (b) Encapsulation pits after treatment using Autoclave/disinfection, (c) Shredding.

The North Sikkim District commissioned incinerator of 5 Kg/day at Mangan District Hospital.

District Environment Plan [North]



Biomedical Waste Management in North Sikkim District

| Inventory of BMW in the District | Quantity |
|--|---|
| Total no. of Bedded HealthCare Facilities | 103 |
| Total no. of non-bedded HCF | 5 |
| No. of HCFs authorized by SPCBs/PCCs | 108 |
| No of Common Biomedical Waste Treatment and Disposal Facilities (CBWTFs) | NOT ESTABLISH YET IN THE STATE |
| Capacity of CBWTFs | [in Kg/day] |
| No. of Deep burials for BMW if any | 1 - District Hospital, 5- PHC, 19- PHSC=25 |
| Quantity of biomedical waste generated per day | 31 kg per day (11225 kg per annum) approx. |
| Quantity of biomedical waste treated per day | 5 Kg/day for recycling, rest disposed off in incinerator and sharp pit. |

a. Identification of Gaps and Action Plan:

| S. No | Action points | Gaps | Action Plan | Responsible agency | Timeline for completion of action plan |
|-------|--|--|---|---|---|
| 1. | Inventory and Identification of Health Care Facilities | Checks whether all HCFs including, clinics, hospitals, veterinary hospitals, Aayush, animal houses etc, generating biomedical waste area identified and authorized by SPCBs/PCCs. | <ol style="list-style-type: none"> Updating of Inventory and Authorization of HCFs by SPCBs/PCCs. Authorization and annual report submitting every year by all health care facilities under North Sikkim to SPCB, Gangtok, East Sikkim. Every year (Annually from December to January) | District Hospital Mangan, PHC, PHSC, Department of Health & Family Welfare, State Pollution Control Board | 2023 |
| 2. | Adequacy of facilities to treat biomedical waste | <ol style="list-style-type: none"> Till date captive treatment and disposal of BMW is going on at all the health care facilities of North Sikkim. <p>Check if there is any gap between Quantity of Biomedical Waste generated per day and quantity of Biomedical Waste treated and disposed in the district? In case of no access to CBWTFs, adequacy of existing disposal of BMW</p> | <ol style="list-style-type: none"> Action plan for setting up CBWTF or providing access to CBWTF with 75km from places waste generation. Including identification on site for setting up such facility. Action plan for management of BMW through captive facilities in case of no access to CBWTF. CBWTF should be established at Gangtok for all the HCF of east and north Sikkim instead of Mangan, North Sikkim. HC,HS&FW department is now coming up with a transport vehicle of BMW(Only for red color coded waste which is largely plastic and for blue coded waste which is mainly consist of glass). Through this mechanism of transportation of vehicle which has authorized by the department to one person who shall collect the red and blue coded waste under Bio-Medical Waste for recycling at Gangtok. | Department of Health & Family Welfare, Department of Commerce & Industries SPCB – Sikkim | Monthly collection system will be there by august 2021. |

District Environment Plan [North]

| | | | | | |
|----|---|---|---|---|--------------------|
| 3. | Tracking of BMW | Check whether bar code system is implemented by all HCFs and CBWTFs? | <ol style="list-style-type: none"> 1. Plan for implementation of bar code system by all HCFs and CBWTFs in the district. 2. Recently, department is planning to start a tracking system of BMW by next month. Soon tracking of BMW will be started. | Department of Health & Family Welfare, District Hospital, PHC, PHSC | |
| 4. | Awareness and education of healthcare staff | <p>Whether training has been organized for all stakeholders?</p> <ol style="list-style-type: none"> 1. IEC cell of District Hospital Mangan through its various program used to provide awareness to local bodies like panchayats, ULB. 2. Staff of all HCF has been providing training routinely regarding the proper management of BMW according to 2016 BMW (Management & handling) Rules. | Action plan for awareness programs and training to healthcare staff and ULB officials. | Department of Health & Family Welfare, SPCB – Sikkim | 2024 |
| 5. | Adequacy of funds | <p>Whether adequate funds is allocated to Government healthcare Facilities for bio-medical waste management by State Govt.?</p> <p>There seems to lack adequate funds as some needful things regarding the implementation of BMW is not sorted out timely.</p> | Action plan for ensuring adequate fund to Government health care facilities for Bio-medical waste management by State Govt. | All departments, Govt. of Sikkim. | Continuous process |

