



**GOVERNMENT OF KARNATAKA**

**DEPARTMENT OF AGRICULTURE**

**Pradhan Mantri Krishi Sinchayee Yojana  
(PMKSY)**

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**DISTRICT IRRIGATION PLAN**

**BALLARI DISTRICT**



**2016**



## GOVERNMENT OF KARNATAKA

Sri. Dr. V. Ram Prasath Manohar, IAS  
Deputy Commissioner

### Foreword

“Hon’ble President in his address to the Joint Session of Parliament of 16<sup>th</sup> Lok Sabha indicated that each drop of water is precious and launched Pradhana Mantri Krishi Sinchayee Yojana (PMKSY), with a major objective to achieve convergence of investments in irrigation at the field level, expand cultivable area under assured irrigation, improve on-farm water use efficiency to reduce wastage of water, enhance the adoption of precision irrigation and other water saving technologies. It will complete the long pending irrigation projects on priority. Micro-irrigation will be popularized to ensure Per Drop More Crop.

Ballari district has an average normal rainfall of 600.1 mm in 42 rainy days mainly in the months from August to October. The entire Ballari district comes under Northern Dry Zone 3. The district falls under semi-arid rainfall deficit climate. The climate of Ballari district is quite moderate, shows dryness in major part of the year and a hot summer from March to May.

The net sown area of the district is 4.39 lakh ha, of which 47.52 % (2.06 lakh ha) is irrigated and the rest (52.48%) is rainfed. Canals account for 46.12 % of the irrigated area and tube wells account for 32.60 % of the area irrigated and the remaining area is irrigated through other sources. Ballari district is bestowed with ample water resources, comprising the rivers such as Tunga Bhadra and Hagari and reservoirs like Tunga Bhadra, Narihalla and H.B.Halli offer precious local indigenous fish fauna, Hadagali Jasmine are unique to the place.

The present planning should give impetus on utilizing water for expansion of irrigated area, establishment of new industries, creation of special economic zone and also filling of treated sewage water to the existing tanks so that the district can be model to the

entire State. This provides additional job opportunities leading to economic growth of the district.

Under PMKSY, it is proposed to take various developmental activities to improve irrigation facilities in the district and also proposed to create an additional irrigation potential of 166265 ha by 2020 with a budgetary support of Rs.2345.55 crores. This will help intensive cultivation of crops, taking up of multiple crops, judicious use of water, change of cropping pattern which will create additional employment and income to farming community.

At the outset, I appreciate the efforts of the Department of Agriculture, particularly Joint Director and their team in collection of information from various departments and organizing District Level meetings which has led to finalize this report. I thank all the line department officials for providing timely information on their concerned templates.

I also thank the President and members of PLUS TRUST, Bengaluru for compilation, analysis and printing of the District Irrigation Plan in an exhaustive and excellent manner.

I hope this report will be useful in planning and efficient management of precious water resource of Ballari district.

Date:



Deputy Commissioner

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## **PRADHAN MANTRI KRISHI SINCHAYEE YOJANA (PMKSY)**

### **I. Introduction:**

The major objective of PMKSY is to achieve convergence of investments in irrigation at the field level, expand cultivable area under assured irrigation, improve on-farm water use efficiency to reduce wastage of water, enhance the adoption of precision-irrigation and other water saving technologies (More crop per drop), enhance recharge of aquifers and introduce sustainable water conservation practices by exploring the feasibility of reusing treated municipal waste water for peri-urban agriculture and attract greater private investment in precision irrigation system.

PMKSY has been conceived amalgamating ongoing schemes *viz.* Accelerated Irrigation Benefit Programme (AIBP) of the Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR, RD & GR), Integrated Watershed Management Programme (IWMP) of Department of Land Resources (DoLR) and the On Farm Water Management (OFWM) of Department of Agriculture and Cooperation (DAC). The scheme will be implemented by Ministry of Agriculture, Water Resources and Rural Development. Ministry of Rural Development is to mainly undertake rain water conservation, construction of farm pond, water harvesting structures, small check dams and contour bunding etc., MoWR, RD & GR, is to undertake various measures for creation of assured irrigation source, construction of diversion canals, field channels, water diversion/lift irrigation, including development of water distribution systems. Ministry of Agriculture will promote efficient water conveyance and precision water application devices like drips, sprinklers, pivots, rain-guns in the farm “(Jal Sinchan)”, construction of micro-irrigation structures to supplement source creation activities, extension activities for promotion of scientific moisture conservation and agronomic measures

Programme architecture of PMKSY will be to adopt a ‘decentralized State level planning and projectised execution’ structure that will allow States to draw up their own irrigation development plans based on District Irrigation Plan (DIP) and State Irrigation Plan (SIP). It will be operative as convergence platform for all water sector activities including drinking water & sanitation, MGNREGA, application of science & technology etc., through comprehensive plan. State Level Sanctioning Committee (SLSC) chaired by the Chief

Secretary of the State with the authority to oversee its implementation and sanction of projects.

The programme will be supervised and monitored by an Inter-Ministerial National Steering Committee (NSC) constituted under the Chairmanship of Prime Minister with Union Ministers from concerned Ministries. A National Executive Committee (NEC) constituted under the Chairmanship of Vice Chairman, NITI Aayog to oversee programme implementation, allocation of resources, inter-ministerial coordination, monitoring & performance assessment, addressing administrative issues etc.

Components and responsible Ministries/ Departments are as follows:

1. AIBP by MoWR, RD & GR: To focus on faster completion of on-going Major and Medium Irrigation including National Projects.
2. PMKSY (Har Khet ko Pani) by MoWR, RD & GR: Creation of new water sources through Minor Irrigation (both surface and ground water). Repair, restoration and renovation of water bodies; strengthening carrying capacity of traditional water sources, construction of rain water harvesting structures (Jal Sanchan); Command area development, strengthening and creation of distribution network from source to the farm. Improvement in water management and distribution system for water bodies to take advantage of available source, which is not utilised to its fullest capacity (deriving benefits from low hanging fruits).
3. PMKSY (Watershed) by Dept. of Land Resources, MoRD Water harvesting structures such as check dams, nala bund, farm ponds, tanks etc. Capacity building, entry point activities, ridge area treatment, drainage line treatment, soil and moisture conservation, nursery raising, afforestation, horticulture, fodder development, livelihood activities for the asset-less persons and production system & microenterprises for small and marginal farmers etc., Effective rainfall management like field bunding, contour bunding/trenching, staggered trenching, land levelling, mulching etc.
4. PMKSY (Per drop more crop) by Dept. of Agriculture & Cooperation, MoA Programme management, preparation of State/District Irrigation Plan, approval of annual action plan, Monitoring etc., Promoting efficient water conveyance and precision water application devices like drips, sprinklers, pivots, rain-guns in the farm (Jal Sinchay) Topping up of input cost particularly under civil construction beyond permissible limit (40%), under MGNREGA for activities like lining inlet, outlet, silt traps, systematic distribution.

