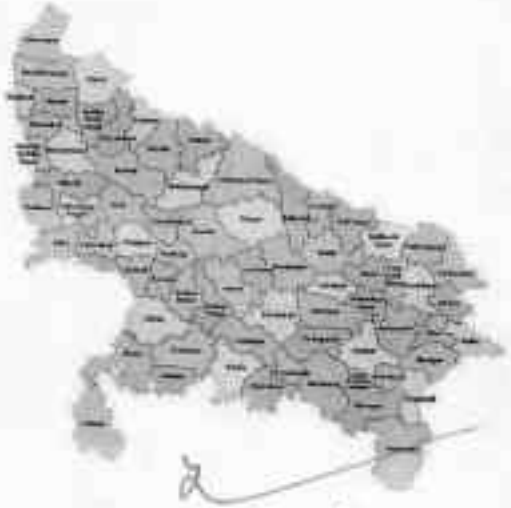
DISTRICT SURVEY REPORT

FOR SAND MINING

DISTRICT RAMPUR



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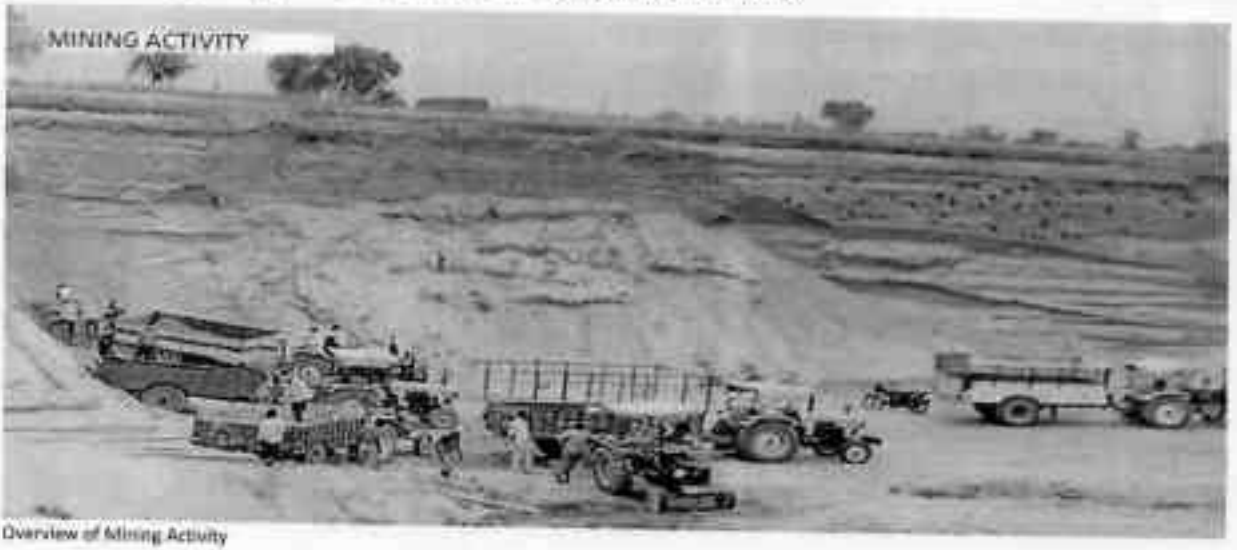
PREFACE

In Compliance to the Notification Issued by the Ministry of Environment, Forest and Climate change Dated 15.01.2016, the preparation of District survey report of River bed mining and other minor minerals is in accordance appendix 10 of the notification. It is also mentioned here that the procedure of preparation of District Survey Report is as per notification guidelines. Every efforts have been made to cover sand mining locations, areas & overview of Mining activity in the district with all it's relevant features pertaining to geology & mineral wealth in replenish able and non-replenish able areas of rivers, stream and other sand sources. This report will be a model and guiding document which is a compendium of available mineral resources , geographical set up, environmental and ecological set up of the District and is based on data of various departments , published reports , and websites. The data may vary due to flood, heavy rains and other natural calamities. Therefore, it is recommended that Sub Divisional Level Committee may take into consideration all its relevant aspects / data while scrutinizing and recommending the application for EC to the concerned Authority.