District Environment Plan [North]

| | | | | | |
|----|--|---|---|--|--------------------|
| 6. | Compliance to Rules by HCFs and CBWTFs | Is there any district Level mechanism to Monitor compliance by Hospitals/HCFs? | Draw action plan to monitor compliance of HCFs and CBWTFs through SPCBs/PCCs. All the compliance of rules enshrined in BMW (Handlin and Management) Rules 2016 shall be looked after by the committee which is the sole authority and responsibility of the committee to monitor the any breach of rules and management. | There is committee called District level Monitoring Committee (DLMC) for Bio-Medical Waste Management; Department of Health & Family Welfare | Continuous process |
| 7. | District Level Monitoring Committee | Check whether District Level Monitoring Committee (DLMC) has been constituted and meetings are being organized? | 1. Periodicity of reviews and follow-up by DLMC. 2. Identify teams in health department to monitor compliance. 3. Every quarter there is meeting of DLMC. District Medical Superintendent (DMS) is the convener of DLMC of BMW management. | DLMC has been formed under District Hospital Mangan; Department of Health & Family Welfare | Continuous process |
| 8. | Waste water Treatment | Check if HCFS are required to install ETPs for waste water generated. | Action plan for installation of ETPs by HCFs where applicable. 1. There is a liquid waste treatment system in place at all PHCs and district hospital, Mangan, to treat the infectious /waste water. 2. HC, HS&FW Department has recently planned to establish ETP in all District Hospital. All site inspection has been done and within 3 months, ETP will be set up in the District Hospital Mangan, North Sikkim. | Department of Health & Family Welfare, Public Health Engineering Department, Govt. of Sikkim | 3 months |

[SPCBs/PCCs is the prescribed authority to ensure implementation of BMW Management Rules,2016. However, Rules also provides mandates to health department to monitor compliance. Hence Action plan for BMW waste management should cover access to biomedical waste management in entire geographical area of the district village Panchayats/ blocks/ town municipalities / City corporations. Action plan need not be prepared in Tabular form. SPCBs/PCC should be part of action plan. Action plan may dwell upon other relevant action points not mentioned in above template. If required budgetary requirement for government HCFs may also be mentioned]

(i) Hazardous Waste Management**a. Current Status related to Hazardous Waste Management**

“Hazardous waste” means any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, cause danger or is likely to cause danger to health or environment, whether alone or in contact with other wastes or substances under Hazardous waste and Transportation Movement Rules, 2016.

Presently there is no Common Hazardous Waste generated in North Sikkim District because North Sikkim does not have any industries established till now.

| Details of Data Requirement | Present Status |
|---|---|
| No. of Industries generating HW | [Nos.] |
| Quantity of HW in the district | [MT/Annum] |
| (i)Quantity of Incinerable HW | [MT/Annum] |
| (ii)Quantity of land-fillable HW | [MT/Annum] |
| (iii)Quantity of Recyclable/ utilizable HW | [MT/Annum] |
| No. of captive/common TSDF | [Nos. of integrated TSDF], [Nos. of SLF].[No. of Standalone incinerators] |
| Contaminated Sites or probable Contaminated sites | [Nos] |

b. Identification of Gaps and Action Plan:

| S. No. | Action points | Identification of Gaps | Action Plan | Responsible agency | Timeline for completion of Action Plan |
|--------|--|--|--|--|--|
| 1. | Regulation of industries and facilities generating Hazardous Waste | Check whether all hazardous waste industries are identified and authorized by SPCBs/PCCs. | SPCB/PCCs should ensure that all hazardous waste industries are authorized and a system of safe disposal is in place. | State Pollution Control Board / (SPCB); Pollution Control Board (PCC). | Continuous process |
| 2. | Establishment of collection centers | Check district has collection centers for hazardous wastes with linkage to common TSDFs /recyclers | Local authority should ensure that adequate number of collection centers should be established and are linked to Common TSDFs. | State Pollution Control Board / Pollution (SPCB) | 2023 |
| 3. | Training of workers involved in handling /recycling/disposal of HW | Identify facilities / Industries engaged in recycling / pre-processing | Action plan to train the workers on safety aspects through Department of Industries as per provisions under HOWM Rules, 2016. | State Pollution Control Board, Department of Labour, Department | 2023 |

District Environment Plan [North]

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|----|---|--|---|---|----------------------|
| | | /disposal of hazardous waste in the district. | | of Industries, Occupier | |
| 4. | Availability/Linkage with common SDF or disposal facility | Check if the generators of HW have access to common TSDF in the State? | Action plan to ensure all generators are linked to TSDF/Action plan in case there is no TSDF in the district or State in such case evaluate existing storage and captive disposal facilities through SPCBs/PCCs | State Pollution Control Board, Occupier, Pollution Control Board (PCC). | Complied |
| 5. | Contaminated Sites | Are there any sites where soils /sediments/ground water contaminated due to dumping of industrial wastes | Action plan for identification of probable contaminated site, incidents of HW dumping, responsible parties for contaminated site etc., an contaminated sites. | SPCB-Sikkim | Action not necessary |

[SPCBs/PCCs is the prescribed authority to ensure implementation of Hazardous and Other (Management, Handling and Transboundary Movement) Rules,2016. Rules also mandates department of industries to ensure training to workers involved in recycling and handling of hazardous wastes.

Action plan for HW waste management should cover HW inventory in the district, check whether rules are implemented effectively, a system for monitoring compliance needs to be in place Action plan need not be prepared in Tabular form. SPCBs/PCC should be part of Action Plan. Action Plan may dwell upon other relevant action points not mentioned in above template.]

(ii) E-Waste Management

a. Current Status related to E-Waste Management

'e-waste' means electrical and electronic equipment, whole or in part discarded as waste by the consumer or bulk consumer as well as rejects from manufacturing, refurbishment and repair processes.

Current practices in Sikkim were limited to collection and transportation of E-waste to other cities like Delhi, Bangalore etc. for recycling activities. Scrap vendors collected E- waste from Government. Offices, residential areas, industries, private institutes, banks, etc. Such E-waste was then stored at the scrap yards. When considerable E-waste was collected at the scrap yards they were then packed and transported to the recycling facilities at other cities.

Mangan Nagar Panchayat has taken up E-waste management as top priority with present time the quantum of e-waste generate worldwide has slowly become hot topic and the various measure for the management of e-waste is tried and tested but still it has remain the topic which demands systematic ways.

However, the Mangan Nagar Panchayat has initiated the E-waste Collection Centre at MNP Office, RN Marg, Mangan, North Sikkim and the response initially was good and Nagar Panchayat managed to collect tetra pack and some electronic goods. On the whole MNP realized that most of the e-waste were collected by the scrape dealer and recycled through the buyers from outside state which is a blessing for us. There are some departments in our district who are major consumer or potentially bulk e-waste generator but they have their own guidelines from their respective nodal department and managing their e-waste directly with the nodal department. Lastly the collection part is somehow can be managed by the Nagar Panchayat but looking for buyer remains the challenge.

