

CHAPTER 1

GENERAL

Origin of the Name: There are many historical accounts in support of the antiquity of Kolar district. 'Kolar', the district headquarters was called by different names *viz., Kolahalapura, Kuvalala, Kolala* in earlier times. Legend has it that Parashurama took revenge on Karthaveeryarjuna here and hence the name Kolar. Sage Jamadagni who honoured him by gifting a cow named 'Surabhi' to Karthaveeryarjuna, when he was the king of this area. Karthaveeryarjuna pressured Jamadagni to gift him the cow, but the sage refused. When Karthaveeryarjuna tried to forcefully snatch the cow, Parashurama, the son of Jamadagni, killed him. Later the sons of Karthaveeryarjuna slained Jamadagni. Renukadevi, the wife of Jamadagni, shared the funeral pyre with her husband and died. Parashurama took an oath to destroy all the *kshatriyas* and in the process killed all the sons of Karthaveeryarjuna in a battle. The commotion from the battlefield echoed down the hill and thus the place got the name Kolahala, which literally means uproar, and it is said that *Kolaramma* temple was built in commemoration of Renuka.

A herdsman called Kola, discovered a hidden treasure while ploughing the land at the site where the town now stands. It came to

the knowledge of Uttamachola, a Chola king who ordered the herdsman to move to Kanchi. Having been warned by Renuka in the form of *Kolahalamma*, the king erected a temple and built a town in her honour says the legend. The name *Kolahala* might have been derived from *Kolahala*, meaning the plough of Kola, the herdsman and later it came to be known by the name Kolar.

Historical evidences say that Kolar might have been in existence from the fourth century A.D. The kings of Ganga dynasty of Talkad originally hailed from Kolar and gave themselves the title *Kuvalalapuravareshwaras*. Kolar was then the capital before it was shifted to Talkad. Many inscriptions of Cholas, Hoysalas and Vijayanagar kings and *Palegars* have been reported from this place. It was an important town of supremacy during those periods. According to an inscription of Kalinga Ganga from Vishakapatna, the 17th king in the lineage, *Kolahala* built the town in his name and named it *Kolahala*. This region was called as *Nikarili Cholamandalam* in the reign of Cholas. Hoysalas ruled this part from 1117 A.D. It appears that these rulers called it *Kolahala* or *Kolala*.

Location and Boundaries: Kolar district forms the easternmost district of the plains of Karnataka state and is located geographically between 12°46' and 13°58' North latitude and 77°21' and 78°35' East longitude. Its greatest length from north to south is about 135 km/85 miles and its greatest distance from east to west is also roughly the same. It is bounded by the Bangalore Rural district and Tumkur district on the west and is surrounded by Andhra Pradesh (Ananthpur and Chittoor districts) on the north and east and Tamil Nadu (North Arcot and Dharmapuri districts) on the south. During 2007 Chikballapura district was carved out of Kolar district. Chikballapur, Shidlaghatta, Chintamani, Bagepalli, Gudibande and Gauribidnur taluks were transferred to the newly formed Chikballapur district. This volume gives details of undivided Kolar district.

Area and Population: The district has a total area of 8,223 sq km forming about 4.29% of the total area of the whole State. It is the ninth largest district area-wise, among the 27 districts of Karnataka. In the Kolar district, Bagepalli Taluk is the largest with an area of 932.71 sq km and Gudibande (227.14 sq km) is placed last. The statistics based on the Census of 2001 records that the district has a total population of 25,36,069 of which 19,10,546 people live in the rural areas. Of the total population, 12,86,193 are males and 12,49,876 females. With a

population of 4,21,437, Bangarpet has the highest figures and Gudibande ranks the lowest with a population of 51,828. The density of population is 275 for every sq km and is thus less than the Karnataka's average population density (307). Bangarpet taluk has the highest population density of 448 people per sq km and Bagepalli taluk has the lowest at 156. The general information of the district is given in Table 1.1 (a) and 1.1(b).

Table 1.1(a) : General Particulars of Kolar District

Sl. No.	Taluk	Area Sq.Km.	East Latitude		North Longitude	
			In Degree minutes	In Degree minutes	In Degree minutes	In Degree minutes
1.	Kolar	793	77:53	78:14	13:01	13:18
2.	Gudibande	227	77:35	77:49	13:36	13:47
3.	Gauribidanur	894	77:21	77:40	13:26	13:48
4.	Chintamani	892	78:51	78:10	13:15	13:21
5.	Chikkaballapur	644	77:33	77:50	13:20	13:39
6.	Bangarpet	848	78:04	78:36	12:46	13:04
7.	Bagepalli	933	77:40	78:05	13:38	13:58
8.	Malur	645	77:47	78:05	12:48	13:10
9.	Mulubagilu	823	78:12	78:35	13:01	13:22
10.	Shidlaghatta	664	77:45	77:58	13:13	13:40
11.	Srinivasapura	860	78:03	78:22	13:12	13:38
Total		8,223	77:21	78:35	12:46	13:58

*Directorate of Census, Bangalore

Source : District at a Glance, Kolar district., 2002-03

Note: 1) The total geographical area of the taluks is not tallying with the total geographical area of the district. Because the statistics of the entire area of taluk merely represent the area under land use as clarified by the Director, Land survey and Revenue system, Department of land records. This slight difference is due to the different methods employed in measuring the area.

Table 1.1(b) : General Particulars of Kolar District

Sl. No.	Taluks	1991 Census			Village Panchayats (2001-02)	Hobies	Villages	2001 Census		
		Inhabited Villages	Uninhabited Villages	Total Villages				town Panchayat	town Municipality	City Municipality
1.	Kolar	323	39	362	36	7	361	0	0	1
2.	Gudibande	84	21	105	7	2	105	1	0	0
3.	Gauribidanur	216	20	236	36	6	239	0	1	0
4.	Chintamani	344	63	407	34	6	400	0	0	1
5.	Chikkaballapur	219	34	253	22	3	250	0	0	1
6.	Bangarpet	357	32	389	37	6	388	0	1	1
7.	Bagepalli	209	19	228	24	5	229	1	0	0
8.	Malur	296	68	364	28	4	363	0	1	0
9.	Mulabagilu	311	34	345	30	5	343	0	1	0
10.	Shidlaghatta	244	45	289	27	4	290	0	1	0
11.	Srinivasapura	290	57	347	25	5	347	1	0	0
	Total of the District	2,893	423	3,325	306	53	3,316	3	5	4

**Table 1.2 : Talukwise Population Details of
Kolar District as per the 2001 Census**

Details	Total	Male	Female
KOLAR DISTRICT			
Total	25,36,069	12,86,193	12,49,876
Rural	19,10,546	9,68,253	9,42,293
Urban	6,25,523	3,17,940	3,07,583
Gauribidanur Taluk			
Total	2,71,119	1,38,328	1,32,791
Rural	2,40,582	1,22,756	1,17,826
Urban	30,537	15,572	14,965
Gauribidanur Municipality	30,537	15,572	14,965
Chikkaballapur Taluk			
Total	1,91,122	97,239	93,883
Rural	1,36,154	69,296	66,858
Urban	54,968	27,943	27,025
Chikkaballapur Corporation	54,968	27,943	27,025
Gudibande Taluk			
Total	51,828	12,150	7,873
Rural	43,021	21,758	21,263
Urban	8,807	4,401	4,406
Gudibande Town Panchayat	8,807	4,401	4,406
Bagepalli Taluk			
Total	1,69,689	86,053	83,636
Rural	1,49,570	75,618	73,952
Urban	20,119	10,435	9,684
Bagepalli Town Panchayat	20,119	10,435	9,684

Details	Total	Male	Female
Shidlaghatta Taluk			
Total	1,93,965	98,426	95,539
Rural	1,52,867	77,276	75,591
Urban	41,098	21,150	19,948
Shidlaghatta Municipality	41,098	21,150	19,948
Chintamani Taluk			
Total	2,71,284	1,38,311	1,32,973
Rural	2,05,791	1,04,466	1,01,325
Urban	65,493	33,845	31,648
Chintamani Corporation	65,493	33,845	31,648
Srinivasapura Taluk			
Total	1,84,721	93,631	91,090
Rural	1,61,762	81,833	79,929
Urban	22,959	11,798	11,161
Srinivasapura Town Panchayat	22,959	11,798	11,161
Kolar Taluk			
Total	3,42,593	1,73,913	1,68,680
Rural	2,28,686	1,15,853	1,12,833
Urban	1,13,907	58,060	55,847
Kolar Corporation	1,13,907	58,060	55,847
Malur Taluk			
Total	2,07,009	1,05,047	1,01,962
Rural	1,79,194	90,880	88,134
Urban	27,815	14,167	13,648
Malur Municipality	27,815	14,167	13,648

Details	Total	Male	Female
Bangarpet Taluk			
Total	4,21,437	2,12,592	2,08,845
Rural	2,25,650	1,14,336	1,11,314
Urban	1,95,787	98,256	97,531
Robertsonpet Corporation	1,57,084	78,578	78,506
Bangarpet Municipality	38,703	19,678	19,025
Mulabagilu Taluk			
Total	2,31,302	1,16,494	1,14,808
Rural	1,87,269	94,181	93,088
Urban	44,033	22,313	21,720
Mulabagilu Municipality	44,033	22,313	21,720

Source : Directorate of Census, Bangalore

Table 1.3 : List of Hobliwise Villages of Kolar District 2001 Census

Taluk	Hobli	Number of Villages	Rural Area (in hectares)
Kolar	Kolar	61	11,161.15
	Narasapura	28	5,974.00
	Vakkaleri	56	11,744.04
	Vemagal	71	15,486.59
	Sugatur	44	10,081.99
	Huttur	50	11,675.68
	Holur	51	11,351.35
		361	77,474.80
Gudibande	Gudibande	49	11,661.67
	Somenahalli	56	10,986.59
		105	22,648.26

Taluk	Hobli	Number of Villages	Rural Area (in hectares, 2001)
Gauribidanur	Gauribidanur	30	16,953.86
	Tondebhavi	38	12,860.07
	Darinayakana Palya	36	12,771.46
	Nagaragere	39	13,250.16
	Mandhenahalli	47	15,196.23
	Hosur	39	18,127.61
		239	89,159.39
Chintamani	Ambajidurga	74	14,,904.18
	Kaivara	49	10,066.24
	Chintamani	71	14,003.17
	Chilakalanerpu	65	18,629.21
	Munaganahalli	55	15,851.97
	Murugamalla	86	14,229.01
		400	87,683.78
Chikkaballapura	Chikkaballapura	85	18,715.97
	Nandi	94	21,138.20
	Mandikal	72	23,495.45
		251	63,349.62
Bangarpet	Kamasamudra	48	11,762.60
	Kyasamballi	79	17,210.80
	Bangarpet	82	15,838.60
	Boodikote	58	15,233.90
	Betamangala	68	12,083.50
	Robertsonpet	53	8,546.39
		388	80,675.79
Bagepalli	Goolur	43	20,767.90
	Chelur	50	20,642.03
	Pathapalya	49	22,360.30
	Bagepalli	48	14,658.60
	Mittemari	39	14,469.90
		229	92,925.73