Overview of Mining Activity

SURVEY REPORT

OF

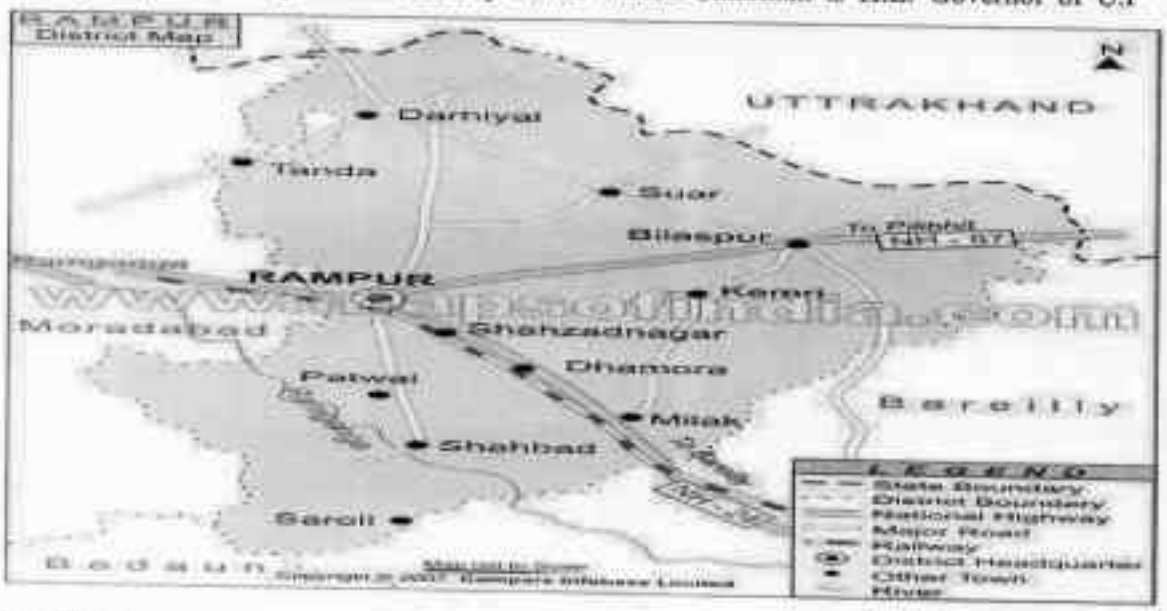
DISTRICT RAMPUR

As per Gazette notification of 15th January 2016 of Ministry of Environment, Forest and Climate Change a Survey shall be carried out by the District Environment Impact Assessment Authority (DEIAA) with assistance of irrigation department, Drainage department, Forest department, Mining department and Revenue department in the district for preparation of District Survey Report as per the sustainable Sand mining guidelines to ensure identification of areas of aggradations or deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining in that area.

Every efforts have been made to cover sand mining locations, areas & overview of Mining activity in the district with all it's relevant features pertaining to geology & mineral wealth in replenish-able and non-replenish-able areas of rivers, stream and other sand sources. The mineral potential is calculated based on field investigation & geology of the catchment area of the river or streams. Also as per the site conditions and locations, depth of minable mineral is defined. The area for removal of the mineral in a river or stream is decided depending on geo- morphology & other factors, it can be 50% to 60% of the area of a particular river or stream. Other constituents like clay and silt are excluded as waste while calculating the mineral potential of particular river or stream. This District Survey Report shall form the basis for application for environment clearance, preparation of reports and appraisal of projects. The report shall be updated once every five years.

Introduction

Rampur is the smallest district of Moradabad division & having 58 positions in the state as per area is concerned. It was an independent local kingdom before December 1949. Subsequently on July 1, 1949 the State of Rampur was merged into the Republic of India and became a district. The Rampur Raza Library is a worth visiting place. It has a great collection of Oriental manuscripts and beautiful Mughal miniature paintings. The Rampur Raza Library is a treasure house of Indo Islamic learning and Art. Nawab Faizullah Khan founded it in 1774 A D. His descendants continued to enrich the collection. After the independence and merger of Rampur State in the Union of India, the library was brought under the management of a Trust till the Govt. of India took over the library on 1st July 1975 under the Act of Parliament, which declared it as an institution of National importance. Its affairs are managed by the Rampur Raza Library Board whose Chairman is H.E. Governor of U.P



Architecture

The Rulers of Rampur have had distinct impact on the architecture of the region. The buildings and monuments signify the presence of Mughal type architecture. Some of the buildings are very old and have been built over repeatedly in course of time.

One of the most well designed monument is the Fort of Rampur. It also houses the Raza Library or Hamid Manzil, the former palace of the Rulers. It has a sizable collection of Oriental manuscripts. The fort also houses the Imambara.

The Jama Masjid is one of the finest piece of architecture to be found in Rampur. It resembles the jama masjid in Delhi to some extent and has a beautiful interior. It was built by Nawab Faizullah Khan. It has a unique mughal touch to it. There are several entry-exit gates to the masjid. It has three big domes and four tall minarets with gold pinnacles boasting of a royal touch. It has a main lofty entrance gate that has an inbuilt clock tower occupied by a big clock that was imported from Britain.