| Details of Data Requirement | Present Status |
|---|----------------------------|
| Inventory of E-Waste in MT/year | Data not available MT/Year |
| Collection centers established by ULBs in the District | 1 |
| Collection centers established by Producers or their PROs | NIL |
| No authorized E-Waste recyclers /Dismantler | NIL |

b. Identification of gaps and Action Plan:

| S. No. | Action points | Gaps in implementation | Action Plan | Responsible agency | Timeline for completion of Action Plan |
|--------|---|--|--|-------------------------------|--|
| 1. | Inventory /Generation of E-Waste /Bulk-waste generators | [Check whether SPCB/PCC has completed inventory of E-Waste in the District. Inventory of bulk waste generators]- NO | Completion of inventory | SPCB/PCC | 6 months |
| 2. | E-Waste collection points | [Availability of E-Waste collection points / call centres / kiosks in villages -Blocks/towns / cities]- YES | Identification /registering E-Waste collection centres in association with Producers - their PROs or Recyclers | Nagar Panchayat; UDD. | Already done |
| 3. | Linkage among Stakeholders to channelize E-Waste | Check whether District administration has information on collection centres established by Producers/PROs? Administration should also identify authorized E-Waste recyclers in the district or in State to channelize E-waste collected in District. | 1. Action plan to establish linkages between ULBs /Collection Centres of Producers and PROs /SPCBs /Bulk waste generators/Recyclers / SPCBs / District Administration/Public. 2. SPCB has to come forward to channelize E-waste because firstly we have very few E-waste and secondly, we don't have agencies/buyer to channelize E-waste | SPCB; District Administration | |

District Environment Plan [North]

| | | | | | |
|----|--|---|---|---|--------------|
| 4. | Regulation of Illegal E-Waste recycling /dismantling | Prevalence of informal trading, dismantling, and recycling of E-waste is in District | 1. Action plan in coordination with SPCBs/PCCs and District Administration to check this activity. 2. Following as per the guidelines provided by the SPCB | SPCBs/PCCs; District Administration | |
| 5. | Integration of informal sector | Whether mechanism exists for bringing informal sector into main stream in collection and recycling of E-Waste | Evolve mechanism by involving producers /PROs. Not in Practise | UDD; RDD; IT Department, Govt. of Sikkim. | |
| 6. | Awareness and Education | Are there any programs at district level for awareness about E-waste management? YES | Plan special workshops and awareness campaigns through Producers/PROs. | District Administration, UDD, RDD, SPCB, MSME, NIELIT, Krishi Vigyan Kendra and District Authorities. | Already done |

[CPCB is the prescribed authority to grant Extended Producer Authorization to various Producers of Electrical and Electronic Equipment being placed on market. Targets for collection of their E-Waste is given to each Producers. Every Producers should have installed a network of collection centres pan India, accordingly, every district should be covered. SPCBs/PCCS are given mandate to ensure implementation of EPR authorization. Therefore, district administration should have all information about collection centres/call centres established by various producers in the District. Such information should be disseminated to public and local administration. Action plan for E-Waste Management should cover the aspects of inventory, collection centres for e-waste channelization, linkage with Producers of their PROS, linkage with recyclers, information of bulk waste generators and effective EPR verification by SPCBs. Action plan need not be prepared in Tabular form. SPCBs/PCC should be part of action plan. Action plan may dwell upon other relevant action points not mentioned in above template.]



Circular banning bursting of fire crackers

| Details of Data Requirement | Present Status |
|--|--|
| Number of Automatic Air Quality monitoring stations in the district. - Operated by SPCB / State Govt / Central govt./PSU agency: - Operated by Industry: | Not Available |
| Number of manual monitoring States operated by SPCBs | Nil |
| Name of towns/cities which are failing to comply with national ambient air quality stations | Mangan |
| No of air pollution industries | Nil |
| Prominent air polluting sources [Large Industry] / [Small Industry] / [Unpaved Roads] / [Burning of Waste Stubble] / [Brick Kiln]/ [Industrial Estate]/[Others](Multiple selection) | Burning of waste is prohibited in State Sikkim |