Construction of micro irrigation structures to supplement source creation activities including tube wells and dug wells (in areas where ground water is available and not under semi critical /critical /over exploited category of development) which are not supported under PMKSY (WR), PMKSY (Watershed) and MGNREGA.

Secondary storage structures at tail end of canal system to store water when available in abundance (rainy season) or from perennial sources like streams for use during dry periods through effective on-farm water management Water lifting devices like diesel/ electric/ solar pumpsets including water carrying pipes.

Extension activities for promotion of scientific moisture conservation and agronomic measures including cropping alignment to maximize use of available water including rainfall and minimise irrigation requirement (Jal samrankchan).

Capacity building, training for encouraging potential use water source through technological, agronomic and management practices including community irrigation awareness campaign on water saving technologies, practices, programmes etc., organisation of workshops, conferences, publication of booklets, pamphlets, success stories, documentary, advertisements etc. Improved/innovative distribution system like pipe and box outlet system with controlled outlet and other activities of enhancing water use efficiency.

### **District Irrigation Plans (DIPs)**

District Irrigation Plan (DIP) shall be the cornerstone for planning and implementation of PMKSY. DIP will identify the gaps in irrigation infrastructure after taking into consideration the District Agriculture Plans (DAPs) already prepared for Rashtriya Krishi Vikas Yojana (RKVY) vis-à-vis irrigation infrastructure currently available and resources that would be added during XII Plan from other ongoing schemes (both State and Central), like Mahatma Gandhi National Rural Employment Guarantee Scheme(MGNREGA), Rashtriya Krishi Vikash Yojana (RKVY), Rural Infrastructure Development Fund (RIDF), Member of Parliament Local Area Development (MPLAD) Scheme, Member of Legislative Assembly Local Area Development (MLALAD) Scheme, Local body funds etc. The gaps identified under Strategic Research & Extension Plan (SREP) are to be used in preparation of DIP.DIPs will present holistic irrigation development perspective of the district outlining medium to long term development plans integrating three

components viz. water sources, distribution network and water use applications incorporating all usage of water like drinking & domestic use, irrigation and industry. Preparation of DIP will be taken up as joint exercise of all participating departments. DIP will form the compendium of all existing and proposed water resource network system in the district.

The DIPs may be prepared at two levels, the block and the district. Keeping in view the convenience of map preparation and data collection, the work would be primarily done at block level. Block wise irrigation plan is to be prepared depending on the available and potential water resources and water requirement for agriculture sector prioritising the activities based on socio-economic and location specific requirement. In case, planning is made based on basin/sub basin level, the comprehensive irrigation plan may cover more than one district. The activities identified in the basin/sub-basin plan can be further segregated into district/block level action plans.

#### **i. Background**

Hon'ble President in his address to the joint Session of the Parliament of 16<sup>th</sup> Lok Sabha indicated that "Each drop of water is precious. Government is committed to giving high priority to water security. It will complete the long pending irrigation projects on priority and launch the 'Pradhan Mantri Krishi Sinchayee Yojana' with the motto of 'Har Khet Ko Paani'.

There is a need for seriously considering all options including linking of rivers, where feasible; for ensuring optimal use of our water resources to prevent the recurrence of floods and drought. By harnessing rain water through 'Jal Sanchay' and 'Jal Sinchan', we will nurture water conservation and ground water recharge. Micro irrigation will be to ensure 'Per drop-More crop'. Out of about 141 million ha of net area sown in the country, about 65 million hectare (or 45%) is presently covered under irrigation. Substantial dependency on rainfall makes cultivation in unirrigated areas a high risk, less productive profession. Empirical evidences suggest that assured or protective irrigation encourages farmers to invest more in farming technology and inputs leading to productivity enhancement and increased farm income. The overarching vision of Pradhan Mantri KrishiSinchayee Yojana (PMKSY) will be to ensure access to some means of protective irrigation to all agricultural farms in the country, to produce 'per drop more crop', thus bringing much desired rural prosperity.

## **ii. Vision**

To utilize the available water resources in the district to the maximum extent in an efficient way to meet the basic needs of every living being and enhancing the livelihoods of rural population to the maximum extent thus alleviating poverty in a sustainable way without compromising the interests of future generations.

## **iii. Objective**

Following are the objectives:

- A. Enhance the physical access of water on the farm and expand cultivable area under assured irrigation (Har Khet ko pani).
- B. Integration of water source, distribution and its efficient use, to make best use of water through appropriate technologies and practices.
- C. Improve on-farm water use efficiency to reduce wastage and increase availability both in duration and extent.
- D. Enhance the adoption of precision-irrigation and other water saving technologies (More crop per drop).
  - Enhance the physical access of water on the farm and expand cultivable area under assured irrigation (Har Khet ko pani).
  - Integration of water source, distribution and its efficient use, to make best use of water through appropriate technologies and practices.
  - Improve on-farm water use efficiency to reduce wastage and increase availability both in duration and extent.
  - Enhance the adoption of precision-irrigation and other water saving technologies (More crop per drop).
  - Enhance recharge of aquifers and introduce sustainable water conservation practices.
  - Ensure the integrated development of rain fed areas using the watershed approach towards soil and water conservation, regeneration of ground water and arresting runoff.
  - Promote extension activities relating to water harvesting, water management and crop alignment for farmers and grass root level field functionaries.
  - Explore the feasibility of reusing treated municipal wastewater for peri-urban agriculture.

#### **iv. Strategy /approach**

- Creation of new water sources; repair, restoration and renovation of defunct water sources; construction of water harvesting structures, secondary & micro storage, ground water development
- Developing/augmenting distribution network where irrigation sources (both assured and protective) are available or created;
- Promotion of scientific moisture conservation and run off control measures to improve ground water recharge so as to create opportunities for farmer to access recharged water through shallow tube/dug wells;
- Promoting efficient water conveyance and field application devices within the farm *viz.*, underground piping system, Drip & Sprinklers
- Encouraging community irrigation through registered user groups.