Taluk	Hobli	Number of Villages	Rural Area (in hectares)
Malur	Tekal	84	13,506.28
	Malur	131	21,526.06
	Masti	90	15,297.94
	Lakkur	58	13,259.20
		363	63,589.48
Mulabagilu	Avani	75	18,218.45
	Tayalur	83	13,640.36
	Duggasandra	59	20,742.13
	Byrakur	71	16,644.38
	Mulabagilu	55	11,289.84
		343	80,535.16
Shidlaghatta	Jangamakote	70	13,995.17
	Bashettihalli	75	15,987.76
	Shidlaghatta	96	20,290.02
	Sadali	49	15,852.26
		290	66,125.21
Srinivasapura	Nelavanki	69	16,030.15
	Yaldooru	43	14,620.85
	Rayalapadu	85	21,633.18
	Ronuru	76	16,692.30
	Srinivasapur	74	16,876.46
		347	85,852.94

Sources : Census of India, 2001, Series 30, Karnataka

Administrative Changes

There is a traditional belief that sage Valmiki lived in Avani area of Mulabagilu taluk. Shathashruna Parvatha, which lies to the west of Kolar, is popular in the context of Renukadevi and Parashurama. It is believed that Pandavas, during their exile, roamed in both these places and Kaivara, near Chintamani, was the ancient Ekachakrapura of Lord Bali. It is believed that Sadali near Shidlaghatta was founded by Sahadeva of Mahabharata fame. There is yet another belief that before waging war with Tripuranthaka, all the gods assembled at Kurudumalai in Mulabagilu taluk.

Gangas in about fourth century A.D. built their kingdom and started ruling this part as is evident from the inscriptions. Mahavali, the Bana king, during 7th and 8th century A.D. ruled eastern parts of Palar River. From about 8th to 10th Century A.D. much of the district was under the control of Nolambas. By the end of 10th century, Cholas subjugated the district and by about the 12th century, it was under the rule of Hoysalas. Cholas, Gangas and other minor dynasties ruled some parts independently for a brief period. Thereafter, the area was under the administrative control of Vijayanagar kings. During the reign of Vijayanagar kings, it is learnt that they honoured local chieftains like *Avathi Nada Prabhus*, Sugatur Palegars, Nayaks of Gummanayakana Palya and others.

When Adilshahis of Bijapur subjugated the Mysore province, Shaji Bhonsle captured Kolar from Sugatur Gowdaprabhus and ceded Punganur to them. Shaji and his son Sambhaji ruled this part from 1653 to 1680. Subsequently, Kolar was seized by Moghals and was attached to the administrative control of Subedhar of Sira. Later Marathas, Nawabs of Cuddappah and Adoni kings ruled it in succession. Hyder Ali subjugated both Kolar and Hoskote in 1761. The British took over Mulabagilu and Kolar in 1768 and subsequently the Marathas gained control in 1770 A.D. The British recaptured Kolar in 1791 but returned it to the same rulers in 1792. This part came under the rule of the British and Wadeyars after the fall of Tippu Sultan.

During the regency of Diwan Purnaiah, Mysore state was divided into three Principal divisions. Pattana – Ashtagrama, Chitradurga and Bidanur or Nagar, each headed by a Subhedar. There were in these divisions, around 115 to 120 taluks and each taluk was divided into

many hoblies consisting of groups of villages. Maharaja Krishnaraj Wodeyar III divided the entire kingdom into six administrative divisions or *Foujdaris* viz., Mysore Ashtagrama, Bangalore, Chitradurga, Nagara, Madhugiri and Manjarabad and the present Kolar district was with the Bangalore Foujdar and was later included under Bangalore division in 1834.

During the regency of Commissioners, as a part of administrative reforms, the earlier existed six divisions were reduced to three revenue divisions and the entire state was divided into eight major district in 1862-63. The Kolar district was separated from the Bangalore Division and was included in Nandidurga Division. The Chief of the district was designated 'Deputy Superintendent' and the head of the division was called 'Superintendent'. In 1869, the administrative head of the state was called 'Chief Commissioner'. In 1873, the superintendents were named as Commissioners. But in 1879, the divisions along with the post of Commissioners were abolished. As a result, Deputy Commissioners as head of the districts and Assistant Commissioners as head of the revenue sub-divisions and Amaldars as head of the taluks were appointed. Gudibande, Srinivasapura and Malur Taluks were abolished in 1882. But, later Srinivasapura and Malur taluks were reconstituted in 1886.

There were three revenue sub-divisions in 1903.1) Kolar Sub-division comprising Kolar, Chintamani and Srinivasapura Taluks. 2) Chikkaballapur Sub-division under which were included Chikkaballapur (Gummanayakana Palya, till 1882), Gauribidanur, Bagepalli and Shidlaghatta taluks, and 3) Second Sub-division of Kolar included Bowringpet (Bangarpet), Malur and Mulabagilu taluks. When Gudibande taluk was rescinded in 1883, a total of 138 villages were transferred to Bagepalli taluk, 46 villages to Chikkaballapur taluk and one village to Shidlaghatta taluk. Later, about 138 villages, which were included earlier under Bagepalli taluk, were separated and a new Gudibande Sub-taluk was constituted.

The Sub-divisions were reconstituted in the year 1918. The second Sub-division of Kolar was rescinded and by clubbing Chintamani, Srinivasapur and Shidlaghatta taluks, a newly constituted Chintamani Sub-division came into being. The Chintamani Sub-division was again rescinded in 1992 and the number of Sub-division were reduced to two - the Malur Sub-division comprising Chintamani, Srinivasapur, Mulabagilu and Malur taluks (with headquarters at Kolar), and the

Chikkaballapur Sub-division comprising Shidlaghatta, Chikkaballapur, Gauribidanur, Bagepalli, and Gudibande sub-taluks (with headquarters at Chikkaballapur). The remaining Kolar and Bangarpet taluks came under the direct administration of the District Commissioner. Later both the above taluks were included under Kolar Sub-division and Gudibande Sub-taluk was later made a full-fledged Taluk.

In the administrative changes that were made during 1950, villages of Bangarpet taluk, viz., Varadikoppa, Valagalakoppa, Byrapareddyhalli, Harakachinnapalli, Gollapalli, Hospet and Chinnaridoddi as well as Koladasanapura of Malur taluk were transferred to Madras State. At the same time Araleri, Rayasandram, Balanapalli and Yettakodi villages of Hosur taluk in Salem district of Madras State, were transferred to Malur taluk. Similarly, Chintakuntapalli village, which was under Hindupur taluk, Ananthapur district of Andhra Pradesh was added to Gudibande taluk. The area of Sub-divisions, which were in existence in 1961, is appended in table 1.4.

Table 1.4 : Details of Sub-Divisions as in 1961

Sub-division and Taluk	No. of Hoblies	Area in Sq.Miles	Area in Sq-Km	No. of Villages
Chikkaballapura Sub-Division				
Chikkaballapura	3	228.9	592.8	210
Shidlaghatta	4	259.9	673.1	231
Chintamani	6	351.1	909.4	334
Bagepalli	5	360.2	932.9	204
Gudibande	2	124.8	323.3	82
Gauribidanur	6	340.4	881.7	204
Kolar Sub-Division				
Kolar	7	308.1	798.0	311
Srinivasapura	5	320.2	829.3	290
Mulabagilu	5	321.0	831.4	302
Bangarpet	6	305.6	791.5	284
Malur	4	259.9	673.1	291
District Total	53	3,180.1	8,236.5	2,743

Source : Gazetteer of Kolar District, 1968

During 2004-05, Kolar district was included under Bangalore Division and comprised Chikkaballapur and Kolar Sub-divisions. While Chikkaballapur Sub-division covers six taluks (Bagepalli, Chikkaballapur, Chintamani, Gauribidanur, Gudibande and Shidlaghatta), Kolar Sub-division has five taluks (Kolar, Malur, Mulabagilu, Bangarpet and Srinivasapur) with Kolar, as the district headquarters. It is located 70 km. east of Bangalore on National Highway No.4. Chikkaballapur town is located 62 km. north of the district headquarters. Subsequently, Kolar district was bifurcated into Kolar and Chikkaballapura districts during 2007. Information given in this book refers to undivided Kolar District prior to 2007.

Water Resources

The district is bounded by the flanks of the Eastern Ghats both on the northwest and the south. The area around Nandidurg on the northeast (1455 m/4,851 ft from MSL) forms the main watershed of the district where the drainage system originates. It is said that seven rivers originate in Nandidurg and flow in different directions. Both the Arkavathi and the Northern Pinakini rivers originate on the western part of the Nandidurg hills. While the former takes a southern course, the latter takes a northern course. On the northern part of Nandidurg originate two other rivers - Chitravathi and Papaghni and take northeasterly courses. River Palar and Pennar originate on the eastern part of Nandidurg hills and take easterly and southern courses. The flows of both Arkavathi and southern Pinakini river are limited to Bangalore rural district. The Northern Pinakini on the north mainly defines the drainage of the district and the Palar on the south and an imaginary line drawn from Chikkaballapur to Srinivasapur bisects both these catchment areas. The district is not endowed with any perennial rivers. Most of the rivers are small and ephemeral in nature and carry water only during the rainy seasons. Rain water in the district, flows as runoff in the easterly direction towards Nayakaneri and Mogili valleys. These valleys form a part of Palamaner zone of Andhra Pradesh. The dense shrubby forest of both these valleys is classified as reserve forest of Kaundinya Wild Life Sanctuary.

The Palar: The Palar river is said to rise as a spring situated within a well and cross the southern Pinakini as sub-terranean flow. Another view maintains that this river originates from the neighbourhood of Kaivara and appears at Gautamagudda to the east of Ambajigudda.

From Gautamagudda where it originates, the river Palar takes a westerly course and flows for a distance of 10 km, through Jangamakote and Kolar. A tributary near Yenandahalli joins it. From here it takes a southeasterly direction and flows in the Bangarpet taluk, where it forms two large tanks - Bethamangala and Ramasagara and enters North Arcot district near Gundalapalli, after crossing the State border. Then it passes through Vellore, Arcot and Kanjivaram and finally joins the Bay of Bengal to the south of Chenglepet. The name Palar (in ancient Kannada *pal* means milk) means 'river of milk' and in the Puranas, it is mentioned as *Ksheeranadhi* in Sanskrit. The total length of the river from the place of its origin, till it reaches the border of the district, is 108 miles and it drains an area of 2712 sq km (1,047 sq miles) in the district. It is interesting to note that more than 1,615 tanks are supported by the drainage basin of Palar. Villages like Muduvadi, Holali, Chellapalli, Ramasagar, Bethamangala are located on the banks of this river.