a. Identification of Gaps and Action Plan:

| S. No. | Action points | Indicative Action Plan | Responsible agency | Timelin e for comple tion of Action Plan |
|--------|---|--|--|---|
| 1. | Identification of prominent air polluting sources? | Carry out inventory of air pollution sources in District including hotspots or areas of concern pertaining to air pollution in association with SPCBs/PCCs | SPCB in co-ordination with District Administration Forest & Environment Department | 1 year |
| 2. | Ambient Air quality data? | Plan to get access to available air quality monitoring stations in the district operated by both Public and private agencies. | SPCB, District Administration | Regular activity |
| 3. | Setting up of Continuous Ambient Air Quality Monitoring Station | Like weather station, District may also have ambient air quality monitoring at major urban settlements or populated areas. Action plan may propose setting up atleast one CAAQMS in District. Also access data generated by CAAQM stations. Installed by other pvt/public agencies. District authority in Association with local office of SPCB/PCC should also ensure that atleast one manual Air Quality monitoring station is available in each city. [District administration may set-up its own network of CAAQMS or manual stations] | SPCB with District Administration | 1 year |
| 4. | District Level Action Plan for Air Pollution | Action plan should be prepared for both improvement of existing air quality as well as for non-attainment days to national ambient air quality standards. [Measures may include multi sector approach for air pollution control such as promotion of public transport, use of green fuels, E-mobility; LPG based cooking, carpeting open areas/kerbs, etc. Action plans envisaged in NCAP project initiated by MoEF & CC may be referred] | SPCB in coordination with District Administration | 1 year |

District Environment Plan [North]

| | | | | |
|----|---------------------------------------|---|---|------------------|
| 5. | Hotspots of air pollution in District | Hotspot with respect to air pollution (such as stubble burning, illegal waste burning, unauthorized operations, cluster activities, forest fires, etc.) should be identified and localized action plan for mitigation of the same should be prepared. Burning of waste (agricultural & solid) has been banned vide Notification No. 191/FEWMD dated 05/01/2015. | SPCB in coordination with District Administration | 1 year |
| 6. | Awareness on Air Quality | Plan for dissemination of information on local air quality in towns and cities located in District may consider developing Mobile App / Online portal for dissemination of air quality as well as to take complaints on local air pollution. | SPCB in coordination with District Administration | Regular activity |

[The district administration is expected know the air quality in the district, identify air polluting sources both industrial and urban area sources and shall monitor mitigation measures and compliance of air polluting sources. District level air quality management plan is necessary to monitor and implement programs for improving air quality in the district. Action plans prepared for 100+ non-attainment cities under NCAP project initiated by MoEF & CC may be referred for drawing district action plan. Action plan need not be prepared in Tabular form. SPCBs/PCC may be part of action plan for control of industrial air pollution. Action plan may dwell upon other relevant action points which are not mentioned in above template.]

Water Quality Management

a. Current Status related to Water Quality Management

Water quality Monitoring is defined as the sampling and analysis of water constituents and conditions. The PHE department monitors its water quality through Water Treatment Plant (WTP) at Mangan and Chungthang. Chungthang WTP uses pressure filter, which is a closed tank with a single or combination of filter media for removal of one or several contaminants. Mangan WTP uses Rapid Sand Filter which use relatively coarse sand and other granular media to remove particles that have been trapped in a floc through the use of flocculation chemicals typically alum.

| Details of Data Requirement | Present Status |
|--|--|
| Rivers | Rafong stream, Rang- Rang chu stream, Namdousa stream, Plum chu stream, Lachen stream. |
| Length of Coastline (if any) | [in Km] |
| Nalas/Drains/Creeks meeting Rivers | All the creeks eventually meet up at rivers. Data on specific numbers not available. |
| Lakes/Ponds | [Nos] and [Area in Hectares] |
| Total Quantity of sewage from towns and cities in District | [MLD] |
| Quantity of industrial wastewater | [MLD] |