There are several entry-exit gates built by the Nawab. These gates are major entry-exit routes from the city. Examples are Shahbad Gate, Nawab Gate, Bilaspur Gate etc.

District Rampur is located between Longitude 78-0-54 & 69-0-28 East and Latitude 28-25 & 29-10 North. Spread in area of 2367 Sq. Km falls in Moradabad Division of Uttar Pradesh State. It is surrounded by District Udham Singh Nagar in North, Bareilly in East, Moradabad in West and Badaun in South. The height from sea level is 192 Meter in north and 166.4 m in South. Situated on the national highway 24, the state capital is 302 km in East and national capital is 185 km in West. It is well connected by Railways & Roadways).

List of e-tender lease area

Name of Sub mineral	Teshil	Village	Gata No.	Area Ha.	Approval (From -To)	Quantity m^3/year (If available)	Accusation
Ordinary Sand	Sadar	Talkapoor	819, 819/10, 830/3, 835, 840, 841, 842, 846, 847	2.50		50,000	
Ordinary Sand	Bilaspur	Sitora	433	1.02		20,400	
Ordinary Sand	Shahbad	Vamanpuri	96h/6, 96h/3, 97h/53,	1.76		35,200	
Ordinary Sand	Sadar	Mansoorpur	59/1, 59/2, 57/2, 60/3,	1.73		34,600	
Ordinary Sand	Sadar	Mansoorpur	49/1, 49/2, 49/3	1.32		26,400	
Ordinary Sand	Sadar	Aagapur	71/1, 71/2, 71/12, 71/14, 71/15, 71/19, 71/20, 71/22, 71/16, 71/21	1.23		24,600	

Ordinary Sand	Sadar	Bainjeer pur urf Ghatam pur	81/19, 81/20	2.80		56,000	

Revenue of last three year

Mines and Mineral Name	2016-17	2015-16	2014-15
Brick Kiln	148.65	144.30	
Ordinary Soil	16.7	24.04	
Other Income	367.91	334.9	
Revenue	533.26	503.24	

Permit discretion

Sub-Mineral Name	Teshil	Village	Gata No.	Area Ha.	Approval (From-To)	Quantity (If Available)	Accusation
Ordinary Sand	Suar	Pttikalan	577	2.387	26.07.17 to 25.1.17	35850	
Ordinary Sand	Tanda	Dhadiyal Ahaitmali	1468, 1467, 1474, 1492, 1477	0.93	13.06.17 to 12.12.17	14025	
Ordinary Sand	Suar	Patti Kalan	1126, 1127	1.715	13.06.17 to 12.12.17	25740	
Ordinary Sand	Suar	Dilari	38/1-3, 36/1-3	1.274	29.06.17 to 29.12.17	19215	

PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT

The deposition in a river bed is more pronounced during rainy season although the quantum of deposition varies from stream to stream depending upon numbers of factors such as catchment, lithology, discharge, river profile and geomorphology of the river course. where annual deposition is much more even two to three meters, but it is noticed that during flood season whole of the pit so excavated is completely filled up and as such the excavated area is replenished with new harvest of minerals.

In order to calculate the mineral deposits in the stream beds, the mineral constituents have

been categorized as clay, silt, sand, bajri and boulder. However during present calculation, the waste material i,e silt which vary from 10 to 20% in different streams has also been included in the total production. Further the Survey of India Topo-Sheets are used as base map to know the extent of river course. The mineral reserves have been calculated only upto 1.00 meter depth although there are some portions in the river beds such as channel bars, point bars and central islands where the annual deposition is raising the level of river bed thus causing shifting of the rivers towards banks resulting in to cutting of banks and at such locations, removal of this material upto the bed level is essential to control the river flow in its central part to check the bank cutting. While calculating the mineral potentials, the mineral deposits lying in the sub-tributaries of that particular stream/river has not been taken into consideration. Since these mineral deposits are adding annually to the main river, the mineral deposits will be much more

PHYSICAL FEATURES & GEOGRAPHICAL AREA

The Rampur district is lying between 78.54' longitude East and 28.25' latitude North. The district is bounded on the North by Udhamsingh Nagar district of Uttranchal, on the South by Bandaun district, on the East by Bareilly district and on t he West by Mooradabad district. The area of Rampur district is 2367 s q.km. The height from sea level is 192 Meter in north and 166.4 m in South. Situated on the national highway 24, the state capital is 302 km in East and national capital is 185 km in West. It is well connected by Railways & Roadways. Ramganga and its tributaries Kosi, Peela, Khar, Senjani & Gangan are the main rivers flowing in the district.