The Northern Pinakini: The Northern Pinakini, also called the North Pennar river, rises on the Chennakeshava hills to the northwest of Nandi hills, and passes by the towns of Manchenahalli and Gowribidanur and enters the Hindupur taluk of Andhra Pradesh and turning eastwards, flows through Cuddapah and Nellore districts and finally joins the Bay of Bengal near Nellore. Before entering Andhra Pradesh, the northern Pinakini, for a small distance, passes through the eastern part of Koratagere, Madhugiri and Pavagada taluks of Tumkur district. Kumudvati and Chitravathi are two of its tributaries. The total length of the river in the district is 54 km (34 miles) with a drainage area of 842 sq km (324 sq. miles) and it feeds 116 tanks of which Jakkalamadagu and Srinivasasagar are two important tanks. The northern Pinakini river before leaving the district border touches Babenahalli near which the famous holy spot of Vidhurashwatha is located. The river carries a huge amount of sand in its course.

The Kumudavathi: The Kumudavathi (Kumudvathi, Kundar river) rises to the west of Makalidurga in Bangalore district and flowing north, passes through Doddaballapura and Gowribidanur taluks and then flows in the taluks of Koratagere and Madhugiri before entering Ananthapur district and joins the Northern Pinakini near Hindupur. It has a length of 56 km (35 miles) along its course in the district and is a seasonal river carrying water only during rainy seasons. It drains an

area of 544 sq km (210 sq miles) with 74 tanks in the basin. On its bank are located villages such as Rampura, Idagur and Chandadur.

The Chitravathi: The Chitravathi River, a tributary of the Northern Pinakini, rises on Kalaganapalyakonda Hills about 14 km to the north of Nandi hills and flows in a north-eastern direction between Varadakonda Hills and Bagepalli areas. From here it passes through Hindupur taluk of Ananthapur district of Andhra Pradesh and joins the Northern Pinakini near Gowdalur in the Cuddappah district. It has a length of 55 km (30 miles) in the district and drains an area of 539 sq km (208 sq miles). There are as many as 206 tanks in the drainage basin.

The Kushavathi: This stream rises in Avalakonda or Cowhill to the north of Nandi hills. Passing through Byrasagar tank, it flows in Gudibande taluk and finally joins the Chitravathi river outside the State boundary. It has a length of 43 km in the district and drains an area of 175 sq km (66.5 sq miles). There are 51 tanks in the drainage basin. The stream crosses the State boundary to the north of Abakavanipalli and enters the Hindupur taluk of Ananthapur district, Andhra Pradesh.

The South Pinakini: The south Pinakini or Dakshina Pinakini river rises on Chennarayana hills just to the north-west of Nandi hills in Chikkaballapur taluk. Flowing in easterly direction up to Shidlaghatta, it takes a turn towards south entering south of Vijayapur of Devanahalli taluk, Bangalore rural district. It passes through the central parts of Hosakote taluk, and taking a turn towards south, crosses the border of the State near Gundur of this taluk. It passes through Dharmapuri and South Arcot districts and finally joins Bay of Bengal to the north of Kadalur. It has a length of 80 km along its course from the point of its origin in the State, of which 30 km. length is within the district. It drains an area of 50 sq km in the basin.

The Papaghni: The Papaghni is a small river in the district and the name means 'destroyer of sin'. It rises in Kalavaradurga of Chikkaballapur taluk and takes a northwesterly course. Passing through the valleys of Shidlaghatta taluk, it enters Chittoor district through Bagepalli taluk and finally joins the northern Pinakini River. A tank called Vyasasamudhra is built across this river towards Andhra Pradesh, at the border of the district. It has a length of 68 km along its course in the district and drains an area of 860 km.

Other Streams: The Nangli Hole, a tributary of Kaundinya river, rises on Kurudumalai near Mulubagilu and takes an easterly turn crossing the border of the district. It has a length of 29 km in the district and drains an area 280 sq km (208 sq miles).

There are two streams bearing the name the Kushavathi in the district, the first one joins the Papaghni river and the other the Chitravathi river. The former rises on the Vali-Eshwara hill to the east of Punganoor in Andhra Pradesh and flows in Srinivasapur taluk and again enters Andhra Pradesh. This is also called by the name Gundedu River. It has a length of 39 km in the district and drains an area of 340 sq km (133 sq miles). There are as many as 249 tanks in the drainage basin. On its bank are located important villages such as Gompalli, Buraganapalli and Pathakote. The description of the second Kushavathi that joins Chitravathi has been given earlier.

The Markandeya Hole is yet another stream in the district. Two streams, one rising to the south west of Vokkaleri hills in Kolar taluk and the other from Tekal hills of Malur taluk, join each other near Boodhikote in Bangarpet taluk and form the Markandeya river. It flows in a southerly direction and ultimately joins the Vrishabhavathi river. It falls in cascade from a height of 50 feet near Tamatamakanahalli. It has a length of 50 km along its course in the district and drains an area 435 sq km (168 sq miles). It has 274 tanks in the drainage basin. Toralaki and Bhodikote are some of the important villages located on the banks of this stream.

The Arkavathi is one of the tributaries of the Kaveri and rises on the Nandi hills. It crosses the district and enters Doddaballapur taluk of Bangalore rural district. It flows for a short length of one kilometre in the Kolar district.

The Vrishabhavathi is a tributary of the South Pinakini. It rises east of Vokkaleri hills and passing through Bangarpet taluk, enters Hosur taluk of Dharmapuri district, Tamil Nadu to the south of Kamasandra. It has a length of over 54 km along its course in the district and drains an area of 347 sq km. The drainage basin supports 264 tanks. Kamasamudra and Bangarpet are two important towns located on the bank of the Vrishabhavathi.

The Vandamana stream is a major tributary of Papaghni River and rises on Itkal hills to the east of Mittemari in Bagepalli taluk. It takes an

easterly course and joins the Papaghni River in Andhra Pradesh. It has a length of 25 km along its course in the district and drains an area of 54 sq km (21 sq miles). The drainage basin supports a total of 137 tanks. The percentage of drainage basin of the district is given in table 1.5.

Table 1:5 : Details of River Basin
(percentage to geographical area in sq. km.)

Sl. No.	Area	North Pinakini Basin	South Pinakini Basin	Palar Basin	Total
1	Bagepalli	100	-	-	100
2	Bangarpet	-	65	35	100
3	Chikkaballapura	78	22	-	100
4	Chintamani	60	5	35	100
5	Gauribidanur	100	-	-	100
6	Gudibande	100	-	-	100
7	Kolar	-	10	90	100
8	Malur	-	93	7	100
9	Mulabagilu	-	-	100	100
10	Shidlaghatta	65	25	10	100
11	Srinivasapura	60	-	40	100

Source : Irrigation Department, Bangalore

Out of a total of 8223 sq.km. drainage area, 4112 (50%) sq. km. belongs to Northern Pinakini, 1,562 sq.km (19%) to Southern Pinakini and 2,549 sq.km. (31%) to Palar drainage area.

Groundwater Resources

Kolar district lies in the eastern agricultural zone of the State with an average annual rainfall of 744 mm. The area enjoys more than 70% of southwest monsoon showers with an average of 42 rainy days. Due to erratic monsoons and scanty and deficit rains, the area is frequently visited by droughts. As there are no perennial rivers, groundwater is the main source for irrigation. Out of the total arable land in the district, only 18.8% is being irrigated. Though the district has more than

3,298 tanks meant for irrigation, the farmer has to depend mainly on the Southwest monsoon for agriculture. As most of the tanks dry up in summer, bore wells are the primary water source for irrigation. Kolar, Malur, Srinivasapur, Chikkaballapur, Gowribidanur and Bangarpet taluks have a profusion of wells. In most cases farmers drill the bore wells at their own cost and they fail to follow the rules of maintaining the specified distance between wells. This has drastically affected the source of ground water and in some cases the sources are on the verge of drying up. Depending on the percentage of utilization of groundwater, the taluk has been classified as white (65%), grey (65 to 85%), black (more than 85%) areas. Recent estimates say that out of eleven taluks of the district, four have been included under the grey area, five under the black and the remaining two taluks under the white area. The taluks such as Chikkaballapur, Kolar, Malur, Chintamani and Shidlaghatta, which are classified under black areas, have been banned from sinking new bore wells. The water table was at 40 feet in the district in 1965 and at present it has gone down to 650 feet. Though some tanks have been useful for recharging the groundwater, most of the tanks are filled with more than 60% silt. The fine silt stalls the infiltration of water and acts as a barrier for the recharge of groundwater. Encroachment of the tank belts has created an additional problem by reducing the area of infiltration. Wells, which also help recharge water and aid in increasing the ground water budget, have copious water only during rainy seasons and their role during summer season is almost insignificant. See table 1.6.

Geology

Gneisses form the major rock type of Kolar district occupying a vast area within which there is a prominent schist belt with a width of about six kilometre, extending from Srinivasapur in the north up to the southern border of the district in the south. The greater part of the district forms an undulating terrain with isolated granite hills. Spectacular balancing rocks as if piled one above the other, are often seen. The schist belt (Kolar schist belt) hosts minerals of economic importance including gold for which it is well known. Associated with the schist belt are a variety of rocks, which include quartzite, ferruginous quartzite, metabasalts and other rocks. In addition, a series of dolerite dykes cut the formations in north-south and east-west directions.

Table 1.6 : Groundwater Resources of Kolar District

Taluk	Total annual ground water recharge ha m	Net annual ground water recharge ha m	Net ground water use as June 2002 ha m	Total number of irrigation wells	Classification of soils
Kolar	8,548	7,266	7,076	9,743	Black
Gudibande	2,431	2,067	971	2,178	White
Gauribidanur	10,439	8,873	6,171	10,802	Ash
Chintamani	9,643	7,082	7,158	11,372	Black
Chikkaballapura	5,704	4,849	8,531	9,888	Black
Bangarpet	9,791	8,323	4,452	8,449	White
Bagepalli	8,332	7,082	4,913	5,194	Ash
Malur	5,978	5,081	5,939	7,670	Black
Mulabagilu	10,314	8,767	3,937	6,757	Ash
Shidlaghatta	6,391	5,432	5,375	10,391	Black
Srinivasapura	9,542	8,111	5,127	6,400	Ash
District Total	87,113	72,933	59,650	88,799	-

Source : Department of Mines and Geology,. Bangalore

Nandi hills form the highest hill range and acts as a watershed separating the catchment areas and many rivers take their birth from here. One can divide the Northern Pinakini river on the north and the palar in the south by drawing an imaginary line from Srinivasapur to Chikkaballapur. The areas on the north and south from this line are generally sloppy in nature. The eastern and the middle part of the district form the Palar valley. The valley of the Northern Pinakini, as one proceeds towards Gowribidanur show a gradual slope. Mogili and Nayakaneri valley tracks on the east are little away from the boundary of the district. Kolar town is 800 m. above sea level while Malur is 854 m. and foot hill of Ambaji Durga is 859 m. above the sea level.