Farmer oriented activities like capacity building, training and exposure visits, demonstrations, farm schools, skill development in efficient water and crop management practices (crop alignment) including large scale awareness on more crop per drop of water through mass media campaign, exhibitions, field days, and extension activities through short animation films etc.,

## CHAPTER I

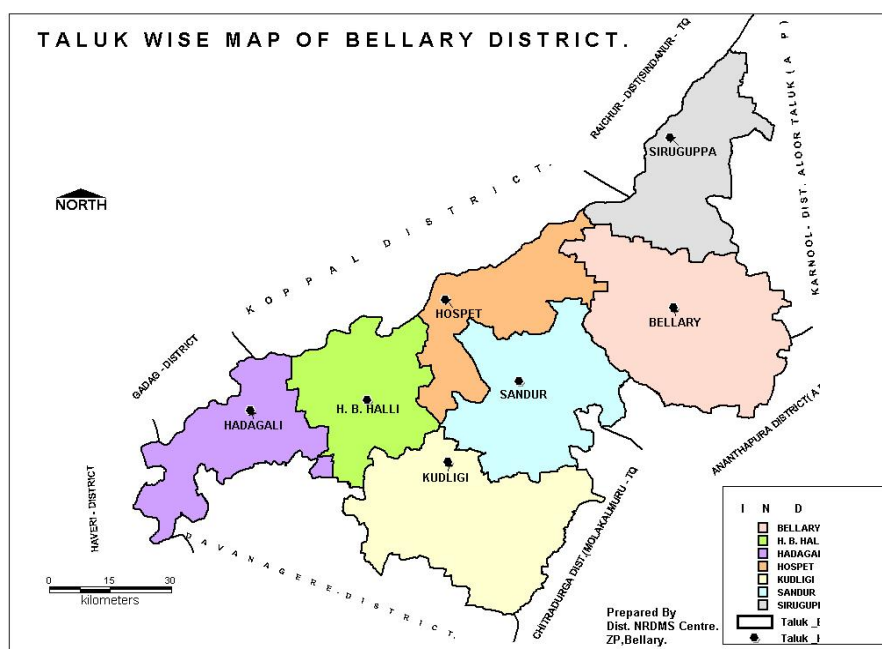
### GENERAL INFORMATION OF THE DISTRICT

#### 1.1. District profile:

Ballari district takes its name from the word Ballari which refers to Goddess Durugamma. It is believed that Lord Rama while searching for Sita met Sugreeva and Hanuman at a place which is very near to Hampi, the celebrated capital of Vijayanagara kingdom. Historically, the Ballari area has been known by many names, such as *Kuntala Desha*, *Sindavadi-nadu* and *Nolambavadi-nadu*.

Ballari has a semi - arid climate, it is located at 14° 30' and 15° 50', North latitude and 75° 40' and 77° 11' East latitude. The entire Ballari district comes under Northern Dry Zone 3. The district falls under semi arid rainfall deficit climate. The district is bound by Raichur district on the North, Koppal district on the West, Chitradurga and Davanagere districts on the South, and Anantapur and Kurnool districts of Andhra Pradesh on the East. The district has 2 revenue sub divisions, Ballari subdivision and Hospet subdivision, which in all have seven taluks. Ballari subdivision has 3 taluks, while there are four taluks in Hospet subdivision (Fig 1). There are 27 [hoblies](#), one Corporation, one City Municipal Council, two town Municipalities, six town panchayats, 199 village panchyaths, 552 revenue villages. According to the 2011 census, Ballari district has a total population of 2,452,595, comprising 1,236,954 male and 1,215,641 female.

**Fig 1: Map of Ballari district**



The district may be classified as Northern Maidan region with monotonous, treeless, and expansive plateau landscape. The step like landscape, hills and ridges are the general features of the northern maidan region. The central part of the Ballari district is occupied by hills and plains to east and west. The Sandur hills run North West of the district dividing the district into two distinct parts. The eastern part consists of Hospet, Ballari and Siruguppa taluks. The western part consists of Hadagali, Hagaribommanahalli, Kudligi and Sandur taluks. The Tungabhadra River forms the eastern and northern boundary of the district.

The climate of Ballari district is quite moderate, shows dryness in major part of the year and a hot summer from March to May months where mean maximum temperatures ranges from 23.2°C to 40.4°C. June to September is the southwest monsoon period where the temperature varies from 19.7°C to 35.1°C. October and November are the post monsoon retreating monsoon season with clear bright weather and the mean daily temperature ranges from 14.4°C to 31.1°C. The geographical area of the district is 8.13 lakh hectares.

The major occupation of the district is agriculture and 75% of the total population is dependent on agriculture for their livelihood. In the district, 65.13% (1,320,290) of the population reside in Rural areas. The net sown area is 4.40 lakh hectares. About 46.8% (2.06 lakh ha) of the net sown area is irrigated. Canals account for 46.12% of the irrigated area and tube wells account for 32.60% of the area irrigated and the remaining area is irrigated through other sources (Table 1.1). Ballari district is bestowed with ample water resources, comprising the rivers such as Tunga Bhadra and Hagari and reservoirs like Tunga Bhadra, Narihalla and H.B.Halli offer precious local indigenous fish fauna, which is unique to the place. Ballari district has 78 minor irrigation tanks and 128 Panchayath tanks and 3 reservoirs. The cropping intensity of the district is 128.19 percent. The important crops grown are, Paddy, Maize, Jowar, Bengalgram, Groundnut, Sunflower, Cotton and Sugarcane.

There is a great potential for fish production that can be explored to a sustainable extent. Totally, 13920 families are full time dependent on fishery and 41780 families are part time dependents.

Horticulture has emerged as an important sector for diversification of agriculture. It has established its credibility in improving the income through increased productivity, generating employment and in enhancing exports besides providing household nutritional security. The focused attention on investment in horticulture has been rewarding in terms of increased production and productivity. The agro - climatic conditions of the district are



favourable for dry land horticulture with protective irrigation. Horticultural crops are grown in an area of 52838 ha accounting for 11.78% of the net sown area. Among horticultural crops, Banana, Mango, Sapota, Pomegranate, Chillies, Tomato, Onion and Coconut are important crops. Apart from crop husbandry, people are also engaged in dairying, sheep and goat rearing and poultry.