Topography

The topography of Rampur district is mainly a plain landmass. The range of Himalayas starts from north part of the district. Bullai, Domath and Matiyar are commonly found soils in the district. Due to tarai region the climate of the district is very pleasant. Here summer starts very early. The temperature of the district is varies from 2° C in winter to 44° C in summer. The wet session normally starts in the end of June month. The average rainfall is 1150 mm. The winter months are virtually dry.

General Profile of Rampur

BRIEF DETAIL OF RAMPUR DISTRICT

NAME OF DISTRICT	AREA (PER SQ. KM)	POPULATION 2011	DENSITY(PER SQ. KM)
RAMPUR	2367	325,248	3,900/km²

Tehsils

SR. NO.	NAME OF TEHSIL
1.	SUAR
2.	MILAK
3.	TANDA
4	SHAHABAD
5	BILASPUR
6	SADAR

Block

SR. NO.	NAME OF SUB – TEHSIL
1.	BILASPUR
2.	CHAMRAUA
3.	MILAK
4.	SAIDNAGAR
5.	SHAHABAD
6.	SUAR

POPULATION

As per the 2011 Census of India,[10] Rampur had a population of 325,248 (compared to 281,549 in 2001) showing 16% growth in 2001–11. Males constituted 52.2% and females 47.8% of the population. Sex ratio was 915 compared to the national average of 940. Rampur had an average literacy rate of 53.7%, much lower than the national average of 64.3%. Male literacy was 56%, and female literacy was 51%. In Rampur, children under six years of age numbered 37,945 and were 11.7% of the population (14% in 2001).

Rampur has a large number of Muslims.[11] The region around Rampur still has a significant number of Rohilla Pathans.[12]

As per provisional reports of Census India, population of Rampur in 2011 is 325,313; of which male and female are 169,681 and 155,632 respectively. Although Rampur city has population of 325,313; its urban / metropolitan population is 349,258 of which 182,206 are males and 167,052 are females.

Rampur is Muslim majority city in India with approximately 70.02 % of city population following Islam as their religion. Hinduism is second most popular religion in city of Rampur with approximately 28.46 % following it. In Rampur city, Christianity is followed by 0.24 %, Jainism by 0.17 %, Buddhism by 0.03 % and Sikhism by 1.00 %. Around 0.00 % stated 'Other Religion', approximately 0.07 % stated 'No Particular Religion'.

RIVER SYSTEM

The river Kosi is one of the major tributaries of river Ramganga and is one of the important river of northern part of Uttar Pradesh and Uttranchal. The major areas, which are parts of Kosi river basin, are Tota-aam and Garajiya in Almora, city Ramnagar (Distt. Nainital), Kashipur (Distt. Udhamsingh Nagar), Dadiyal, Swar, Lalpur, and city Rampur. In terms of economic importance, the area lying on the banks of the river that is, from Ramnagar to Rampur is renowned as Rice Belt and amongst the most prosperous agricultural regions for various products since centuries. However, owing to the rapid development of local economy in last decade, the river is under severe pressure from various anthropogenic activities.

The river Kosi originates from village Budha Peenath of Kausani region of district Almora (UK). After traveling a distance of about 100 km in lower Himalayas with higher velocity, it emerges at Ramnagar in Indo-Gangetic Plains, after which the velocity reduces considerably. In the initial stretch through the Shivalik range of Himalayas, it takes water from a number of major streams, and a major portion is diverted into a canal for irrigation purposes. After Ramnagar, it flows through the famous rice-belt area of Kashipur, where a number of polluting industries discharge their highly polluted effluent into it.

The river has a masonry dam at Lalpur, and most of the canals, which irrigate the major portion of the district, are dependent on its water. During lean periods, no discharge is released down stream of Lalpur dam, and in stretches the river becomes nearly dry. The river recharges due to ground water sources and its tributary river Rajera, which meets the Kosi at village Pranpur downstream of city Rampur. After this city, the river traverses a distance of

around 50 km and meets river Ramganga. The total length of the river is about 240 km.

The area under study is the basin of river Kosi, which pass through district Rampur, Uttar Pradesh. It is located between longitudes 78°54" to 69°28"E and latitude 28°25" to 29°10"N. It covers 2,367 Km²areas. The people of this area work mainly in agriculture and industries in nearest places. The Kosi River water is used for agriculture, domestic use, and drinking purposes. In order to study the effects of various anthropogenic activities on the water quality of river Kosi, an area next to city Rampur was selected. In the study zone, a smaller river Rajera merges with river Kosi. The present study also underlines the alleviating effects of dilution on the overall river water quality.