Evidences for the existence of plate tectonics regimes in South India in the Archaean Era 2.5 billion years ago have been postulated by E.J. Krogstand and Gilbert N. Hanson, especially by studying the Kolar schist belt. They are of the opinion that the Kolar schist belt was a suture zone for two colliding continental plates. The belt extends north south for a distance of 84 km with a width of nearly six km and is a typical example of a linear greenstone belt. Such greenstone belts are to be seen in many parts of the world where ancient earth's crust is still preserved. Kolar Gold Fields are located within the greenstone belt. Based on the measurement of radioactive Uranium, Krogstand stated that rocks west of Kolar schist belt are older compared to those east of it by millions of years. Some volcanic rocks are also seen as indicated by the occurrence of pillow lavas, which is the characteristic feature of submarine volcanism.

Pillow Lava : Pillow lavas have been described from near Marikuppam lying about seven km. from the Kolar Gold Fields. Their age is estimated at 2,500 million years. Such pillow lavas form when volcanoes erupt in the sea floors due to sudden chilling when they come in contact with water. Similar structures have been described from Chitradurga district of Karnataka. Pillow lavas near Marikuppam are spread over an area of 12 sq km and the Geological Survey of India has declared these rare structures as a National Geological Monument.

Hills : The boundaries of Kolar district, which form the eastern margin of Karnataka plateau, touch the hill ranges of the Eastern Ghat both in the north and in the south. Gudibande, Ellodu hill, Adinarayana hill, Panchagiris of Nandi, Kaivara-Chintamani hills, Shathashruniga hills of Kolar, Devarayasamudra, Avani, Mulabagilu, and Kurudumalai are some of the prominent hill ranges of the district.

The principal hill ranges of the district commence from the Nandidurga in Chikkaballapur taluk and stretch northwards passing through Gudibande and towards Penukonda of Andhra Pradesh, they extend in north south direction. Some important peaks are: Nandidurga (1,479 m), Channarayabetta (1,451 m, located eight km southeast of Chikkaballapur), Skandagiri (1,447 m, located eight km to the north of Nandidurga), Brahmagiri (1,419 m, located southeast of Nandidurga), Harihareshwara hill (1,256 m, located to the north of Nandidurga).

Parallel to this range, about 50 to 60 km east of it, there is another hill range which is an extension from Andhra Pradesh and

commences from Dongalakonda or Dokkaladurga to the north of Gummanayakana Palya and extends towards south. This range separates the drainage basins of the Chitravathi and the Papaghni. Its slopes down further where isolated peaks such as Murugamale, Ambajidurga (1,341 m), Rahmandurga (1,304 m), appear. Further, this range extends from west of Kolar (maximum height 1,208 m) continuously up to Vokkaleri and Takel hills to the south.

Another range of low hills commences near Srinivasapur passing through east of Kolar and extends through the southern most part of Bangarpet taluk and stretches up to the ghats towards Kuppam. The hills further east near Mudimagadu and Sunkal are arcuate and form a circular configuration.

The central and the eastern part of the district represent the valleys of the Palar river with an undulating topography and are best suited for agriculture. This region generally has an elevation above the mean sea level of 836 m near Kolar, 891 m near Malur and 897 m near Ambajidurga. The river valley of the Northern Pinakini has considerable slope near Gauribidanur.

Tanks

Tanks were constructed in Kolar district for the welfare of the community as early as the Gangas and Cholas, on the principle of 'one tank feeds another'. Tanks were planned in such a way that if one tank filled up and overflowed, the surplus water filled up the other tank downstream. The network of tanks planned so meticulously by them are in a dilapidated condition today and the linkage is completely disrupted. As mentioned in the gazetteer compiled by Rice, the district was utilizing 85% of the water from Palar and Northern Pinakini rivers for irrigation in his time. A survey from the top of the Nandi hills then could count nearly 400 tanks. There were in all 5,497 tanks, which supplied water to irrigate 48,600 hectares.

In Kolar and Bangarpet taluks, a series of tanks were built across the Palar River viz., Somambhudhi, Yellaghatta, Muduvadi, Chillapalli, Manighatta, Bethamangala and Ramasagar. The interval between the tanks is maintained at an average of five to seven kilometers. Kolar, Nangali and Kurubooru tanks also belong to this series and Ramasagar tank is the largest tank of the district. The extent of irrigated land - Achchkut of Bagawadi tank of Srinivasapur taluk is 269 hectares, Ronur 113 hectares, Kolatoor 61 hectares and Lakshmanasagar 92 hectares.

Kandawar and Gopalakrishna tanks built across the Southern Pinakini in Chikkaballapur taluk provide water for irrigation to 253 hectares and 290 hectares respectively. Katamachanahalli tank of the same taluk provides water for 219 hectares for irrigation. The spillover water from Gopalakrishna tank is connected to Amanikere and Belutikere of Shidlaghatta.

The Northern Pinakini and its tributaries such as the Chitravathi and the Papaghni are the sources for many tanks and Byrasagara tank of Gudibande happens to be one of the largest tanks of that area. Vatadhahosahalli, Hudugoor, Nagaragere and Namagondlu tanks are some of the other important tanks of Gudibande taluk. Poornasagara tank to the south-west of Gauribidanur and Periasandra tank built across Chitravathi River are also significant. A list of tanks in Kolar district is appended at the end of the chapter.

Tank Management Scheme, Kolar

Karnataka has over 36,000 tanks most of which are 100 to 200 years old. Presently these tanks are facing severe man-made problems like environmental destruction in the drainage area, encroachment of feeder canals, silt deposition in the tank beds, dilapidated tank bunds, sluices, weirs and canals. As a result of this there is a considerable decline in their water holding capacity and their capacity to provide water for irrigation. This undesired development has not only created irrigational problems but has also affected the employment potential in rural areas. Destruction of environment has resulted in lowering the groundwater table. The participation of the local folk in the overall development and management of tanks assumes greater importance in this context. The Government of Karnataka with the help of World Bank launched a scheme called 'Community based tank management of Karnataka' to be executed within a stipulated time. The Government has also constituted a Water Development Society.

The scheme aims at community development by encouraging the local populace to take a more pro-active role, which in turn is likely to improve their standard of living. The scheme covers 34 taluks in nine districts of Karnataka and includes 1,024 tanks of Kolar district (Kolar taluk -165, Malur taluk -132, Chintamani taluk - 203, Mulabagilu taluk -270, Bagepalli taluk -159, Shidlaghatta taluk - 60 and Gudibande taluk-35). The works to improve the conditions of 231 tanks were at various stages of completion as on 2003-04.

Tanks are the property of the Government of Karnataka and hence their management and the collection of water cess are the responsibility of the concerned departments of the Government. Once the rejuvenation of the tank is complete, the community is asked to superwise its management. The community is empowered to collect the water cess and 90% of the cess collected, together with other benefits reaped from the tank, is utilized for future management of the tanks. Tanks not only belong to the people who are covered under *achkutdars* but also to the entire village community. Since entire village or Grama Panchayat is involved in the developmental activities of the tank, the necessary grant will directly be given to the community itself.

Under this scheme, if a tank is to be rejuvenated, the decision is to be made by the community itself. Following are the points that have to be fulfilled to take part in this scheme. The regulations insists that 1) Tanks should be irrigational 2) Tanks should have had spill-overs at least once or twice in the preceding ten years 3) The entire community should accept the decision of the village panchayat by affixing their signatures to take up this scheme 4) The community should accept to pay 12% of the total expenditure incurred for development of tanks 5) No tank should be covered under 'Canals' for major or minor irrigation. 6) They should not be private tanks. 7) The area covered under irrigation should consist mostly of small landholders and medium landholders 8) The land under irrigation by the tank should not be less than four hectares or more than 3,000 hectares.

Since the implementation of the scheme rests upon the community it also becomes participatory. This involves not only people enjoying the irrigational facilities, but also the farmers of the drainage basin, landless people, women, fishermen and backward class people. In order to execute this scheme and to guide the local community, a group guiding team has been constituted through non-governmental organizations. The tank development society in consultation with the above team will be involved in implementing this scheme.

Mineral Deposits

Gold : Gold occurs mostly in the auriferous quartz veins of Dharwar Schists in Karnataka. It occurs as minute specks in Kolar schist belt, which has a strike length of over 80 km. with a width of about six km. The auriferous lodes, generally extending north south, occur over a length of mere 7.2 km. There are about 30 separate auriferous lodes of

which the Champion lode is the most significant. The Mysore mine, the Champion Reef mine, The Oorigaum mine and the Balaghat mine are the principal mines located in the Kolar Gold Fields. Gold is also associated with minor amount of silver, which as a by-product in the processing has yielded 20,000 to 25,000 ounces of the metal. There was a considerable decline in the production of silver since 1943. At present, the Kolar Gold Fields have been closed.

Corundum : The occurrence of corundum has been reported a kilometre south of Bangarpet near Dodderi, where the deposit occurs as individual patches. Granite forms the host rock and corundum occurs as lenses and small bands in the metamorphosed mica-cordierite-sillimanite schist. Sometimes big crystals are also seen.

Kyanite : Kyanite occurs in association with sillimanite and cordierite near Sakarsanahalli, Dodderi and Kamasamudra in Bangarpet taluk with or without corundum. Some of the boulders from this area carry kyanite crystals.

Ochre: There are small deposits of Ochre in Kolar, Mulabagilu and Srinivasapura taluks. Here they occur in isolated patches and are white to light yellow in colour.

Feldspar : Pegmatite veins carrying potash Feldspar crystals are reported from Thondebhavi and Kamasamudra areas.

Graphite : Graphite occurs near Ganachapura of Bangarpet taluk about eight km. to the northwest of Kolar Gold mines. The deposit is massive in nature with 12% carbon and occurs as lenses. It is considered to be a large deposit and is associated with fine-grained grey granite. Locally it is surrounded by phyllitic schist and ferruginous quartzite and intrusive granite.

FLORA

With many tanks, wells, rivers and streams in Kolar district one would expect lush green vegetation. But as the average annual rainfall is quite low and many rivers and streams carry meager water for most part of the year the vegetation is rather sparse. More than 80% of the total sowing area in the district depends on rains.

