

7.1.13 Rohtak

The Rohtak district is located between 28°23' to 29°06' N latitudes and 76°13' to 76°58' E longitudes. It covers a total area of 1745 sq. km. The climate of the district is dry with intensely hot summer, and cold winter. The average annual rainfall of the district is 577.0 mm. It generally increases towards northeast. About 74 per cent of annual rainfall is received during the monsoon season. The district experiences extreme temperatures. During January the temperature goes down to below 1°C. May and June are the hottest months with mean daily maximum temperature at about 40°C. Temperature sometimes may rise to 45°C.

The district is comprised of the vast Indo-Gangetic alluvial plains called older alluvial plain. This older alluvial plain is further divided into sand dunes, plain and depressions. The sediment derived in the old alluvial plain are mostly from the Himalayan rivers having a heterogeneous composition. This landform is formed predominantly by medium to fine textured soils. Since the soils are fertile with good irrigation facilities (canal and tube wells), these have been put into maximum use over a long time. This landform has been further divided into the following subunits:

	1					[Area in ha
	Wettcode	Wetland Category			% of wetland area	Open	Water
Sr. No.			Number of Wetlands	Vetland Area		Post- monsoon Area	Pre- monsoon Area
	1100	Inland Wetlands - Natural					
1	1101	Lakes/Ponds	-	-	-	-	-
2	1102	Ox-bow lakes/ Cut-off meanders	-	-	-	-	-
3	1103	High altitude wetlands	-	-	-	-	-
4	1104	Riverine wetlands	-	-	-	-	-
5	1105	Waterlogged	8	150	8.91	148	108
6	1106	River/Stream	-	-	-	-	-
	1200	Inland Wetlands -Man-made					
7	1201	Reservoirs/Barrages	-	-	-	-	-
8	1202	Tanks/Ponds	126	888	52.76	874	696
9	1203	Waterlogged	25	232	13.78	229	170
10	1204	Salt pans	-	-	-	-	-
		Sub-Total	159	1270	75.46	1251	974
		Wetlands (<2.25 ha), mainly Tanks	413	413	24.54	-	-
		Total	572	1683	100.00	1251	974

Table 19: Area estimates of wetlands in Rohtak

Area under Aquatic Vegetation 13	(
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Area under turbidity levels		l I
Low	875	696
Moderate	0	0
High	376	278

The total wetland area in the district is 1983 ha and tanks/ponds and waterlogged contribute around 67 per cent wetland area. There are 126 tanks/ ponds and their wetland area in both the season not shown any drastic fluctuations in water spread. Natural waterlogged wetlands were observed low-lying areas and contribute around 9 per cent in total wetlands of the district. In addition there are 413 wetlands having less than 2.25 ha area. Qualitative turbidity ranges from low to high and is observed in both seasons. Out of 1683 ha wetland area 13 ha area was covered by aquatic vegetation during post monsoon season.



			The second second second
	Coastal Wetlands		
		Natural	
2101			Lagoons
2102			Creeks
2103	2		Sand/Beach
2104			Intertidal mud flats
2105			Salt marsh
2106			Mangroves
2107			Coral reefs
		Man-made	
2201			Salt pans
2202		İ.	Aquaculture ponds





7.1.14 Jhajjar

The Jhajjar district is located between 29°21'30" to 29°51'30" N latitudes and 76°16'30" to 76°58'45" E longitudes. It covers a total area of 1834 sq. km. The climate of the district is dry with intense hot summer, and cold winter. The average annual rainfall of the district is 577.0 mm. The maximum rainfall received during the months of July and August. About 74% of annual rainfall is received during the monsoon season. Temperature starts rising from March and continues till the end of June. May and June are the hottest months with mean daily maximum temperature is about 40°C. During winter the temperature starts decreasing by the middle of November, January is the coldest month.

The main physiographic units of the district are as under: The upland plain spreads in the north- eastern part of the district. It slopes towards south. This plain is covered with old alluvium of high productivity. The sandy region is spread in the southern and south- western parts of the district. It comprises of permanent sand dunes, most of them now have been leveled. Sahibi is the only seasonal stream, which enters the district from the southeastern part and flows from the south.