**Table 1.1 : District Profile**

1.	District Code	565
2.	Latitude and Longitude	14° 30' and 15° 50', North latitude and 75° 40' and 77° 11' East latitude
3.	Total Number of block	7
4.	Total Number of Grama Panchayats	199
5.	Total No. of Hoblies	27
6.	Total Number of Villages	552
7.	Total Population	2452595
8.	Total Male Population	1236954
9.	Total Female Population	1215641
10.	Total Child population	344152
11.	Total SC Population	517409
12.	Total ST Population	451706
13.	Geographical Area	813196 ha
14.	Net Sown Area	439865 ha
15.	Gross Cropped Area	563882 ha
16.	Net Irrigated	206174 ha
17.	Net Rainfed	283875 ha
18.	Area under Forest	97017 ha
19.	Total livestock	1439419
20.	Total poultry	3348817

## 1.2. Demography:

### 1.2a: Population:

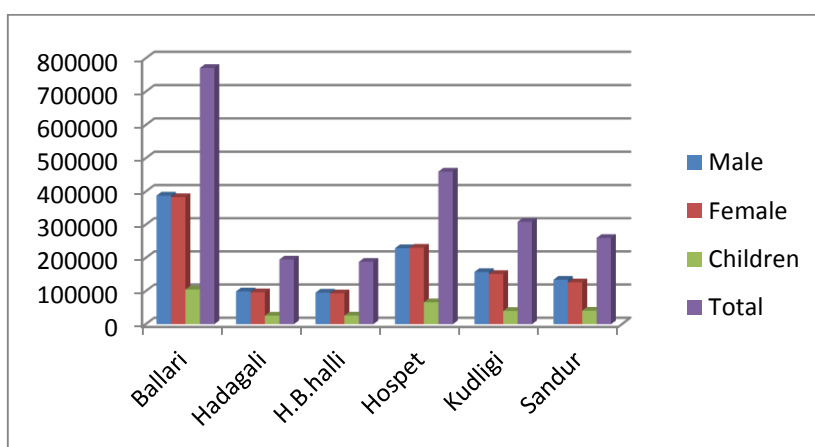
The total population of Ballari district is 2,452,595 (Table 1.2a, Fig 1.1 & 1.2). The Male population accounts for 1,236,954 and Female population is 1,215,641. Ballari has the highest population of 770,889 (31.43%), followed by Hospet with 459,991 (18.76%), Kudligi with 308,901 (12.59%), Siruguppa with 269,104 (10.97%), Sandur with 260,213 (10.61%), Hadagali with 195,219 (7.96%), while H.Bommanahalli has the lowest population of 188,278 (7.68%). The Schedule Caste population in the district is 517,409 (21.10%) and that of Schedule Tribe population is 451,406 (18.42%). Schedule Caste population is the highest (138,979) in Ballari taluk and lowest in H B Halli taluk (46,206), whereas Schedule Tribe population is the highest in Ballari taluk (132,166) and lowest in Hadagali taluk (14,620). Village wise details are furnished at Annexure 1.

**Table 1.2a: Taluk-wise Population of Ballari district**

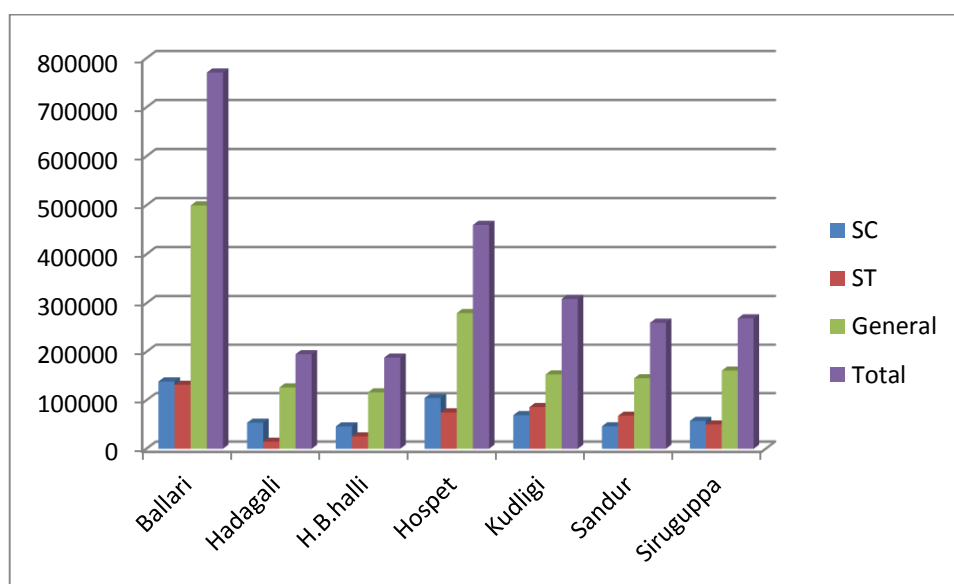
Sl. No	Name of the Taluk	Population				SC Population	ST Population	General Population
		Male	Female	Children	Total			
1	Ballari	387744	383145	104716	770889	138979	132166	499744
2	Hadagali	98853	96366	25821	195219	53893	14620	126706
3	H.B.halli	95377	92901	26383	188278	46206	25527	116545
4	Hospet	229338	230653	66128	459991	104902	75069	280020
5	Kudligi	157402	151499	40025	308901	69380	86077	153444
6	Sandur	134034	126179	40915	260213	46411	68189	145613
7	Siruguppa	134246	134858	40164	269104	57638	50058	161408
<b>Total</b>		<b>1236994</b>	<b>1215601</b>	<b>344152</b>	<b>2452595</b>	<b>517409</b>	<b>451706</b>	<b>1483480</b>

Source: Census report of Ballari

**Fig. 1.1: Taluk-wise Population of Ballari district by Gender**



**Fig. 1.2: Taluk-wise SC and ST Population of Ballari District**



### 1.2b. Rural and Urban Population

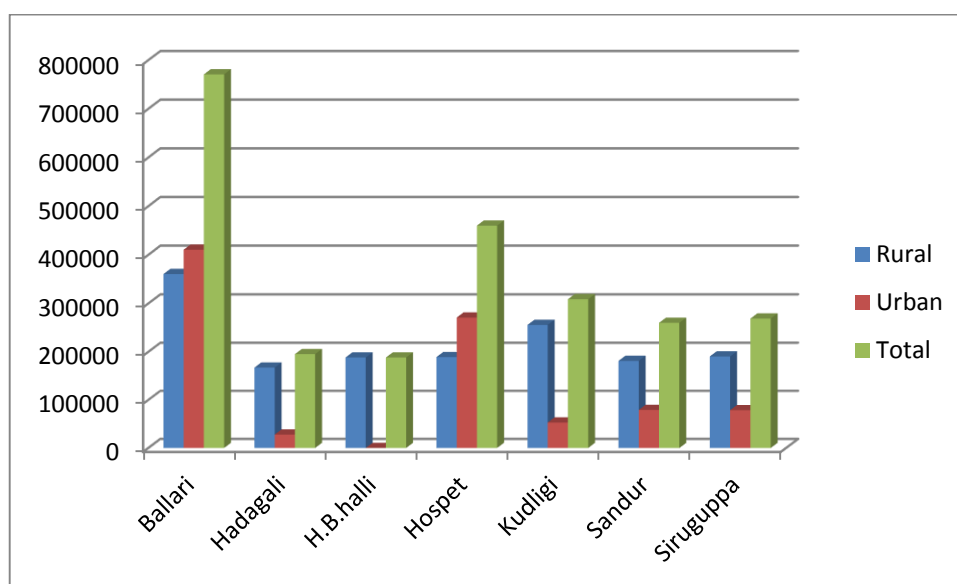
It can be seen from Table 1.2b (Fig. 1.3) that, more than nearly two third (62.48 %) of the population of Bellary district lives in rural areas. The total Bellary district population living in rural areas is 1,532,356 and the remaining 37.52 percent of the population lives in urban regions of district. In total, 920,239 people live in urban areas. More than 50 per cent of the population of Ballari and Hospet taluks reside in urban areas. On the contrary, 100% of the population from H B Halli resides in rural areas only. It is also observed that more than 80 per cent of the population of Hadgali and Kudligi taluks is accounted by rural population.