The total geographical area of the district is 8,22,300 hectares of which the forest area is estimated at 1,03,941 hectares and represents 12.64% of the total geographical area. As per the survey of 2003-04 the

district has 877.93 sq km of reserved forest, 43.31sq km of protected forest, 61.56 sq km unclassified forest and 56.61 sq km of rural forest. Deciduous and scrub forests predominate in Kolar district and are governed by the climate and dry soil. Trees have a stunted growth with large canopy. Many parts of the forest areas have been heavily worked in the past for firewood and charcoal and has resulted in poor tree density even in protected forest areas. As per the reports of Forest Survey of India, the district has forest cover of mere 5.1%, though the forest area accounts for 13.33% of the total geographic area of the district. The remaining 8.23% area is yet to be covered by afforestation. Added to this, most of the forests are limited to hilly areas, and the valleys between the hills are frequently encroached and converted into agricultural land. Soil mixed with gravel is yet another impediment for growth of trees in these forests. There is ample opportunity in the district for forest plantations of diverse nature. The department has in fact taken steps for planting trees meant for fuel as well as for fruit. Nandidurg hill in the district has encouraged rich vegetation while it is scarce in other hilly areas. A list of plants found in the district is given below:

Name of the Plant	Scientific Name	Name of the Plant	Scientific Name
Karijali/babul	Acacia Arabica	Bandrike	Dodonea viscosa
Kaggali	Acacia Catechu	Mukarti	Elaeodendron glaucum
Banni	Acacia ferrigomea	Neelagiri	Eucalptus spp
Bili jali	Acasia leucophloea	Nerale	Eugenia jambolana
Bilwa	Aegle marmelos	Devadaru	Eythroxylon monogynum
Ankole	Alanguim lamarcki	Bela	Feronia elephantam
Chujjulu	Albizzia amara	Ala	Ficus benghalensis
Bagi	Albizzia lebbeck	Bikke	Gardenia gummifera
Bilwara	lbizzia odoratissima	Thandarisi	Gymnosporia montana
Dindiga	Anogeissus latifolia	Goravi	Ixora parviflora
Sita phala	Anona squamosa	Lantana	Lantana camara

Goje	<i>Bridelia retusa</i>	Bevu	<i>Melia azadirachta</i>
Maradi	<i>Buchanania angustigolia</i>	Pavate	<i>Pavetta indica</i>
Muttuga	<i>Butea frondosa</i>	Honge	<i>Pongamia glabra</i>
Nalla halasu	<i>Canathium diymm</i>	Ijje	<i>Premna tomentosa</i>
Thangai	<i>Cassia auriculata</i>	Ballari jali	<i>Prosopia fuliflora</i>
Kakke	<i>Cassia fistula</i>	Kare	<i>Randia dumetorum</i>
Seeme Thangadi	<i>Cassia siamia</i>	Gandha/Srigandha	<i>Santalum album</i>
Surve mara	<i>Casuarina equestigolia</i>	Kurudi	<i>Scutea indica</i>
Huragalu	<i>Chloroxylon swietenia</i>	Alari	<i>Shorea talura</i>
Pachari	<i>Dalbergia peniculata</i>	Hunise	<i>Tamarindus indica</i>
Sisso	<i>Dalbergia sisoo</i>	Torematti	<i>Terminalia arjuna</i>
Jagalaganti	<i>Diospyros montana</i>	Alale	<i>Terminalia chebula</i>
Tupra	<i>Diospyros tupra</i>	Naviladi	<i>Vitex altissima</i>
Chennangi	<i>Lagerstroemia parviflora</i>	Beppale / hale	<i>Wrightia tinctoria</i>
Chotte	<i>Zyzipus xylopyros</i>	Bore	<i>Zyziphus jujuba</i>

Forest Development Activities

Many programmes are being executed for the development of forests in the district. Among them are degraded forest developmental plan, plantation along the roadside, greening of towns, distribution of saplings to the public, protection of *Devara kadu*, Central Government sponsored fuel and fodder development, Central Government sponsored non-plantation minor forest produce, special units, tribal sub plan and many of these are already operational. The joint forest plan and management aims to involve the general public as well as those dwelling in forest areas to work for afforestation through forest committees. It emphasizes the establishment of forest committees, supply of wood, protecting forest and other similar activities. In Kolar district, a total of 384 village forest committees were constituted during 2003, of which 165 committees are working under regional forest division and 213 under social forestry section.

FAUNA

Due to the absence of thick forests in the district, wild animals are scarce, and fauna like tigers, bisons and elephants seen elsewhere,

are absent here. Bears and panthers are occasionally spotted at Nandidurga. Black bucks and deer are found in some parts having sparse forest cover. Several kinds of reptiles, however, are ubiquitous. There are no important wild life sanctuaries in Kolar district.

Environment and Ecology

The Environment and Ecology Department draws specific programmes related to environment and invites project plans from universities, institutes and voluntary organizations through newspaper advertisements. Advice of experts is sought, the proposals are accepted and reviewed by a body and accordingly recommendations for grants are made.

National Green Army Eco-clubs : The Ministry of Forests and Environment has decided to establish 50,000 Eco-clubs throughout the country and has planned 100 Eco-clubs in various schools in each district. It mainly aims at creating awareness to conserve and improve the environment and action plans are afoot to implement the scheme. Approval for 2700 Eco-clubs has been obtained for the State. This programme is being planned for all the districts following the guidance of Government of India. For this purpose the Karnataka State Council for Science and Technology (KSCST) and Karnataka State Vignana Parishad (K.R.V.P) has been identified as nodal institutions and the Kolar district is being handled by K.S.C.S.T.

World Environmental Day : The 5th of June every year is being observed as the World Environmental Day. On this occasion, the Government felicitates personages and institutes that have contributed to the betterment of the environment by initiating conservation, pollution control, adopting eco-friendly measures and creating a general awareness among people. The awardees are selected through a committee appointed by the government. The *Parisara Sree* Award is also being distributed since 2002.

According to the Environmental (conservation) Act of 1986, the Ministry of Forest and Environment, Government of India and the various State Pollution Control Boards will be monitoring the production of plastics and recycling while the district committee will be implementing the rule regarding the use of plastics, collection, separation, transportation and disposal. The said notification prohibits, among other things, the use of recycled plastic bags or tins for food

collection, transportation, disposal or package. Through the same notification, the use of plastic or recycled plastic less than 20 microns in thickness is also banned.

District Environmental Conservation Authority: The District Environmental Conservation Authority was reconstituted in 2002 and the District Commissioner heads the committee, while the Executive Officers of the district panchayat are co-opted as co-presidents. This authority is constituted to deal with problems concerning environmental conservation and pollution and also to examine related complaints. This committee acts as the authority in giving advice and recommendation to the government and to the Pollution Control Board. The district environmental conservation committee discharges the following work: 1) it identifies the places which have severe environmental problems and which are peculiar to that place and recommends to the Government, the possible expenditure for management. 2) It creates awareness among the public about pollution and its management through various media. 3) It encourages indigenous methods or traditional methods of overcoming pollution. 4) It identifies endemic species of both plants and animals and recommends to the Government, developmental actions to be taken. 5) It identifies individual sectors, which use materials that destroy the ozone layers and reports solutions. 6) Periodical inspection of heavy and dangerous establishments of the district and reports the preparedness in regard to onsite and offsite to the Pollution Control Board 7) It reports to the state government/Pollution Control Board, major accidents in any of the establishments in the district along with recommendations to prevent recurrence 8) It discusses, recommends and encourages eco-friendly activities such as development of greenery, conserving of top soil, use of non-conventional fuel, proper use of rain water, groundwater recharge, management of catchment areas, techniques related to the purity and recycling of wastes, use of organic fertilizers and the use of organic pesticides.

CLIMATE

The district has an agreeable climate. The year can be divided into four seasons. The dry season with clear bright weather from December to February, hot season from March to May and the Southwest monsoon season from June to about the end of October. November, December is the season of retreating monsoon.

Rainfall

Records of rainfall are available for 12 stations in the district and extend back to about 90 years for most of the stations. The details of the rainfall at these stations are appended in table 1.7. The range of hills in the northwestern part of the district comprising the Nandi hills and their further continuation north constitutes the chief watershed and most of the rivers in the district have their origin there. The average annual rainfall at Nandi hills at an elevation of 1470 m is 730.5 mm of which 69% is contributed by the southwest monsoons. September is usually the month with the highest rainfall. During April and May and in the retreating monsoon the district gets some rainfall accompanied by thunderstorms. In the fifty-year period from 1901 to 1950, the annual rainfall average over the district was the highest in 1903, when it amounted to 173% of the normal while the lowest was 52% of the normal in 1923. In 11 out of the 50 years (1901 to 1950) the rainfall was less than 80% of the normal, and in 43 of the years the rainfall was 500 to 1000 mm. See tables 1.7 to 1.9 for more details.

On an average, there are 47 rainy days (days with rainfall of 2.5 mm). The number varies from 43 at Bagepalli to 54 at Chikkaballapur. The highest rainfall recorded in 24 hours at any station in the district was 253.7 mm at Malur on 1st May 1872.

Details of Season-wise Rainfall in Kolar District (in m.m.)

Sl. No.	Details	Normal Rainfall	Rainfall during 1999-2000	Rainfall during 2000-2001
1	South west monsoon season (June to September)	326.50	253.00	445.00
2	North east monsoon season (October to December)	189.80	182.00	219.00
3	Winter Season (January-February)	7.00	43.00	1.00
4	Summer season (March to May)	107.30	88.00	105.00
5	Annual	640.60	566.00	770.00

Source : Directorate of Economic and Statistics, Rainfall Division, Bangalore.

Table 1.7: Details of the Minimum and Maximum Rainfall in the District

Name of the Centre	Year	Jan.	Feb.	Mar	Apr.	May	June	July	Aug.	Sept.
Kolar	50 a	9.7	5.8	10.71	37.1	91.4	45.7	64.3	98.8	129.3
	b	1.0	0.5	0.7	2.3	5.4	3.4	5.2	6.5	7.3
Bangarpet	50a	8.4	5.6	8.6	37.6	94.2	47.5	63.3	97.3	123.9
	b	0.7	0.4	0.6	2.2	5.7	3.6	5.6	6.4	7.0
Chintamani	50a	8.1	3.3	10.4	35.6	74.9	57.9	61.5	85.9	128.5
	B	0.8	0.4	0.8	2.0	4.7	4.2	5.3	6.2	7.0
Mulabagilu	50a	13.5	7.9	11.4	31.7	83.6	58.4	70.1	105.2	136.1
	b	1.2	0.5	0.7	2.0	5.1	4.0	4.9	6.5	7.0
Shidlaghatta	50a	7.9	5.3	11.4	34.8	82.0	64.0	81.0	102.9	151.4
	B	0.6	0.4	0.7	2.2	5.0	4.3	6.9	7.9	7.4
Chikkaballapura	50a	9.1	8.1	12.5	31.5	70.4	76.5	100.3	120.7	147.1
	b	0.7	0.5	0.7	2.5	4.7	5.4	8.9	9.5	8.4
Malur	50a	7.9	8.6	11.2	41.9	97.5	50.8	69.6	98.3	133.9
	b	0.9	0.3	0.7	2.5	6.3	4.4	6.3	7.2	7.0
Srinivasapura	50a	9.4	9.1	10.2	31.2	82.8	57.7	71.9	93.0	136.7
	b	0.9	0.6	0.6	2.2	5.0	4.2	5.9	7.1	7.0
Bagepalli	50a	3.8	4.1	6.6	31.5	63.7	57.4	82.4	97.8	152.4
	b	0.3	0.3	0.5	1.9	4.1	4.1	6.2	6.5	8.0
Gauribidanur	50a	5.1	5.1	4.3	28.7	69.6	61.5	85.6	100.6	158.5
	b	0.5	0.5	0.4	1.9	4.5	4.5	6.8	7.0	8.1
Gudibande	50a	5.6	6.6	7.4	31.2	69.3	76.5	103.6	127.0	182.9
	b	0.4	0.5	0.4	1.9	4.0	5.2	8.7	8.0	8.6
Kolar District	50a	8.0	6.3	9.5	33.9	79.9	59.4	78.1	102.5	143.7
	b	0.7	0.5	0.6	2.1	4.9	4.3	60.4	7.2	7.6
Nandibetta	16a	5.3	0.5	14.7	33.3	123.7	115.3	182.1	177.3	195.6
	b	0.4	0.1	0.9	2.2	6.0	6.6	12.0	10.8	9.7