						Open Water		
Sr. No.	Wettcode	Wetland Category	Number of Wetlands	Total Wetland Area	% of wetland area	Post- monsoon Area	Pre- monsoon Area	
	1100	Inland Wetlands - Natural						
1	1101	Lakes/Ponds	2	563	25.66	203	0	
2	1102	Ox-bow lakes/ Cut-off meanders	-	-	-	-	-	
3	1103	High altitude wetlands	-	-	-	-	-	
4	1104	Riverine wetlands	-	-	-	-	-	
5	1105	Waterlogged	6	76	3.46	76	76	
6	1106	River/Stream	-	-	-	-	-	
	1200	Inland Wetlands -Man-made						
7	1201	Reservoirs/Barrages	-	-	-	-	-	
8	1202	Tanks/Ponds	72	499	22.74	480	369	
9	1203	Waterlogged	27	227	10.35	219	247	
10	1204	Salt pans	-	-	-	-	-	
		Sub-Total	107	1365	62.22	978	692	
		Wetlands (<2.25 ha), mainly Tanks	829	829	37.78	-	-	
		Total	936	2194	100.00	978	692	

Table 20: Area estimates of wetlands in Jhajjar

Area under Aquatic Vegetation	378	49
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Area under turbidity levels		
Low	683	369
Moderate	0	0
High	295	323

The total wetland area in the district is 2194 ha and lakes/ ponds and tanks/ponds contribute around 49 per cent wetland area. There are 72 tanks/ ponds and their wetland area in both the season not shown any drastic fluctuations in water spread. There are only two lakes and the wetland area in post-monsoon season 203 ha but during summer these wetlands dried. There are 107 wetlands having area more than 2.25 ha in the district where as less than 2.25 ha wetlands are 829. Qualitative turbidity ranges from low to high and is observed in both seasons. Out of 2194 ha wetland area 378 ha area was covered by aquatic vegetation during post monsoon season while in pre-monsoon season it is only 49 ha.



			The second second second
	Coastal Wetlands		
		Natural	
2101			Lagoons
2102			Creeks
2103			Sand/Beach
2104			Intertidal mud flats
2105			Salt marsh
2106			Mangroves
2107			Coral reefs
		Man-made	
2201			Salt pans
2202		1	Aquaculture ponds





7.1.15 Mahendragarh

Mahendergarh district, situated in south- western part of Haryana, has an area of 1859 sq. km. Geographically, it stretches in between 27°48' N to 28°28' N latitudes and 75°54' E to 76°22' E longitudes. The climatic conditions in the district vary from arid to semi arid. The summer months are very hot whereas, winter season is fairly cool and dry, but there is sometimes freezing temperature during the months of December and January. Occasionally, frost also occurs in winter. The annual rainfall in the district increases from west to east. About 75% of annual rainfall is received during the southwest monsoon months i.e. July to September. During winter months light rainfall occurs due to western cyclonic disturbance of Mediterranean sea. Temperature begins to rise from March to June. June is the hottest month. The mean daily maximum temperature varies from 41°C to 45°C and mean daily temperature is about 27°C. Maximum temperature may go up to 48°C.

The district is dominated by dry lands with presence of inland streams, sandy plains, shifting sand dunes, stabilized sand dunes, dissected upland tracts and often barren, denuded, rocky hill ranges and their outcrops.

							Area in ha
	Wettcode	Wetland Category				Open Water	
Sr. No.			Number of Wetlands	Total Wetland Area	% of wetland area	Post- monsoon Area	Pre- monsoon Area
	1100	Inland Wetlands - Natural					
1	1101	Lakes/Ponds	-	-	-	-	-
2	1102	Ox-bow lakes/ Cut-off meanders	-	-	-	-	-
3	1103	High altitude wetlands	-	-	-	-	-
4	1104	Riverine wetlands	-	-	-	-	-
5	1105	Waterlogged	2	97	21.95	97	12
6	1106	River/Stream	-	-	-	-	-
	1200	Inland Wetlands -Man-made					
7	1201	Reservoirs/Barrages	1	13	2.94	13	3
8	1202	Tanks/Ponds	2	17	3.85	17	4
9	1203	Waterlogged	3	26	5.88	26	5
10	1204	Salt pans	-	-	-	-	-
		Sub-Total	8	153	34.62	153	24
		Wetlands (<2.25 ha), mainly Tanks	289	289	65.38	-	-
		Total	297	442	100.00	153	24