CLIMATE AND RAINFALL

There is no meteorological station in Rampur, hence data of nearest meteorological station in Bareilly has been considered. The climate is subhumid and its is characterised by a hot dry summer and winter. The average annual rainfall of the district is 967 mm. About 85% of the rainfall is received during June to September. May is the hottest month of the year with mean daily maximum temperature at about 460 C and mean daily minimum temperature about 400 C. With the advance of the southwest monsoon the day temperature drops appreciably but the night continue to be warm. January is the coldest month with the mean daily maximum temperature at 210 C and mean daily minimum temperature about 80 C. The mean monthly maximum temperature is 29.40 C and mean monthly minimum temperature is 120 C. The air is very humid during the southwest monsoon season to a lesser extent in the post monsoon season. The mean monthly morning relative humidity is 69% and the mean monthly evening relative humidity 51%. Wind are generally light, the mean wind velocity is 5-1 kph. The potential evapotranspiration is 1402.8 mm.

GEOMORPHOLOGY & SOIL TYPE

Rampur district is a part of Central Ganga Alluvial Plain and represented by high relief in the northern parts, which gradually flatten as towards south. The highest altitude in the district is at village Manunagar (224 mamsl) and lowest being at village Gangapur (172 mamsl) in the Ram Ganga flood plain. The following geomorphic units have been identified. a) Tarai Tract: This tract is southerly extension of the Tarai tract of Nanital district. It occupies the northern most part of the district. This tract is marked by shallow water level conditions and flowing

wells at places. 7 b) Meander Flood Plain: It is a flat low lying, poorly drained area of little or no relief confined to the river channels of Ram Ganga, Kosi, Pilkhau. Point bars and Sand bars are typical geomorphic features in this unit. c) Younger Alluvial Plain: These plain areas are characterised by a flat to gently sloping and slightly undulating topography and are limited to the areas along Kosi, Pilakhau and Ram Ganga rivers with maximum lateral extension of about 10 Kms. The fluvial landform such as palaeo-channels, meander scars, oxbow-lakes are common features. d) Older Alluvial Plain: The area lying south of Terai tract is older alluvial plain or upland. This plain occupies a much higher elevation than the younger alluvial plain and forms the inter stream area. This plain covers about 80% of the area in the district. e) Ravinous Tract: This tract is formed by erosional activity of runoff water and characterised by the network of gullies along river Kosi, Pilakhau and Ram Ganga. Soil: Depending upon the profile of the area various fertile types of soils have been developed in different geomorphic units. Fine textured, organic matter rich soil occur in tarai tract. Loamy soil developed in uplands. Silty soil occur in younger alluvial plains. The type of soil has played a vital role in deciding the land utilization pattern of the district.

GROUND WATER SCENARIO

HYDROGEOLOGY: District Rampur lies over alluvial deposits of the quaternary period brought by river systems of Ganga and Ram Ganga. These comprise sand, silt and clays in various proportions. There are four aquifer groups present in the area down to 440 mbgl. The first aquifer group, comprising fine to medium sand is utlised, mostly for 8 irrigational purpose follows the top soil and extends down to depth of 60 to 90 mbgl. This aquifer shows presence of clay lenses at places. The first aquifer is followed by a clay layer of varying thickness from 10-24 m. The second aquifer is a intermixing zone in which clay and sand layers are intercalated. This zone extends from 90 m to 160 m at Milak and 125 m to 204 m at Bazpur of Nanital district. The third aquifer occurs at a depth range of 240 to 300 mbgl. The fourth aquifer which is quite thick at Milak extends from 294 m to total explored depth of 440 m. Ground water in shallow zones occurs under unconfined conditions whereas in the deeper zone it occurs under semiconfined to confined conditions. The depth to water level in year 2007 during premonsoon period varies from 4.83 to 8.68 mbgl. Whereas in postmonsoon period it varies from 2.02 to 7.10 mbgl. The fluctuation in water level between pre & post monsoon period from 0.0 to 3.23 m. The long term water level trend of NHMS well for last 10 years (1997-2007) shows fall in water level from 10 cm/year to 17 cm/year.

The maximum decline is observed at Tanda Urmatnag. The tarai belt which occurs only at few places in the northern part, at places shows artesian conditions. The discharge of flowing well varies from 0.3 lps (litre per second) to 12 lps. However non flowing wells in the Tarai belt tapping 10 to 40 meter of saturated granular zone may yield upto 40 lps. In flood plain areas the tubewells tapping shallow aquifers down to 90 meter yield at the rate of 10 to 20 lps. The deep tubewell tapping 30 to 45 meter of granular zone shows a yield of 40 to 57 lps. The Central Ground Water Board has constructed 4 EW (Exploratory Wells one SH (Slim Hole) and one OW (Observation Well) in the district. The depth ranges from 327 to 706 meter and discharge varies from 41 to 58 lps for normal drawdown

GROUND WATER RESOURCES: As per dynamic ground water resource of Rampur district as on 31.3.2004 the net annual ground water availability is 88848.97 ham (Table-2). The existing gross ground water draft is 68409.82 ham & the stage of ground water development is 77%. One block Chamrana is over exploited with stage of ground water development 113%. All other blocks are in safe category, but the stage of development varies from 57.13 to 89.68%.