*a : normal rain in mm. b : daily average rain (above 2.5 mm rain per day) * statistics*

Name of the Centre	Year	oct.	Nov.	Dec.	Annual	Max. rainfall@	Min. rainfall@	Maximum during 24 date	rainfall hours
Kolar	50a	119.1	82.0	17.5	711.4	167 (1903)	57 (1908)	167.6	2-5-1872
	b	7.6	5.3	1.6	46.8				
Bangarpet	50a	126.7	69.9	15.5	698.5	199 (1903)	47 (1950)	179.1	1-11-1888
	b	8.1	5.0	1.4	46.1				
Chintamani	50a	126.2	81.5	16.3	690.1	168 (1930)	45 (1908)	166.4	6-7-1894
	b	7.2	5/2	1/5	45/3				

Mulabagilu	50a b	132.8 8.1	89.1 5.8	23.1 2.0	762.9 47.8	200 (1930)	41 (1950)	196.9	26-8-1910
Shidlaghatta	50a b	124.2 7.4	74.9 4.6	13.2 1.3	753.0 48.7	171 (1903)	52 (1923)	142.7	29-9-1932
Chikkaballapur	50a b	116.8 6.7	67.8 4.7	10.4 1.2	777.1 53.9	192 (1903)	47 (1908)	154.9	21-5-1879
Malur	50a b	123.9 7.6	74.7 4.5	14.2 1.4	733.0 49.9	160 (1903)	43 (1920)	253.7	1-5-1872
Srinivasapura	50a b	133.1 7.4	82.3 5.3	16.0 1.4	733.4 47.6	167 (1903)	48 (1923)	172.7	21-9-1875
Bagepalli	50a b	105.4 6.1	58.2 3.8	10.9 0.8	679.2 42.6	156 (1903)	48 (1904)	144.8	19-10-1949
Gauribidanur	50a b	110.7 6.6	58.7 3.6	6.9 0.7	695.3 45.1	158 (1903)	44 (1923)	162.6	24-9-1938
Gudibande	50a b	117.6 6.9	67.1 3.8	13.5 1.0	808.3 49.4	181 (1903)	44 (1908)	238.8	21-5-1879
Kolar district	50a b	121.5 7.2	73.3 4.7	14.4 1.3	730.5 47.5	173 (1903)	52 (1923)		
Nandibetta	16a b	231.7 9.6	82.3 3.8	33.5 1.9	1,195.8 64.0	234 (1946)	52 (1942)	176.8	6-7-1951S

Table 1.8 : Details of the Annual Rainfall During 2002 (in m.m.)

Taluk	Rain-gauge Centres in 2002-03			No.of days rained			
	Active	Closed	Total	Normal Rain (m.m)	Actual Rain (m.m.)	Actual Rain	Normal Rain
Kolar	7	0	7	716	540.10	34	45
Gudibande	2	0	2	805	413.00	26	48
Gauribidanur	7	0	7	678	395.70	34	43
Chintamani	8	2	10	778	593.6	40	45

Chikkaballapur	4	2	6	796	375.9	37	53
Bangarpet	9	1	10	702	440.8	39	45
Bagepalli	5	0	5	678	364.7	30	42
Malur	4	0	4	713	694.7	30	49
Mulabagilu	2	2	4	818	628.9	33	45
Shidlaghatta	6	0	6	768	336.6	28	49
Srinivasapura	3	3	6	722	509.6	21	34
District Total	57	10	67	744	481.2	32	45

**Table 1.9 : Details of the Rainfall of the District
from 1990 to 2002 (in m.m.)**

Month/ Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Normal Rains (mm)	7	6	9	33	80	61	81	100	145	136	69	17	744
1991	2	2	0	39	70	120	45	72	191	361	125	0	1,027
1992	1	0	0	10	89	112	83	89	99	145	101	1	730
1993	0	0	7	8	17	114	50	113	180	237	54	33	813
1994	0	0	0	30	73	36	71	58	58	230	29	5	590
1995	2	1	4	12	109	50	94	167	78	103	25	0	645
1996	0	0	0	47	48	196	53	139	222	80	6	43	834
1997	1	0	24	31	19	50	32	54	212	118	64	26	631
1998	1	0	5	25	43	32	120	160	135	167	62	26	776
1999	0	2	1	32	103	36	26	73	119	119	53	9	573
2000	0	36	0	17	70	33	62	204	146	204	12	4	788
2001	1	0	5	75	24	3	78	69	281	231	26	9	802
2002	0	0	10	26	113	84	16	23	99	87	17	3	478

Temperature

Records of temperature are available at the Kolar Gold Field observatory and Nandidurga observatory. The meteorological conditions as seen from the data of the Kolar Gold Fields observatory may be taken to be representative of those over the district in general. Nandi hill enjoys a cooler climate throughout the year. The period from March to May is one of the continuous raise in temperature. May is generally the hottest part of the year with the mean daily maximum temperature of 34.2°C . At Nandi hills, during April, a mean daily maximum temperature of 28.7°C has been recorded. In the summer months, the maximum temperature may sometimes go up to 39° or 40°C .

With the advancement of Southwest monsoons the temperature decreases, and throughout the monsoon season the weather is pleasant. With the retreating of the Southwest monsoon, the temperature begins to drop both during day and a night. December is the coldest part of the year with the mean daily maximum temperature of 25.3°C . and the mean daily minimum temperature of 15.6°C . At Nandidurg, the mean daily maximum temperature is 20.6°C while the mean daily minimum temperature is 12.6°C . The highest maximum temperature recorded at Kolar Gold Fields was 39.9°C on 21st May 1931 and at Nandi hills it was 32.8°C on 12th May 1950. The lowest minimum temperature was 10.6°C on 1st February 1923 at Kolar Gold Fields and 8.3°C on 5th December 1954 at Nandi hills. The details of the temperature of the district is appended in table 1.10

Cloudiness : Skies are heavily clouded and overcast in the period from June to September and October to November. During the remaining part of the year the skies are clear or lightly clouded. Relative humidities are high in the Northwest monsoon season and moderate during the rest of the year.

Winds : Winds are generally moderate with some increase in speed during the monsoon months. The details of speed of the wind is appended table 1.11.

Other Weather Phenomena : Occasional thunderstorms accompanying rains is common during the months of February to May. During monsoon season and from September to October heavy rains with hailstones are frequent. Occasional fog occurs in the cold season. Other details related to weather phenomena is appended in table 1.12.

Table 1.10 : Minimum and Maximum Temperature and Relative Humidity of the District (Nandi hills)

Month	Average daily Max. Temp.	Average daily min temp.	Maximum temperature		Minimum temperature		Humidity as at morning 8.30 a.m.
	Celsius	Celsius	Celsius	Date	Celsius	Date	Percentage
January	21.9	12.4	25.6	21-1-1954	8.9	11-1-1946	66
February	24.6	14.7	28.3	27-2-1954	10.0	7-2-1947	57
March	21.7	16.8	30.6	5-3-1953	12.8	4-3-1944	55
April	28.7	17.8	32.2	23-4-1956	13.3	17-4-1949	64
May	27.8	17.5	32.8	12-5-1950	13.3	24-5-1955	70
June	24.1	16.2	30.0	6-6-1953	12.2	7-6-1948	90
July	21.7	15.7	26.1	22-7-1941	12.8	11-7-1952	98
August	21.9	15.7	25.6	4-8-1947	13.3	27-8-1947	97
September	22.1	15.5	26.1	4-9-1951	12.2	21-9-1949	95
October	22.5	15.7	25.0	26-10-1951	12.2	3-10-1948	87
November	21.4	14.2	24.4	4-11-1953	8.9	27-11-1945	80
December	20.6	12.6	25.0	26-12-1945	8.3	5-12-1954	69
Annual	23.7	15.4	-	-	-	-	77

Table 1.11 : Average Wind Speed per hour in Kilometre

Month	Speed	Month	Speed
January	7.8	July	17.2
February	8.1	August	14.9
March	8.4	September	11.9
April	8.5	October	7.4
May	11.7	November	6.9
June	17.4	December	6.9
		Annual	10.6

Table 1.12 : Details of Special Weather Phenomena*

Month	Thunder storm	Hailstone	Dusty storm	Cyclone	Fog
January	0.0	0.0	0.0	0.0	1.6
February	0.0	0.0	0.0	0.0	0.0
March	0.0	0.0	0.0	0.0	0.1
April	0.6	0.0	0.0	0.0	0.1
May	1.3	0.0	0.0	0.0	1.7
June	0.0	0.0	0.0	0.0	2.0
July	0.0	0.0	0.0	0.0	5.9
August	0.0	0.0	0.0	0.0	4.3
September	0.0	0.0	0.0	0.0	5.4
October	0.4	0.0	0.0	0.0	2.5
November	0.0	0.0	0.0	0.0	1.5
December	0.0	0.0	0.0	0.0	1.9
Annual	2.3	0.0	0.0	0.0	27.0

* Number of days. If it occurs more than 2 days, whole numbers are given.
Source : Meteorological Department, Government of India.

Seismic Centre, Bhabha Atomic Research Centre, Gauribidanur

One of the most important Seismic Centres of the country is located about 75 km. from Bangalore, and 14 km from Gauribidanur on the Madhugiri road in Kolar district. It was established in 1965 and is so sensitive that it can record even quakes of minute proportion wherever it has occurred anywhere and whatever its depth of origin. There are two Seismographs established in Gauribidanur, one records the horizontal component of the seismic waves and the other, the vertical component. There are about 20 mini Seismic Stations established around this part, besides the principal centre. The main centre gets the data from these mini stations, which are digitized. While compiling the data, factors like earth's latitude and longitude are adjusted to the Greenwich Mean Time. Based on the analysis of the results, the data on magnitude of earthquake, its focus, epicentre and

its distance from the seismic station can be computed. Earthquakes both natural and man-made (nuclear explosion) are recorded in this station. Records of world-famous earthquakes and nuclear explosions are displayed in this centre. For instance, the Kobe earthquake of Japan, the Latur earthquake of India, the Nuclear explosion in Pokhran has been analyzed and the details are displayed. In addition, there are three more Seismic Centres - one near Kolar Gold Mines in Kolar district; the second at Magadi, Bangalore rural district (Ramnagar since 2007 and the third at Hosur in Tamil Nadu.