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Area under Aquatic Vegetation	0	
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Area under turbidity levels		
Low	16	3
Moderate	13	2
High	124	19

The total wetland area in the district is 442 ha and waterlogged area contributes around 28 per cent wetland

area. There are 18 wetlands having area more than 2.25 ha in the district where as less than 2.25 ha wetlands are 289. Qualitative turbidity ranges from low to high and is observed in both seasons. Almost all wetlands are devoid of aquatic vegetation. Many wetlands are dried during pre-monsoon season.



			The second second second
	Coastal Wetlands		
		Natural	
2101			Lagoons
2102			Creeks
2103			Sand/Beach
2104			Intertidal mud flats
2105			Salt marsh
2106			Mangroves
2107			Coral reefs
		Man-made	
2201			Salt pans
2202		1	Aquaculture ponds



7.1.16 Rewari

Rewari district lies in southwestern part of Haryana, which extends from 27°57' north to 28°17' north latitudes and from 76°17' cast to 76°51' east longitudes encompassing an area of 1582 sq. km. The climate in the district varies from arid to semi arid. The incidence of thunderstorm also occurs during August and September. These are sometimes accompanied by heavy shower and occasional hail. The district has an average annual rainfall of about 686.6 mm. The major part of it (70 to 80%) is received during summer monsoon i.e. July to September. Due to western cyclonic disturbances coming through Afghanistan and Pakistan, the district receives about 10 to 15 percent of total rainfall during winter season. Eastern part of the district gets more rainfall and it starts decreasing towards west and southwest. The summer months are very hot with maximum temperature ranging from 41°C to 46°C in May and June. June is the period of highest incidence of dust storm. Sometimes, the temperature touches 48°C.

						Open	Water
Sr. No.	Wettcode	ode Wetland Category Of Wetland Wetland Wetland Category	Total Wetland Area	% of wetland area	Post- monsoon Area	Pre- monsoon Area	
	1100	Inland Wetlands - Natural					
1	1101	Lakes/Ponds	-	-	-	-	-
2	1102	Ox-bow lakes/ Cut-off meanders	-	-	-	-	-
3	1103	High altitude wetlands	-	-	-	-	-
4	1104	Riverine wetlands	-	-	-	-	-
5	1105	Waterlogged	-	-	-	-	-
6	1106	River/Stream	-	-	-	-	-
	1200	Inland Wetlands -Man-made					
7	1201	Reservoirs/Barrages	-	-	-	-	-
8	1202	Tanks/Ponds	2	20	4.52	20	20
9	1203	Waterlogged	7	106	23.98	106	4
10	1204	Salt pans	-	-	-	-	-
		Sub-Total	9	126	28.51	126	24
		Wetlands (<2.25 ha), mainly Tanks	316	316	71.49	-	-
		Total	325	442	100.00	126	24

Table 22: Area estimates of v	wetlands in Rewari
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Area under Aquatic Vegetation	0	0
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Area under turbidity levels		
Low	20	20
Moderate	0	0
High	106	4

The total wetland area in the district is 442 ha and man made waterlogged area contribute around 24 per cent wetland area. There are no natural wetlands in the district. There are only two tanks and water level fluctuations are very high. There are 9 wetlands having area more than 2.25 ha in the district where as less than 2.25 ha wetlands are 316. Two classes of turbidity were observed. Area of high turbidity is 106 ha and low turbidity is restricted to 20 ha. Almost all wetlands are devoid of aquatic vegetation. Many wetlands mainly waterlogged are dried during pre-monsoon season.