GROUND WATER QUALITY: The electrical conductivity is in range of 232 to 900 µs/cm at 250 C. The total hardness is in the range of 250-280 mg/l as calcium carbonate. The Fluoride is also very low and within permissible range of 0.11 to 0.20 mg/l. The Nitrate content varies in range of 1.7 to 48 mg/l., which is also within permissible range.

January	February	March	April	May	June	July	August	September	October	November	December	
Avg. Temperature (°C)	14.8	17.3	22.5	28.4	32.2	32.8	29.4	28.5	26.3	23.2	18.9	16.0
Min. Temperature (°C)	8.3	10.2	14.9	20.1	24.7	25.8	25.6	25	24.2	18.9	12.2	8.9
Max. Temperature (°C)	21.3	24.4	30.2	36.7	39.7	39.8	33.1	32.1	28.4	27.5	25.6	23
Avg. Temperature (°F)	58.6	63.1	72.5	83.2	90.0	91.0	84.9	83.3	79.3	73.8	66.0	60.8
Min. Temperature (°F)	46.9	50.4	58.8	68.2	76.5	78.4	78.1	77.1	75.6	66.0	54.0	48.0
Max. Temperature (°F)	70.3	75.9	86.4	97.9	103.5	103.6	91.6	89.8	83.1	81.5	78.1	73.4
Precipitation / Rainfall (mm)	30	16	16	4	14	82	318	330	178	79	3	7

LAND UTILIZATION PATTERN IN THE DISTRICT

Availability of Minerals.

No mineral is available in the district

FOREST

The total forest area in the district is 6611 hectare.

Administrative set up:

For administrative convenience, the district of Rampur has been divided into five tehsils namely, 1. Rampur 2. Bilaspur 3. Suar 4. Milak, 5. Shahbad These tehsils are further divided into 6 blocks.

Status of Land Use Pattern

gives the land use pattern in the district and in the state of Uttar Pradesh. In the district per cent of net area sown comes to 81.80 per cent, which is larger than that in the state of Uttar Pradesh of 69.2 per cent. Land put to non-agricultural uses comes to 11.00 per cent of the total reporting area. In U.P. it comes to 10.7 per cent. Forest area in the district comes to 2.8 per cent, of the total reporting area. In the state it comes to 7 per cent. Thus, there is a pressing need of afforestation in the district. Current fallows come to 0.90 per cent of the total reporting area in the district as against the 4.6 per cent in the state of Uttar Pradesh. Thus, current fallows are required to be enhanced to raise the level of productivity of the crops. In Rampur, land put to non-agricultural uses comes to 11 per cent, which is marginally higher than the state of 10.7 per cent. Grazing uses of land in the district are found to be nil. It would be necessary that grazing of land is enhanced in the district.

Items	Year	Unit	Rampur	Uttar Pradesh
Total reported area	2004 -05	Hectare	235726	24201292
Forest	2004 -05	%	2.8	6.9
Cultural waste land	2004 -05	%	0.1	1.3
Current fallows	2004 -05	%	0.9	4.6
Other fallows	2004 -05	%	0.3	2.4
Land put to non-agricultural uses	2004 -05	%	11.00	10.7
Barren and uncultivable land	2004 -05	%	2.7	2.2
Grazing uses of land	2004 -05	%	0.0	0.7
Area under trees and orchards	2004 -05	%	0.4	1.4
Net area sown	2004 -05	%	81.8	69.2
Gross cropped area	2004 -05	Hectare	360275	25424605
Percentage of net irrigated area to net area sown	2004 -05	%	89.2	79.20

Source: Statistics Abstract, U.P., 2006.

Status of Irrigation Coverage and Sources

classifies the principal sources of irrigation. It includes (i) canal (ii) government tubewell, (iii) private tubewell and (iv) other sources. In 2003-04, private tube well is found as a principal source of irrigation. As much as 84.03 per cent in

Rampur and to 67.87 per cent in the state have used this source for the purpose of irrigation. Private tube well, thus, emerges as the principal source of irrigation

Main Sources of Irrigation: 2003-04

Sources of irrigation	Rampur (%)	Uttar Pradesh (%)
Canal	1.37	20.92
Govt. tubewell	0.10	2.87
Private tubewell	84.03	67.87
Other sources	14.50	8.34
Net irrigated area	100.00	100.00