District Environment Plan [North]

| | |
|---|---------|
| Percentage of untreated sewage | [100 %] |
| Details of bore wells and number of permissions given for extraction of groundwater | [Nos] |
| Groundwater polluted areas if any | Nil |
| Polluted river stretches if any | Nil |

b. Identification of Gaps and Action Plan for Water Quality Monitoring:

| S. No. | Action points | Gaps and Action Plan | Responsible agency | Timeline for completion of action plan |
|--------|---|--|---|--|
| 1. | Inventory of water bodies | An environmental monitoring cell shall maintain data of all water bodies (rivers / canals /natural drains / creeks /estuaries / groundwater /ponds / lakes / etc.) in district including its water quality. 1. Inventory of water bodies is being monitored by Department of Forest & Environment. SPCB-Sikkim conducts regular monitoring of river water quality under the NWMP program and the analyzed data is available in the SPCB website. 2. River Rejuvenation Committee has been notified as the State Nodal agency to ensure compliance to the environmental norms and monitor the actions of the implementing departments. RRC is also undertaking the Inventorization of water bodies. | Department of Forest & Environment, SPCB-Sikkim, Department of Water Resources & River Development, Department of Public Health & Engineering | Continuous activity |
| 2. | Quality of water bodies in the district | Check availability of data on water bodies. Create a district level monitoring cell for periodic monitoring of water bodies for specific parameters in association with SPCBs. It is also necessary to disseminate information pertaining to water quality in the form of hoardings on river banks, official websites, etc. 1. SPCB Sikkim has been continuously monitoring the industrial activities by ensuring continuous operation of Effluent Treatment Plant (ETP). Further, SPCB Sikkim has made Zero Liquid Discharge (ZLD) mandatory so that the treated water meeting the prescribed standard is recycled and reused for gardening, flushing, cleaning and cooling purposes. | SPCB-Sikkim | Continuous activity |
| 3. | Hotspots of water contamination | Check trends of water quality and identify hotspot of surface water and groundwater. Establish a system or separate cell to monitor water quality. Implement action points for restoration of water quality in association with SPCBs and department of environment. | Department of Forest & Environment, SPCB-Sikkim, Department of Water Resources & River Development | Continuous activity |

District Environment Plan [North]

| | | | | |
|----|---|---|--|--|
| 4. | Protection of river/lake water front | Action plan should be prepared for control riverside open defecation, dumping of Solid waste on river banks, for idol Immersion, etc. | | |
| 5. | Inventory of sources of water pollution | Check whether inventory of all sewage and waste water discharge points into water bodies in the district. Action plan to complete inventory. | | |
| 6. | Oil spill disaster management (for coastal districts) | Whether district oil spill crisis management group and District Oil Spill Disaster Contingency Plan has been created? If not, create District Oil Spill Crisis Management Group and District Oil Spill Disaster Contingency Plan for the district. | | |
| 7. | Protection of flood plains | Check whether there is regulation for protection of flood plain encroachment? Action plan should be prepared for protection of flood plain and prevention of encroachment. | | |
| 8. | Rejuvenation of ground water | Check availability of Ground water and if required prepare action plan to rejuvenate ground water in selected areas. Action plan should be prepared for Rain water harvesting | | |
| 9. | Complaints redressal system | Check whether there is any complaint redressing system based on Mobile App/Online, is available? If not, a complaint redressing system based on Mobile App/Online should be available at district level | | |

Domestic Sewage

At present the Sewerage Coverage in entire North Sikkim District is 0%.

The P.H.E Department North Division does not look after the sewerage system in North Sikkim, Information required future plans and projects for sewerage system in North District can be sought from P.H.E department (SEWERAGE WING), Gangtok, East Sikkim.