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	Coastal Wetlands		
		Natural	
2101			Lagoons
2102			Creeks
2103			Sand/Beach
2104			Intertidal mud flats
2105			Salt marsh
2106			Mangroves
2107			Coral reefs
		Man-made	
2201			Salt pans
2202		İ.	Aquaculture ponds





7.1.18 Gurgaon

The Gurgaon district is one of the southern districts of Haryana state and named after its headquarter town Gurgaon. The district lies between 27°39' N and 28°32'N latitudes and 76°39' and 77°20'E longitudes. It stretches towards the outlying hills of the Rajasthan in the south. It is bounded on the northwest by the Jhajjar district and on the north-east by the Union Teritory of Delhi. On the east Faridabad district forms its boundary. On the south the Alwar district of Rajasthan and on the west Rewari district marks the district boundary. Total area of the district is 1254 sq.km.

The district experiences dry air except during the monsoon, hot summer and cold winter. The monthly average annual rainfall of the district is 442.4mm. Maximum rainfall is received during the months of July, September, August about 76%. Some rainfall is also received during the winter season from December to February but the amount is very low (6%).

Temperature begins to rise from March to June. June is the hottest month. Maximum temperature may go up to 48°C. With the onset of monsoon, temperature starts falling and during monsoon period weather remains uncomfortable due to increased humidity and warm night. After October, there is decrease temperature, the decrease being steeper after middle of November. January is the coldest month. Occasionally during winter season, cold in association with western disturbances brings temperature down to freezing point.

The drainage of the district is typical of the arid and semi-arid areas. It comprises of large depressions and seasonal streams. Important depressions of the district are: Khalilpur lake, Chandaini lake, Sangel-Ujina lake, Kotla Dahar lake and Najafgarh lake. Sahibi and Indari are two important seasonal streams of the district. They originate from Aravalli hills. Both these streams cause heavy damage to crops during heavy rainfall.

							Area in ha
						Open	Water
Sr. No.	Sr. No.WettcodeWetland CategoryNumber of Wetlands	l otal Wetland Area	% of wetland area	Post- monsoon Area	Pre- monsoon Area		
	1100	Inland Wetlands - Natural					
1	1101	Lakes/Ponds	2	158	5.72	70	20
2	1102	Ox-bow lakes/ Cut-off meanders	-	-	-	-	-
3	1103	High altitude wetlands	-	-	-	-	-
4	1104	Riverine wetlands	-	-	-	-	-
5	1105	Waterlogged	9	79	2.86	51	61
6	1106	River/Stream	-	-	-	-	-
	1200	Inland Wetlands -Man-made					
7	1201	Reservoirs/Barrages	1	1713	61.98	0	153
8	1202	Tanks/Ponds	14	63	2.28	54	59
9	1203	Waterlogged	18	155	5.61	114	128
10	1204	Salt pans	-	-	-	-	-
		Sub-Total	44	2168	78.44	289	421
		Wetlands (<2.25 ha), mainly Tanks	596	596	21.56	-	-
		Total	640	2764	100.00	289	421

Table 23: Area estimates of wetlands in Gurgaon

Area under Aquatic Vegetation599

Area under turbidity levels		
Low	75	212
Moderate	48	20
High	166	189

The total wetland area in the district is 2764 ha and man made reservoirs/barrages contribute around 62 per cent wetland area. The contribution of natural wetlands to total wetlands of the district is around 3 per cent. There are 44 wetlands having area more than 2.25 ha in the district where as less than 2.25 ha wetlands are 596. Three classes of turbidity were observed in both the season. Area of high turbidity is 166 ha and 189 ha in post and pre-monsoon season respectively. Out of 2764 wetland area 599 ha area was covered by aquatic vegetation while pre-monsoon season it was 312 ha.



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	Coastal Wetlands		
		Natural	
2101			Lagoons
2102			Creeks
2103	2		Sand/Beach
2104			Intertidal mud flats
2105			Salt marsh
2106			Mangroves
2107			Coral reefs
		Man-made	
2201			Salt pans
2202		1	Aquaculture ponds