List of Tanks under Minor Irrigation Department in Kolar District

Name of the Tank	Acchkut (in Hect.)	Water spread area (in Hect.)	River valleys
KOLAR TALUK			
Kembodi Doddakere	46.00	17.86	Palar
Beechagondanahalli Hongikere	48.50	8.02	Palar
Doddavallabi doddakere	69.20	16.38	Palar
Jannaghatta kere	119.10	63.22	Palar
Arahalli kere	55.20	8.03	Palar
Jannapalli kere	67.20	24.76	Palar
Jaderi kere	55.40	23.66	Palar
Holooru Doddakere	63.00	47.06	Palar
Rajakallahalli Mudikere	66.00	18.78	Palar
Kyalanooru Amanikere	92.80	38.99	Palar
Mylasandra Amanikere	135.60	1.97	Palar
Kamaandahalli kere	76.00	0.40	Palar
Madivala Bhatlakere	46.80	55.61	Palar
Maliyappanahalli jeer	90.30	9.60	Palar
Parchenahalli Doddakere	80.60	15.64	Palar
Seegehalli Doddakere	93.00	20.78	Palar
Narasapura Doddakere	122.00	21.66	Palar
Parehosahalli Doddakere	53.20	49.46	Palar

Yalavaara kodagikere	125.60	3.73	Palar
Kodikannuru kodagikere	57.60	13.04	Palar
Seepoorukere	61.20	4.94	Palar
Nerlahalli Doddakere	53.40	10.32	Palar
Kalahastipura Doddakere	74.00	8.82	Palar
Nandamballi Thummalakere	44.80	0.88	Palar
Agrahara Somarasanahalli jeer	42.80	2.61	Palar
Harati Doddakere	53.60	0.77	Palar
Hutturu Dodakere	72.00	3.28	Palar
Hale Somarasanahalli kere	42.80	10.47	Palar
Shillangere Doddakere	45.50	3.15	Palar
Nayakanahalli kere (honnikere)	54.00	2.61	Palar
Kootandahalli kere	48.00	1.03	Palar
Belluru Subbayyanakere	41.60	5.74	Palar
Ammanalluru Arlikere	48.80	5.84	Palar
Gangarasanahalli kere	81.20	4.89	Palar
Vaanaraasi Homgikere	45.00	2.50	Palar
Kurkivengala kere	42.80	4.10	Palar
Eakamballi kere	160.00	1.13	Palar
Hutturu kere	43.00	2.89	Palar
Seesandra kere	64.00	0.72	Palar
Kolar Amanikere	318.00	51.32	Palar
Muduvadi Doddakere	255.00	14.74	Palar
Chillappalli Amanikere	244.00	42.80	Palar
Somambhudhi Agrahara kere	377.00	64.07	Palar
Byrandahalli kere	222.00	26.45	Palar

MALUR TALUK			
Madivala Doddakere	42.90	35.57	South Pennar
Malur Doddakere	56.10	40.21	South Pennar
Dodda Shivara Amanikere	50.30	54.09	South Pennar
Shivarapattana Amanikere	82.00	46.38	South Pennar
Araleri Doddakere	61.60	5.30	South Pennar
Baraguru Doddakere	66.50	41.51	South Pennar
Lakkuru Doddakere	61.70	41.51	South Pennar
Huladenahalli Doddakere	65.70	29.49	South Pennar
Thimmanayakanahalli arasi Amanikere	73.60	13.73	South Pennar
Krishnasagar kere	40.10	85.52	South Pennar
Gajapurasagara kere	41.00	36.46	South Pennar
Toralakki LIS	41.00	-	-
Pemmadoddi LIS	40.00	-	-
BANGARAPET TALUK			
Bhoodhikore Ramachandra Nayakanakere	43.60	9.95	South Pennar
Thamatamakanakere yaligi kere	48.00	2.20	South Pennar
Koppadoddakere	68.80	10/64	South Pennar
Bhodugurki Hosakere	47.20	-	South Pennar
Thimmasandra Balanakere	57.20	7.02	Palar
Angala Doddakere	42.30	2.85	Palar
Sanganahalli Doddakere	51.20	4.56	Palar
Kyasamballi Raghavayyana kere	41.60	2.51	Palar
Markandeya kere	340.00	19.71	Palar
Kamasamudra kere	264.00	25.12	Palar
Mupparahalli kere	449.00	33.92	Palar
Ramasagara kere	486.00	8.57	Palar
Marandahalli LIS	40.00	-	Palar

MULABAGILU TALUK			
Sangasandra doddakere	42.40	1.32	Palar
Agara Doddakere	49.10	5.66	Palar
Gujjanahalli Doddakere	64.60	3.46	Palar
Mudiyanooru kere	96.00	3.76	Palar
Uttanooru Doddakere	125.60	4.99	Palar
Kappalamadagu Doddakere	40.00	1.11	Palar
Mallikuppa Doddakere	60.40	2.89	Palar
Byatanooru Mallappanakere	121.00	9.09	Palar
Hebbani Doddakere	118.00	2.81	Palar
Rajendrahalli Doddakere	44.80	0.94	Palar
Bangavadhi Doddakere	48.40	1.83	Palar
Mushtooru Doddakere	72.00	2.76	Palar
Kadenahalli Doddakere	47.00	2.46	Palar
Gundlahalli kere	58.40	2.01	Palar
Gudipalli kere	60.40	3.09	Palar
Byrakooru Doddakere	64.40	3.15	Palar
Avani Doddakere	60.40	2.67	Palar
Devarayanasamudra Doddakere	76.80	1.75	Palar
Kottamangala Doddakere	59.20	2.46	Palar
Melagani Doddakere	42.00	1.91	Palar
Padakashtri Doddakere	59.48	3.54	Palar
Kannasandra Doddakere	42.60	3.30	Palar
Karipareddihalli Doddakere	92.00	4.73	Palar
Madheri Doddakere	69.20	4.34	Palar
M. Gollahalli Doddakere	43.60	3.28	Palar
Oorukunte Mitturu Doddakere	51.00	2.46	Palar

Maarandahalli Hosahallikere	51.80	2.59	Palar
Nalluru Doddakere	71.60	2.96	Palar
Thayalooru Amanikere	194.40	3.86	Palar
Kappalamadagu kere	40.05	2.36	Palar
Sonnaavaadi Doddakere	40.05	2.96	Palar
Koladevi Malagaanakere	40.05	2.76	Palar
Shettikallu hattira Hosakere	80.00	-	Palar
Obaleshwaragudda Hosakere	32.00	-	Palar
Nangali Doddakere	238.00	7.80	Palar
SRINIVASAPURA TALUK			
Nambihalli Chikkakere	51.00	11.05	Palar
Tharanahalli JoLarayanakere	55.00	6.25	Palar
Gummareddypura kere	92.00	16.80	Palar
Bhangavadhi Doddakere	191.60	7.73	Palar
Shettihalli kere	133.60	9.11	Palar
Nambihalli Doddakere	80.00	10.75	Palar
Kalluru Doddakere	75.00	8.10	Palar
Srinivasapura Amanikere	163.60	25.08	Palar
Lakshmisagar Doddakere	84.40	66.00	Palar
Yalluru Doddakere	120.00	46.50	Palar
Kolathuru Doddakere	84.50	58.57	Palar
Achampalli kere	65.20	6.53	Palar
Nernahalli kere	44.00	10.10	Palar
Muttukapalli Doddakere	70.80	17.97	Palar
Neelatooru kere	91.60	16.88	Palar
Yaldooru Amanikere	191.20	214.58	Palar
Ronooru Doddakere	118.80	18.97	Palar

Hodali Doddakere	70.00	8.70	Palar
Thimmasandra Doddakere	75.00	55.99	Palar
Imarakunte kere	45.20	9.73	Palar
Ranganathapura Kondarajakere	40.40	2.32	Palar
Kornahalli Deverakere	78.00	18.64	Palar
Thadigallu Doddakere	50.40	23.40	Palar
Idoni Doddakere	53.20	7.84	North Pennar
Yerukaluve kumara	48.40	11.61	North Pennar
Obalanayakana kere	-	-	North Pennar
Narappanayakanakere	63.60	17.73	North Pennar
Gundodu Doddakere	44.00	-	North Pennar
Kodipalli Doddakere	63.20	6.78	North Pennar
Koorigepalli Doddakere	100.40	11.30	North Pennar
Yarnavaripalli Amani	61.20	7.30	North Pennar
Marapalli Kicchammankumte	46.00	-	North Pennar
Addagallu Amanikere (Vasanthanayakana kere)	71.60	6.87	North Pennar
Kotekalluru Balareddikere	102.00	65.85	North Pennar
Thinnahalli kere	41.20	7.33	Palar
Badipalli Hosakere	65.00	-	North Pennar
CHINTAMANI TALUK			
Kuruburu Amanikere	191.60	68.30	Palar
Anooru Doddakere	48.00	40.84	Palar
Anooru Nayakanakere	48.40	43.43	Palar
Hebbari Doddakere	49.30	61.64	Palar
Doddaganjooru Doddakere	79.00	72.13	Palar
Kodadhavadi kere	62.40	67.34	Palar
Oolavadi amanikere	52.00	10.62	Palar

Nekkundi Doddakere	64.00	30.82	Palar
Akkamangala kere	46.80	45.94	Palar
Thalagavaara Amanikere	173.20	29.11	Palar
Kyvara Doddakere	74.10	9.77	Palar
Korlapati Doddakere	88.40	29.94	Palar
Burudugunte Amani Thimmasanikere	120.00	4.07	Palar
Devaganahalli Venkateshasagarkere	76.80	65.19	Palar
Basavapura gabbinayanavoddu	100.00	4.12	Palar
Kotigallu Amanikere	67.60	7.23	Palar
Bhaktara Arasikere	42.00	4.21	Palar
Munaganahalli Doddakere	44.80	28.46	Palar
Papathimmanahalli Rajanavoddu	67.30	11.44	Palar
Kencharlahalli Doddakere	42.50	3.89	Palar
SHIDLAGHATTA TALUK			
Malluru kere	44.00	6.44	South Pennar
Malamachanhalli kere	104.00	14.45	South Pennar
Dasenahalli Amanikere	63.00	5.61	South Pennar
Devaramalluru kere	68.00	15.91	South Pennar
Amani ballada kere	94.00	6.78	Palar
Chimangala kere	43.00	1.88	Palar
Abbaloodu kere	51.00	2.01	South Pennar
Kottanooru kere	56.00	6.00	South Pennar
Shidlaghatta Amanikere	130.00	7.09	South Pennar
Shidlaghatta Gowdanakere	99.00	9.90	South Pennar
Belluti kere	160.00	4.22	South Pennar
Sorakayalahalli kere	106.00	6.19	South Pennar
Nimmanavoddu Doddakere	105.00	1.59	North Pennar