Data not available in North Sikkim District

a. Current Status related to Treatment of Domestic Sewage

| Details of Data Requirement | Present Status |
|---------------------------------------|----------------|
| No of Class-II towns and above | Data N.A |
| No of Class-I towns and above | Data N.A |
| No of Towns STPs installed | Data N.A |
| No of Towns needing STPs | Data N.A |
| No of ULBs having partial underground | Data N.A |

District Environment Plan [North]

| | |
|---|----------|
| Sewerage network | |
| No of towns not having sewerage network | Data N.A |
| Total Quantity of Sewage generated in District From Class II cities and above | Data N.A |
| Quantity of treated sewage flowing into Rivers (directly or indirectly) | Data N.A |
| Quantity of untreated or partially treated sewage (directly or indirectly) | Data N.A |
| Quantity of sewage flowing into lakes | Data N.A |
| Total available Treatment Capacity | Data N.A |

a. Identification of Gaps and Action Plan for Treatment of Domestic Sewage:

| S. No. | Action points | Gaps and Action Plan | Responsible agency | Timeline for completion of action plan |
|--------|--------------------------------|--|--|--|
| 1 | Sewage Treatment Plants (STPs) | Check whether existing capacity of STPs is adequate for treatment of sewage? If no, action plan for additional treatment capacity required should be prepared in association with ULBs/department of UDD | Public Health & Engineering Department; UDD | |
| 2 | Underground sewerage network | Check available sewerage network and prepare Action plan for laying of sewerage network in town and cities. The project may be executed through ULBs and Department of UDD. | Public Health & Engineering Department; UDD | |

[Action plan for installing new /up-grading sewage treatment and laying of sewerage network is the mandate of local bodies, being cost intensive action points, the district administration may draw action points in consultation with ULBs and Urban development department. Action plan need not be prepared in Tabular form. ULBs, SPCBs/PCC and UDD may be part of action plan for collection and treatment of sewage. Action plan may also dwell upon other relevant action points which are not mentioned in above template.]

Industrial Waste Water Management

a. Current Status related to Industrial Waste Water Management

*** No industries located in North Sikkim District.**

| | |
|--|---|
| Number of Red, Orange, Green and White industries in the District | [Nos of Red industries], [Nos of Orange industries],[Nos. of Green industries],[Nos. of White industries] |
| No. of Industries discharging Wastewater | [Nos] |
| Total Quantity of industrial waste water generated | [MLD] |
| Quantity of treated industrial waste water discharged into Nalas/ Rivers | [MLD] |

District Environment Plan [North]

| | |
|---|-------|
| Common Effluent Treatment Facilities | [Nos] |
| No of Industries meeting Standards | [Nos] |
| No. of Industries not meeting discharge Standards | [Nos] |

b. Identification of Gaps and Action Plan for Industrial Waste Water:

| S. No. | Action points | Gaps and Action Plan | Responsible agency | Timeline For completion of action plan |
|--------|---|---|--------------------|--|
| 1. | Compliance to discharge norms by Industries | Identify gaps w.r.t industries not Meeting the standards. Necessary action be initiated through SPCBs against the industries no meeting the standards. | | |
| 2. | Complaint redressal system | Check if there is any complaint redressing system based on Mobile App/ Online, is available? If not, a complaint redressing system based on Mobile App/Online portal may be prepared at district level. | | |

Mining Activity Management Plan

a. Current Status related to Mining Activity Management

* No mining Activity in North Sikkim District.