Source: Statistics Bulletin, District Rampur; Statistics Diary, 2006, U.P. Economics and Statistics Division, State Planning Institute, Uttar Pradesh

Status of Industrial Development

Rampur is industrially developed district in the state of Uttar Pradesh. In spite of the fact that district lacks forest resources and it does not posses sound economic base for industrial development, the district has the potential in terms of animal husbandry and in the production of peppermint. There exists agglomeration economies as Rampur is very near to industrially advanced district of Moradabad.

portrays the industrial development by using various industrial development indicators. It is revealed that industrial area per lakh of population is higher (0.49) in the district than to that in the state of Uttar Pradesh (0.08). Similarly, number of industrial estate per lakh of population is found higher in the district (5.96) than to what is observed in the state as a whole of 0.15. Also, registered factories per lakh of population are found larger in the district (15.92) than to that in the state of Uttar Pradesh (5.40). Number of functional factories per lakh of population is found la rger in Rampur (7.03) than to those in the state of Uttar Pradesh (5.70). Number of persons employed in the registered factories is found larger in Rampur (581.28) than to those in the state of Uttar Pradesh (261). However, per capita industrial production is found lower in Rampur (7.27) than to those in the state of Uttar Pradesh (28.11). Thus, out of 6 industrial development indicators, 5 are found in favour of Rampur district. A large potential exists in agriculture linked activities like peppermint. Also, there is untapped potential for developing the leather units in the district

Indicators of Industrial Development: 2001

Sl.No	Items	Rampur	Uttar Pradesh
1	No. of industrial areas per lakh of population	0.49	0.08
2	No of industrial estates per lakh of population	5.96	0.15
3	No. of registered factories per lakh of population	15.92	5.40
4	No. of functional factories per lakh of population	7.03	5.7
5	No of persons employed in registered factories per lakh of population	581.28	261
6	Per capita value of industrial production in '000'	7.27	2811

Source: Statistics Bulletin District Rampur; Statistics Diary 2006 U.P. Economics and Statistics Division, State planning Institute, Uttar Pradesh

Total area of the sampled 30 villages has been reported to be 7,080.47 acres, of which,

78.67 per cent are occupied by the agriculture. As much as 14.54 per cent are uncultivable land,

2.09 per cent current fallow, 1.90 per cent other fallow, 1.44 per cent cultivable waste and to

0.76 per cent of land has been earmarked for non-agricultural uses. Area sown more than once is found to be 5414.54 acres.

Land Use Pattern

Item	Area (Hectare)	Percentage
1. Total reporting	7,080.47	100.00
2. Forest	0.00	0.00
3. Uncultivable land	1,029.40	14.54
4. Non-agricultural uses	54.14	0.76
5. Cultivable waste	102.14	1.44
6. Pasture/grazing	2.96	0.04
7. Orchards	38.66	0.55
8. Other fallow	134.81	1.90
9. Current fallow	147.78	2.09
10. Net area sown	5,570.55	78.67
11. Area sown more than once	5,414.54	78.68

Source: Based on the primary data.

DISTRICT AT A GLANCE

S.No	Particular	Year	Unit	Statistics
1	**Geographical features**			
(A)	Geographical Data			

	i) Latitude			28.25^{0}N
	ii) Longitude			78.54^{0}E
	iii) Geographical Area	2011	Sq. KM	2367
(B)	Administrative Units			
	i) Sub divisions	2011	Nos.	5
	ii) Tehsils	2011	Nos.	5
	iii) Sub-Tehsil	2011	Nos.	6
	iv) Patwar Circle	2011	Nos.	NA
	v) Nyay Panchayat	2011	Nos.	75
	vi)Nagar nigam	2011	Nos.	0
	vii) Nagar Palika	2011	Nos.	5
	viii) Gram Panchayats	2011	Nos.	580
	xi) Revenue villages	2011	Nos.	1092
	x) Assembly Area	2011	Nos.	5
2.	**Population**			
(A)	Sex-wise			
	i) Male	2011	Nos.	1226175
	ii) Female	2011	Nos.	1109223
(B)	Total Population	2011	Nos.	2335398
3.	**Agriculture**			
A.	Land utilization			
	i) Total Area	2009-10	Hectare	235726
	ii) Forest cover	2009-10	"	6611
	iii) Non Agriculture Land	2009-10	"	27440
	v) cultivable Barren land	2009-10	"	213
4.	**Forest**			
	(i) Forest	2010-11	Ha.	6611
5.	**Livestock & Poultry**			
A.	**Cattle**			
	i) Cows	2007	Nos.	152395
	ii) Buffaloes	2007	Nos.	440452
B.	**Other livestock**			
	i) Goats	2007	Nos.	119753
	ii) Pigs	2007	Nos.	11611
	iii) Poultry	2007	Nos.	454067
	iv) **Railways**			
	i) Length of rail line	2010-11	Kms	74
	V) **Roads**			
	(a) National Highway	2010-11	Kms	77