**Table 1.2b: Taluk wise Rural and Urban Population of Ballari District**

Sl. No.	Taluk	Rural	Urban	Total
1	Ballari	360484	410445	770929
2	Hadagali	167252	27967	195219
3	H.B.halli	188238	0	188238
4	Hospet	188965	271026	459991
5	Kudligi	255932	52969	308901
6	Sandur	181097	79116	260213
7	Siruguppa	190388	78716	269104
	<b>Total</b>	<b>1532356</b>	<b>920239</b>	<b>2452595</b>

Source: Census report of Ballari, 2011

**Fig. 1.3: Taluk-wise Rural and Urban Population of Ballari District**



<http://www.census2011.co.in/data/subdistrict/5500-bellary-bellary-karnataka.html>

For Annexure tables (Taluk-wise population of Ballari District)

### 1.3.Biomass and Livestock:

#### 1.3a. Cattle and Buffaloes

It can be seen from Table 1.3a and Fig 1.4, that Ballari district has 344169 cattle population and 142196 buffaloes. Kudligi taluk has the highest number of cattle and buffalo population of 108219 (22.3%), followed by Ballari with 87166 (17.9%), Sandur with 60920 (12.5%), Hadagali with 59834 (12.3%), H.Bommanahalli with 58881 (12.1%) and Hospet with 57076 (11.7%). Siruguppa has the lowest cattle and buffaloes population of 54269 (11.2%) in the district.

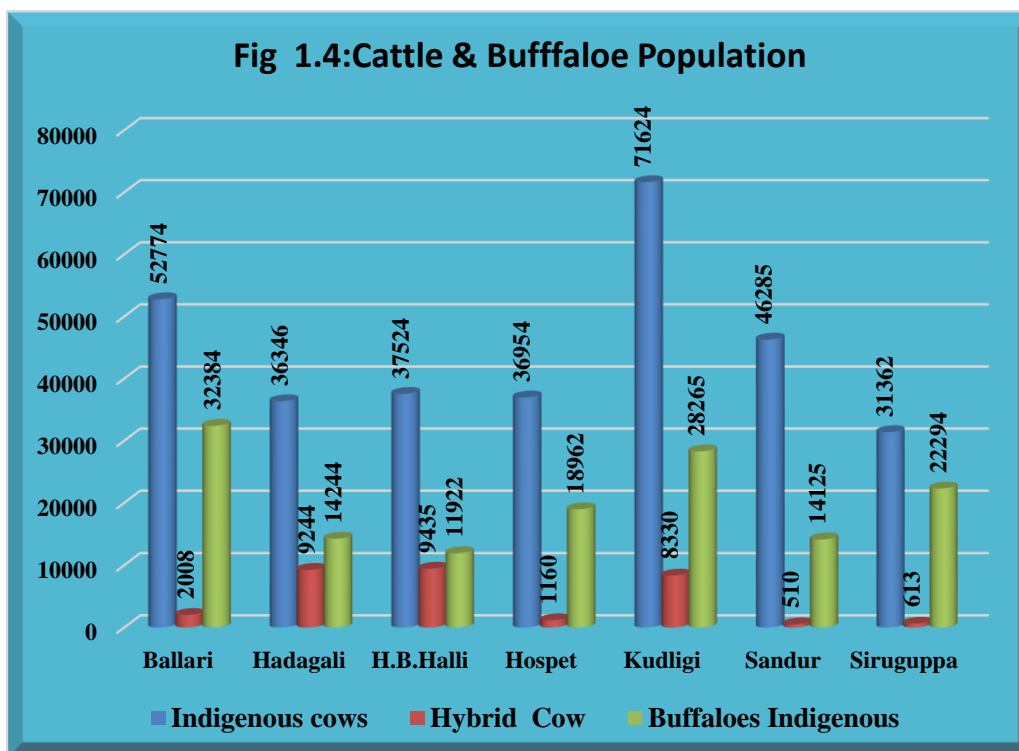
The district has 953054 small animals viz., Sheep, Goat, Dogs etc., and 3348817 poultry birds. Kudligi taluk has the highest population of small animals 233099 (24.5 %), followed by Ballari with 154434 (16.2%), Sandur with 131896 (13.8%), Hospet with 131311 (13.78%), Hadagali with 131207 (13.7%) and H. Bommanahalli with 107457 (11.3%). Siruguppa has the lowest number of small animals i.e., 63650 (6.7%). As far as Poultry birds are concerned, H. B. halli taluk has the highest number of poultry 1365449 (40.8 %), followed by Ballari with 855569 (25.6%), Kudligi with 610714 (18.2 %), Hospet with 298836 (8.9%), Sandur with 150970 (4.5%) and Hadagali with 43662 (1.3%). Siruguppa has the lowest number of poultry birds 23617 (0.7%). Taluk-wise details are provided in Table 1.3b and Fig. 1.5 and Fig 1.6.

**Table 1.3a: Cattle & Buffaloes population**

In Numbers

Sl. No.	Taluk	Indigenous cow(Nos.)	Hybrid Cow (Nos.)	Total Cows	Buffaloes Indigenous	Total-Cattle & Buffaloes
1	Ballari	52774	2008	54782	32384	87166
2	Hadagali	36346	9244	45590	14244	59834
3	H.B.Halli	37524	9435	46959	11922	58881
4	Hospet	36954	1160	38114	18962	57076
5	Kudligi	71624	8330	79954	28265	108219
6	Sandur	46285	510	46795	14125	60920
7	Siruguppa	31362	613	31975	22294	54269
<b>Total</b>		<b>312869</b>	<b>31300</b>	<b>344169</b>	<b>142196</b>	<b>486365</b>