| Details of Data Requirement | Existing Mining operations |
|---|--|
| Type of Mining Activity | Name of mines – list may be closed] [Sand Mining] /[Iron Ore]/[Bauxite] /[Coal]/Other[specify] |
| No. of licensed Mining operations in the district | [Nos] |
| % Area covered under mining in The district | % |
| Area of Sand Mining | [Sq.Km] |
| Area of sand Mining | [Riverbed]/[Estuary]/[Non -river deposit] |

b. Identification of Gaps and Action Plan:

| S. No. | Action points | Gaps and Action Plan | Responsible agency | Timeline for completion of action plan |
|--------|---|--|--------------------|--|
| 1. | Monitoring of Mining activity | A district level task team may be identified to identify mining activity and to monitor status with respect to environmental compliance | | |
| 2. | Inventory of illegal mining if any mining | Action plan to identify illegals and other mining activity in the district through surveillance, patrolling and enforcement. District Level task Force may be constituted for control of illegal mining activity | | |
| 3. | Environment compliance by Mining industry | Action plan for periodic verification of compliance to environmental conditions stipulated by SPCBs/PCC, MoEF & CC department of mines etc. SPCBs/PCC may be involved in this activity. | | |

Noise Pollution Management Plan**a. Current Status related to Noise Pollution Management**

- As per the Motor Vehicles Act, 1988, vehicles are challaned under section 19(2) which states, “Any person who drives or cause or allows to be driven, in any public place a motor vehicle which violates the standards prescribed in relation to road safety, control of noise and air pollution” is strictly implemented
- As per Section 158(1) of Sikkim police Act, 2008 (Act no. 15 of 2008), mike and loud speakers’ permission is issued by Superintendent of police of concerned district and clause 11, sub- clause (i) & (ii) of condition of licence which mentions:
 - In Public places: Shall not exceed 10 db(A) above the ambient noise standard for the area or 75 db(A) whichever is lower.
 - In other places: The sound be so regulated that it should not cause any inconvenience /irritation to others.
- As per notification No. 187/FEWMD, dated: 19.12.2014 by then Principal Secretary – cum –PCCF, Forest environment and Wildlife Management Department, government of Sikkim which prohibits the manufacture, sale and use or burning of all types of firecrackers including any sound emitting or illuminating type of firecrackers within the State of Sikkim is being Strictly implemented in Jurisdiction of the concerned Station House Officer.
- Till date, no complaint has been lodged in North Sikkim District as to take action under section 15(1) of the environment (Protection) Act, 1986.
- However, no police station under north district is equipped with Sound/ Noise level Meters, no signboards in noise zone and there is no proper complaint redressal system.

| Details of Data Requirement | Measurable Out come |
|--|---|
| No. of noise measuring devices available with various agencies in district | None of the 5 police Station in North District have any device. |

b. Identification of Gaps and Action Plan:

| S. No. | Action points | Gaps and Action Plan | Responsible agency | Timeline for completion of action plan |
|--------|---|--|--------------------------------|--|
| 1. | Availability of Sound/Noise Level Meters. | Need to check whether concerned agencies that is ULBs, SHOs, Traffic police and SPCB/PCC have noise level meters. District administration may ensure through an action plan that concerned agencies and environmental cell under district administration have Adequate number of portable noise level meters. – No availability of sound/noise level meters. | District Administration/ SHO's | 6 Months |
| 2. | Ambient Noise Level monitoring. | ULBs shall ensure that ambient sound levels comply with notified standards for residential, sensitive zones. Apart from portable analyzers, fixed ambient noise level monitoring stations may be installed in major cities and towns, such stations may be installed by ULBs and SPCB/PCC- Total 3 nos of Noise level meters is required in entire North Sikkim District. | | |
| 3. | Sign boards in Noise zones | District administration may ensure that adequate number of signboards installed at sensitive zones in towns / cities in towns and cities. An action Plan may be prepared by district authority. - Total 10 nos. of Signboard are required in entire North Sikkim District. | | |
| 4. | Complaint redressing system | Action Plan may envisage implementing a public complaint redressal system for noise pollution. Such application may be used by SHOs, Traffic police ULBs and SPCBs in the district. - All complaint shall be registered in nearby police station to SHO's. | | |

Attempts have been made to prepare District Environmental Plan for North Sikkim District in line with the model District Environment Plan of CPCB covering the topics given therein.

**District Magistrate North Sikkim,
Chairman District Level Environment Committee**