	(b) State Highway	2010-11	Kms	0
	(c) Main District Highway	2010-11	Kms	163
	(d) Other district & Rural Roads	2010-11	Kms	1215
	(e) Rural road/ Agriculture Marketing Board Roads	2010-11	Kms	643
	(f) Kachacha Road	2010-11	Kms	NA
	(VI) **Communication**			
	(a) Telephone connection	2010-11		28250
	(b) Post offices	2010-11	Nos.	131
	(c) Telephone center	2010-11	Nos.	16
	(d)Density of Telephone	2010-11	Nos./lakh person	1206
	(e) Density of Telephone	2010-11	No. per Sq. KM.	11.94
	(f) PCO Rural	2010-11	No.	463
	(g) PCO STD	2010-11	No.	681
	(h) Mobile	2010-11	No.	NA
	(VII) Public Health			
	(a) Allopathic Hospital	2010-11	No.	24
	(b) Beds in Allopathic hospitals		No.	596
	(c) Ayurvedic Hospital		No.	13
	(d) Beds in Ayurvedic hospitals		No.	73
	(e) Unani hospitals		No.	6
	(f) Community health centers		No.	5
	(g) Primary health centers		No.	37
	(h) Dispensaries		No.	42
	(i) Sub Health Centers		No.	163
	(j) Private hospitals		No.	73
	(VIII) **Banking** commercial			
	(a) Commercial Bank	2010-11	Nos.	119
	(b) rural Bank Products	2010-11	Nos.	43
	(c) Co-Operative bank products	2010-11	Nos.	29

	(d) PLDB Branches	2010-11	Nos.	6
	(IX) Education	2010-11		
	(a) Primary school	2010-11	Nos.	2187
	(b) Middle schools	2010-11	Nos.	734
	(c) Secondary & senior secondary schools	2010-11	Nos.	124
	(d) Colleges	2010-11	Nos.	5
	(e) Technical University	2010-11	Nos.	0

Source: District Eco. & Stat. Office, Rampur

Dranage System with description of main rivers

S.No.	Name of River	Area Drained (Sq. Km)	% Area Drained in the District
1	Ram Ganga	30641	4.6
2	Kosi River	-	-
3	Pilakha River	-	-
4	Begul	-	-

Salient Features of Important Rivers and Streams:

S.No.	Name of the River or Stream	Total Length in the District (in Km)	Place of Origin	Altitude at Origin
1	Ram Ganga	28	Pauri Garhwal	78°54' to 69°29'E 28°25' to 29°10'N
2	Kosi River	-	-	-
3	Pilakha River	-	-	-
4	Begul	-	-	-

Portion of the River or Stream Recommended for Mineral Concession	Length of area Recommended for mineral concession (in Ha.)	Average width of area recommended for mineral concession (in meters)	Area Recommended for mineral concession (in square meter)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)
Ramganga	12.36	175	17600	10560
Kosi	-	150	133860	80316
Pilakha	-	92	25000	15000
Begul	-	67	10200	6120

Mineral Potential

Boulder (MT)	Bajari (MT)	Sand (M3)	Total Mineable Mineral Potential (MT)
Not Available	Not available	342030	247200
-	-	-	-
-	-	-	-
-	-	-	-

GENERAL RECOMMENDATIONS/CONCLUSIONS

1. Abandoned stream channels or terrace and inactive flood plains may be preferred rather than active channels and their deltas and floodplains.

2. Stream should not be diverted to form inactive channel.

3. Mining below subterranean water level should be avoided as a safeguard against environmental contamination and over exploitation of resources.

4. Large rivers and streams whose periodic sediment replenishment capacities are larger, may be preferred than smaller rivers.

5. Segments of braided river system should be used preferably falling within the lateral migration area of the river regime that enhances the feasibility of sediment replenishment.

6. Mining at the concave side of the river channel should be avoided

to prevent bank erosion. Similarly meandering segment of a river should be selected for mining in such a way as to avoid natural eroding banks and to promote mining on naturally building (aggrading) meander components.

7. Continued riverbed material mining in a given segment of the river will induce seasonal scouring and intensify the erosion activity within the channel. This will have an adverse effect not only within the mining area but also both in upstream and downstream of the river course. Hazardous effects of such scouring and enhanced erosion due to riverbed mining should be evaluated periodically and avoided for sustainable mining activities

8. Mining area should be demarcated on the ground with Pucca pillars so as to avoid illegal unscientific mining.