Source: Ballari District at a Glance : 2014-15

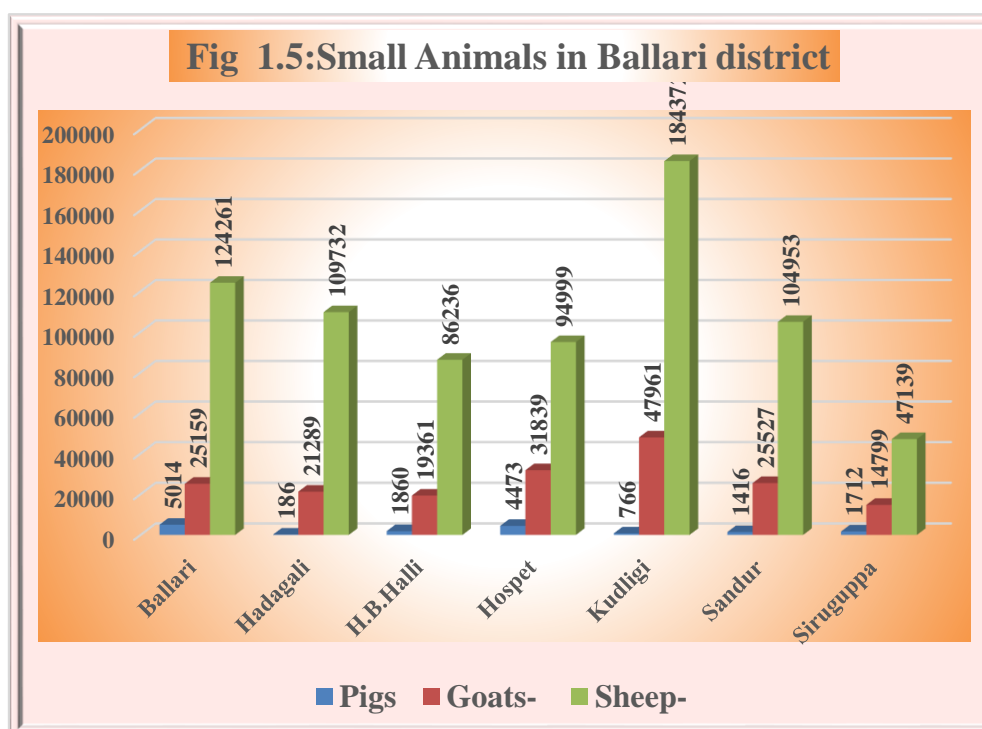


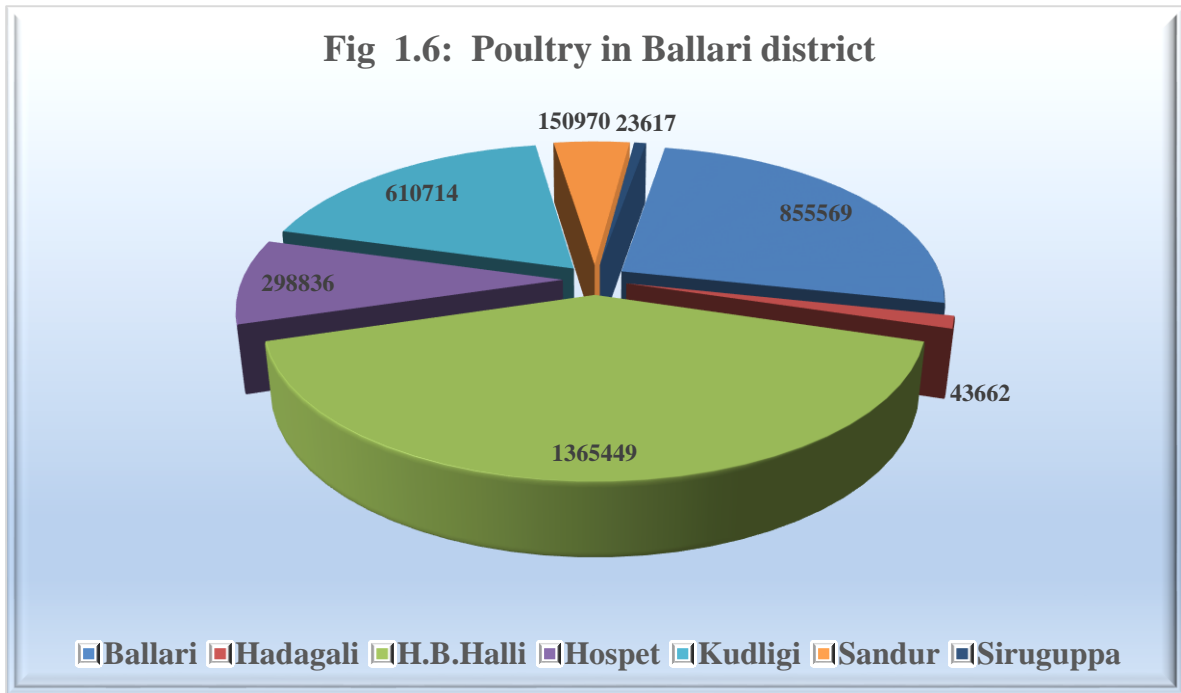
**Table 1.3b: Small Animals in Ballari district.**

In Numbers

Sl. No	Block/ Taluk	Pigs	Goats-Indigenous	Sheep-Indigenous	Total Small Animals	Poultry
1	Ballari	5014	25159	124261	154434	855569
2	Hadagali	186	21289	109732	131207	43662
3	H.B.Halli	1860	19361	86236	107457	1365449
4	Hospet	4473	31839	94999	131311	298836
5	Kudligi	766	47961	184372	233099	610714
6	Sandur	1416	25527	104953	131896	150970
7	Siruguppa	1712	14799	47139	63650	23617
	<b>Total</b>	<b>15427</b>	<b>185935</b>	<b>751692</b>	<b>953054</b>	<b>3348817</b>

Source: Ballari District at a Glance : 2014-15





#### 1.4 Agro-Ecology, Climate, Hydrology and Topography:

##### 1.4a. Agro-ecology

The entire Ballari district comes under Northern Dry Zone 3. The district falls under semi arid rainfall deficit climate. The city lies in the rain shadow region of the Western Ghats, it receives little rain from the southwest monsoon. The climate of Ballari district is quite moderate shows dryness in major part of the year and a hot summer from March to May, June to September is the southwest monsoon period, October and November is the post monsoon retreating monsoon season with clear bright weather. During December to February weather remains dry and comparatively cool season. Ballari has four distinct seasons:

- December to February - winter (10 °C - 30 °C)
- March to May - summer (24 °C - 37 °C)
- June to September - monsoon (22 °C - 32 °C)
- October to November - post-monsoon (20 °C - 31 °C)

It can be seen from Table 1.4, that the district receives about 600.1 mm of rain every year with about 42 rainy days, mainly in the months from August to October. Sandur has recorded average highest rainfall (783 mm), followed by Siruguppa (657 mm), Hadagali (596 mm), Hospet (578.9 mm), Kudligi (577 mm,) and H.B.Halli (506 mm). Lowest average rainfall was recorded in Ballaritaluk (502.9mm).