Bandharaghatta kere	-	-	-
Sadali hosakere	45.00	4.21	North Pennar
Sadali Sadalammanakere	43.00	5.57	North Pennar
Amani Bandammanakere	47.00	4.25	North Pennar
Bacchegowdanakere	43.00	6.95	North Pennar
Thimmanayakanahalli Amanikere	101.00	1.42	North Pennar
Anemadagu Somanakere	67.00	1.05	North Pennar
Odeyanakere	64.00	6.50	North Pennar
Odeyana Hosakere	73.00	6.56	North Pennar
Valasenahalli Rajanakere	53.00	7.78	North Pennar
Ramasamudra Kere	382.00	7.21	North Pennar
Amani Bhadranakere	435.00	26.81	North Pennar
Thimmasandra Arasikere	105.00	20.23	North Pennar
Kannappanahalli hosatank	46.00	-	North Pennar
CHIKKABALLAPURA TALUK			
Amani Kandavara kere	210.00	8.47	South Pennar
Amani Gopalakrishna kere	290.00	9.68	South Pennar
Srinivasasagara kere	486.00	32.20	North Pennar
Yadarlahalli kere	250.00	9.20	North Pennar
Chikkapayalagurki	210.00	-	North Pennar
Reddyhalli Amanikere	98.00	12.03	North Pennar
Byrasagarakere	97.00	4.45	North Pennar
Peresandra Hosakere	190.00	-	North Pennar
Poonasagara kere	75.00	2.20	North Pennar
Rangadhama kere	197.00	1.11	South Pennar
Amani Doddamarali kere	95.00	1.55	Palar
Bommanahalli kere	44.00	1.28	Palar

Kanitahalli kere	58.00	1.23	Palar
Hosahudya kere	77.00	3.68	South pennar
Jatavara kere	45.00	10.80	South Pennar
Manchanabele Amanikere	148.00	2.00	South Pennar
Dibbur Hosakere	60.00	1.77	South Pennar
Katriguppa kere	75.00	4.27	South Pennar
Kasanakunte kere	42.00	2.00	North Pennar
Muslkooru kere	42.00	1.99	South Pennar
Mavumani kere	88.00	2.30	South Pennar
GAURIBIDANUR TALUK			
Vatadahosahalli Amanikere	981.00	10.84	North Pennar
Hudugooru Doddakere	392.00	7.80	North Pennar
Hudugooru Chkkakere	-	-	North Pennar
Sonaganahalli	240.00	3.45	North Pennar
Poornambhudhi kere	-	-	North Pennar
Dandiganahalli Hosakere	213.00	12.80	North Pennar
Venkatapura ayammanakere	293.00	3.14	North Pennar
Nagaragere Doddakere	284.00	12.99	North Pennar
Nagaragere Chikkakere	-	0/92	North Pennar
Thippaganahalli kere	405.00	15.40	North Pennar
Ujjenahole kere	324.00	16.17	North Pennar
Nagarabhavi Kere	210.00	5.35	North Pennar
Badimarallur kere	-	-	North Pennar
Ooramundina kere	45.00	1.04	North Pennar
Kurudumala kunte	-	-	North Pennar
Mahamalleshwara kere	66.00	1.18	North Pennar
Doddakurugodu Doddakere	109.00	2.14	North Pennar
Chikkakurugodu Doddakere	54.00	0.63	North Pennar
Gotakanapura Doddakere	53.00	2.31	North Pennar

Kalloodi Doddakere	63.00	1.13	North Pennar
Sonaganahalli Lingappana kunte	85.00	0.53	North Pennar
Gangasandra Hosakere	126.00	1.72	North Pennar
Gangasandra Mudhuganukunte	92.00	0.80	North Pennar
Halaganahalli	-	-	-
Ooramundinakere	108.00	1.60	North Pennar
Halaganahalli	-	-	-
Gollachikkanakunte	40.00	1.00	North Pennar
Chandanadooru Doddakere	194.00	2.65	North Pennar
Idagooru Nellurukunte	63.00	1.27	North Pennar
Idagooru Doddakere	173.00	1.65	North Pennar
Maralooru Doddakere	123.00	2.85	North Pennar
Gundapura kere	45.00	1.60	North Pennar
Kadalaveni kere	60.00	1.09	North Pennar
Vyjakooru kere	48.00	0.60	North Pennar
Vellapi kere	52.00	1.06	North Pennar
Melya kere	135.00	10.00	North Pennar
Mudugere Doddakere	116.00	1.15	North Pennar
Hosakote Doddakere	42.00	1.00	North Pennar
Hosuru Kannikere	125.00	3.20	North Pennar
Ramapura kere	40.00	1.12	North Pennar
Kurudi ooramundina kere	44.00	3.86	North Pennar
Anoodi Doddakere	61.00	2.42	North Pennar
Kudurebyalya Doddakere	70.00	3.70	North Pennar
Hunasenahalli kere	40.00	0.80	North Pennar
Kundihalli kere	40.00	1.23	North Pennar
Viroopasandra	-	-	-
Ooramundina kere	49.00	2.10	North Pennar
Sadenahalli hosakere	51.00	0.75	North Pennar

Manchenahalli Kodagikere	189.00	23.00	North Pennar
Chilakunte kere	46.00	2.47	North Pennar
Cholashettihalli kere	48.00	0.83	North Pennar
Mallenhalli Sannakere	43.00	1.05	North Pennar
G. Kottanooru Hirekere	54.00	1.30	North Pennar
Manivala kere	177.00	1.84	North Pennar
Nekkalahalli kere	84.00	1.96	North Pennar
Jarabandanahalli	-	-	-
Narayanaswami kere	78.00	4.15	North Pennar
Balareddyhalli	-	-	-
Puttanarayanappa kere	94.00	0.75	North Pennar
Lakkasandra kere	56.00	2.76	North Pennar
B. Bommasandra Nayakarakere	83.00	3.14	North Pennar
D.Palya Mahamalleshwara kere	87.00	2.89	North Pennar
B. Bommasandra Ramapadakere	41.00	1.39	North Pennar
Namagondlu Chikkakere	58.00	0.69	North Pennar
Namagondlu Doddakere	150.00	3.90	North Pennar
Kadabooru Thavarekere	80.00	0.48	North Pennar
Doddamallekere	66.60	3.20	North Pennar
Veerammanahalli kere	49.00	0.30	North Pennar
Bommanahalli kere	70.00	1.20	North Pennar
Dyavasandra kere	72.00	6.38	North Pennar
Potenahalli kere	43.00	0.88	North Pennar
Hanumenahalli Doddakere	54.00	1.28	North Pennar
Gedare Doddakere	189.00	7.02	North Pennar
G. Bommasandra kere	100.00	2.05	North Pennar
Kachamaachanahalli kere	75.00	4.90	North Pennar
Hunasekunte kere	41.00	1.10	North Pennar
Kenkere Doddakere	43.00	2.06	North Pennar

Lakapura kere	42.00	0.53	North Pennar
Kurubarahalli Nanjappana kunte	87.00	1.55	North Pennar
Chigatagere kere	42.00	0.40	North Pennar
Kamaganahalli Sannakere	129.00	0.27	North Pennar
Gowdanagere Melina kere	52.00	0.55	North Pennar
Gowdanagere Kodigikere	42.00	0.30	North Pennar
Varavani kere	48.00	0.83	North Pennar
Dandiganahalli Dasegowdanakere	40.00	1.71	North Pennar
Guyyalahalli kere	164.00	7.25	North Pennar
Beesalahalli Hosakere	60.00	0.48	North Pennar
Chikkahosahalli Hosakere	123.00	1.25	North Pennar
Basavanahalli Hosakere	49.00	0.80	North Pennar
Muttugadahalli Hosakere	51.00	0.85	North Pennar
Kamareddyhalli kere	56.00	-	North Pennar
Bychapura Doddakere	73.00	26.15	North Pennar
Upparahalli Hosakere	83.00	1.25	North Pennar
Muddalodu Hosakere	132.00	8.54	North Pennar
GUDIBANDE TALUK			
Amani Byrasagara kere	509.00	24.25	North Pennar
Kadehalli kere	71.00	0.48	North Pennar
Hampasandra kere	60.00	0.44	North Pennar
Neelagamba kere	50.00	2.03	North Pennar
Yallodu kere	45.00	1.27	North Pennar
Kambalahalli	43.00	1.68	North Pennar
Chendooru Kanappakunte	122.00	4.09	North Pennar
Thiruvani kere	88.00	1.05	North Pennar
Beechaganahalli kere	100.00	2.96	North Pennar
Doddanacchanoorlu kere	64.00	1.60	North Pennar
Somenahalli kere	61.00	1.65	North Pennar

Gangenahalli kere	66.00	1.74	North Pennar
Someshwara kere	86.00	7.65	North Pennar
BAGEPALLI TALUK			
Pesalaparti Hosakere	45.00	-	North Pennar
Marganukunte Doddakere	59.00	3.45	North Pennar
Goolooru Doddakere	71.00	4.10	North Pennar
Nallappareddy Doddakere	94.00	2.80	North Pennar
Gutlapalya Ballasandra kere	41.00	2.76	North Pennar
Muddepalli Doddakere	52.00	1.17	North Pennar
Mallasandra Rajavari kere	100.00	2.46	North Pennar
Gadium kere	69.00	3.82	North Pennar
Karakuru kere	80.00	4.00	North Pennar
Yallampalli Sanjeevamma kere	79.00	2.98	North Pennar
Yallampalli Ooramundina kere	57.00	2.59	North Pennar
Achepalli kere	85.00	0.74	North Pennar
Puttaparti Nimmalapalli kere	59.00	1.62	North Pennar
Paragodu kere	55.00	2.06	North Pennar
Paragodu Mangasandra kere	41.00	2.76	North Pennar
Mittemari Puvandammana kere	55.00	2.71	North Pennar
Pathapalya ammanakere	70.00	5.68	North Pennar
Pathapalya Doddakere	93.00	4.69	North Pennar
Patapalya Kadirmmanakere	60.00	5.03	North Pennar
Agatamadaka Doddakere	52.00	1.17	North Pennar
Billuru Doddakere	140.00	8.16	North Pennar
Raeravu Doddakere	43.00	7.67	North Pennar
Naremmuddepalli Doddakere	89.00	6.79	North Pennar
Chinnaganapalli Yarragudi kere	62.00	1.75	North Pennar
Somanathapura Doddakere	52.00	1.00	North Pennar
Puligal Gudibande Hosakere	87.00	1.05	North Pennar

Puligal Reddy kere	44.00	3.89	North Pennar
Venkatapura Doddakere	41.00	1.16	North Pennar
Palya Doddakere	83.00	3.88	North Pennar
Machanahalli Hosakere	60.00	1.54	North Pennar
Vandmana Hosatank	165.00	-	North Pennar

Source : K. Prahlada Rao (ed), *Kereya Hara, (Kolara jilleya jalaparva, Kolara Patrike Prakashana, Kolar, 2005.*