**Table 1.4: Taluk wise data on Weather**

Sl. No.	Taluk	Block area (Ha)	Annual Normal Rainfall (mm)	Average monthly rainfall (mm)	No. of rainy days	Temperature		Humidity (%)	
						Min. 0C	Max. 0C	Min	Max
1	Ballari	169027	502.9	41.9	33	22	33	49	62
2	Hadagali	94853	596.0	49.7	43	20	32	60	74
3	H.B.Halli	97599	506.0	42.2	37	21	32	57	78
4	Hospet	93374	578.9	48.2	44	20	32	58	76
5	Kudligi	159706	577.0	48.1	41	20	31	80	81
6	Sandur	94359	783.0	65.3	56	22	32	58	78
7	Siruguppa	104278	657.0	54.8	44	22	33	49	62
	<b>TOTAL</b>	<b>813196</b>	<b>600.1</b>	<b>50.0</b>	<b>42</b>	<b>21.77</b>	<b>33.05</b>	<b>59.69</b>	<b>74.09</b>

Source: KSNDMC

#### 1.4b. Hydrology

The district falls under Krishna basin. The Tungabhadra perennial river forms major drainage system in Ballari district. Major inter-state irrigation project constructed across this at Mallapuram village in Hospet taluk with a catchment area of 28179 sq.kms. ChikkaHagari and Hagari/Vedavathi are the tributaries of Tungabhadra runs south to north from the southern tip of the district. These are seasonal rivers which flow during monsoon season. Chikkahagari River originates in Guddada Ranganahills near Chitradurga and drains into Ballari district flows south to north and joins Tungabhadra at Mallapuram after a travel of 64 kms in the district. A Medium irrigation project across this river exists at Malavi in H.B.Halli taluk. Hagari/Vedavathy the other tributary originates near Mullaianagiri hills in Chikmagalur district and enters the eastern part of the Ballari district and drains Hadagali and Kudligi taluks before joining Tungabhadra with a travel of 92 km at Bagavadi village in Siruguppa taluk. Number of minor streams which arise locally and ultimately drains into Tungabhadra. Naarihalla is one among them which has a dam (medium irrigation project) at Taranagar in Sandur taluk useful for irrigation in the taluk.

Hydrogeologically, the district forms a part of hard rock terrain comprising granitic gneiss, younger granites and schistose formation of Archean age. The alluvium occurring in



old river course and in flood plains of granitic and gneissic terrain, which are noticed in Hagari river course in Kudligi, Ballari and Siruguppa taluks. The dug wells constructed in these areas tap alluvial aquifers with perforated cement ring and are generally fitted centrifugal pumps. Even cavity wells were noticed near Kottur area. The granitic gneiss and gneissic granite which form major aquifers in the district recorded a weathered and semi weathered zone up to 25m. Schistose formation has weathered formation with less granular and fracture openings than granites and gneisses. Occurrence and movement of ground water are controlled by the degree of weathering, fracturing and the geomorphologic set up in the area.

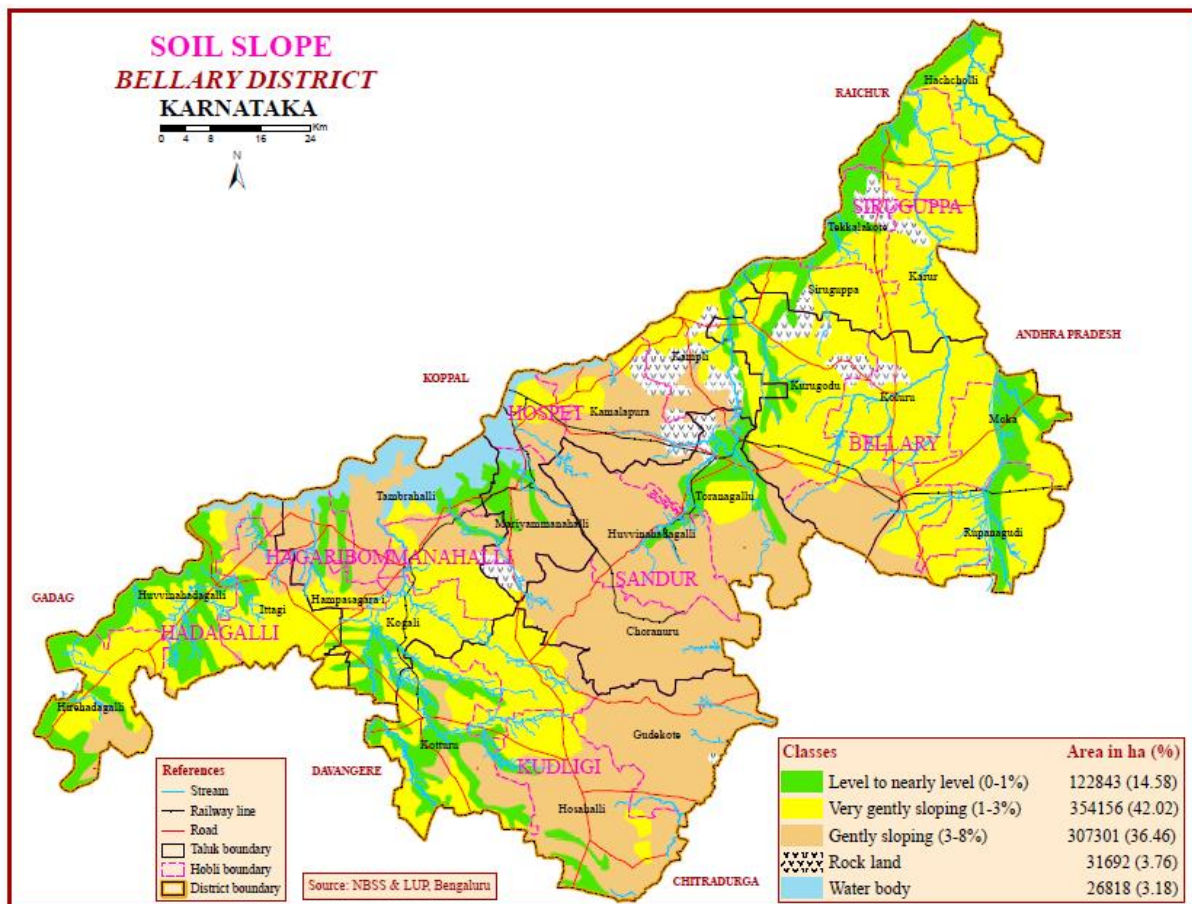
Groundwater occurs under phreatic and semi confined conditions in weathered and fractured rocks. The principal rock types are granites, gneisses and schist which has no primary porosity but possess fractures and joints as secondary porosity that forms water bearing and yielding properties of these rocks. Ground water in the above rock formations have potential aquifers with fracture down to the depth of 138 mbgl in the gneissic and granitic rocks. Whereas, schistose rocks holds less potential zones due to its compactness and clay filled fracture zones. Alluvial aquifers with the thickness up to 25 m yields copious water as observed in wells at PD halli. The deep-seated fracture is common in the depth range of 80 to 110m along major lineaments. The principal source of recharge is rainfall. In command areas seepage from reservoirs canals and percolation from applied irrigation water form additional recharge sources. Out of 22 National Hydrograph Stations (NHS-dug wells,CGWB) located in Ballari district, the depth of water levels recorded during May-2011 was in the range of 1.61 to 12.05mbgl. The depths to water levels recorded during post monsoon period (November 2011) were in the range of 1.26 to 13.20mbgl. The average depth to water level during pre-monsoon is 5.30m and in post monsoon it is 5.40m. Further, the depth of water level between 0.00 to 5.00m in both pre and post monsoon periods were observed in parts of Hospet taluk, most part of Siruguppa taluk and in some parts of West and North West of Ballari in Ballari taluk due to Tungabhadra canal irrigation activity. The major portion of the district shows 5.00 to 10.00m water level during May as well as November 2011. The major part of Kudligi taluk, part of Hadagali and Sandur taluk and east of Ballari taluk is covered either with hill ranges or partly bad land topography. Such areas are left out for want of sufficient control over the water level data. In the remaining part, due to uneven topography, the depth of water level changes within short distance. The water levels in 9piezometers ranged from 3.68 to 32.51mbgl during May 2011 and it varied between 2.27

and 34.56mbgl during November 2011. Seasonal water level fluctuations consequent upon seasonal rainfall, the water levels record a rise indicating the build up of storage in ground water reservoir. During the non-monsoon period, this gets depleted due to exploitation and natural discharge. The water levels, in general show a receding trend from December to May

#### 1.4c: Topography:

The lands of the district can be broadly divided into three soil slope classes i) level to nearly level lands (0-1% slope), ii) very gently sloping lands (1-3% slope) and iii) gently sloping lands (3-8% slopes). Lands in Ballari, Siruguppa, Kudligi, Hospet, Hagari Bommanahalli and Hadagali taluks are mainly very gently sloping, occurring in an area of 354156 ha (42.02 %). Gently sloping lands are found in Kudligi, Sandur, Hospet, Hagari Bommanahalli and Ballari taluks and are spread over an area of 307301 ha ( 36.46 %), while lands that are level to nearly level cover an area of 122843 (14.58 %) mainly in Hadagali, Hagari Bommanahalli and Siruguppa and in a small area in Ballari, Sandur and Hospet (Fig.1.7).

**Fig. 1.7: Slope Map of Ballari district (Traditional)**



### **1.5: Soil Profile:**

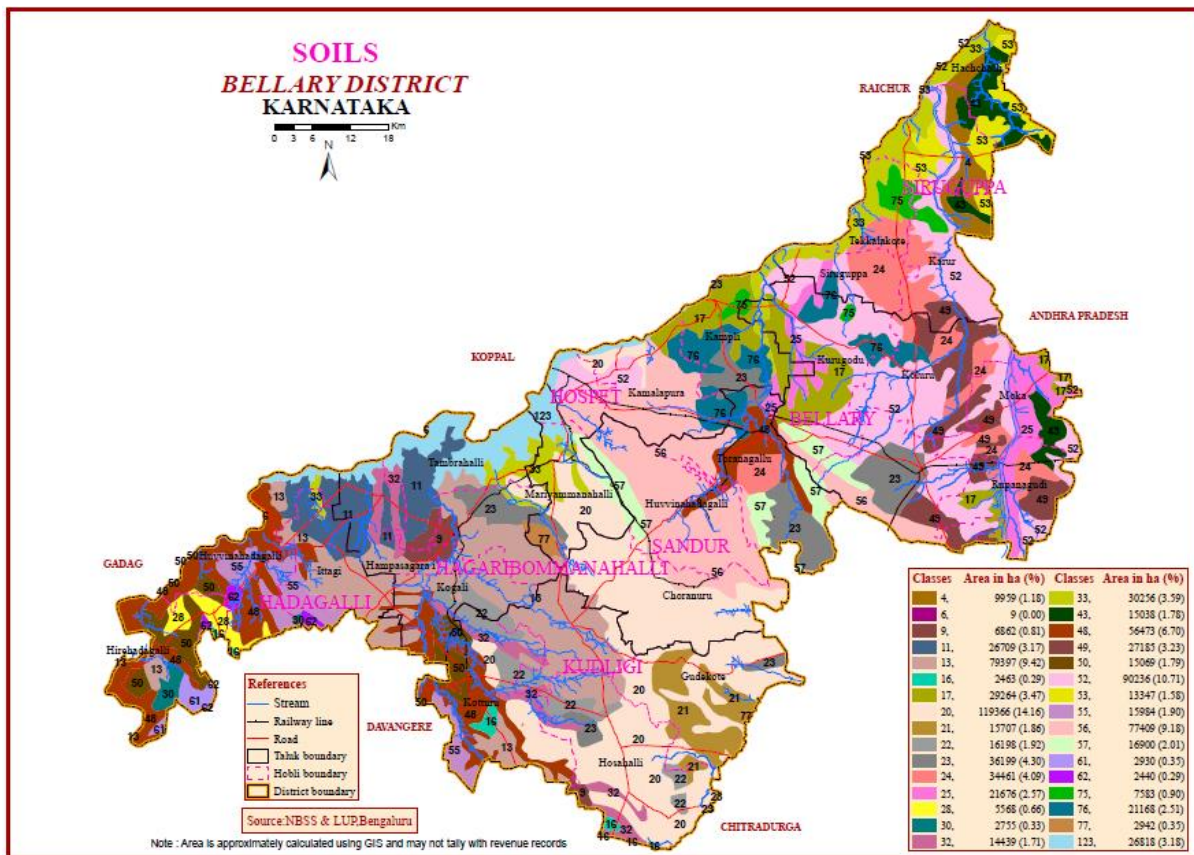
Soils of the soil order Aridisols occur in Ballari, Hospet, Siruguppa, Sandur, Kudligi and Hagari bommanahalli taluks; Entisols occur in Siruguppa, Ballari, Sandur, Kudligi and Hadagali taluks; Vertisols occur in Hadagali, Kudligi, Hospet, Ballari and Siruguppa taluks; Inceptisols occur in Hadagali, Hagari Bommanahalli, Kudligi, Ballari and Siruguppa taluks; while soils of the soil order Alfisols occur in Hadagali, Hagari Bommanahalli and Kudligi taluks.

Soils of the soils order Aridisols are moderately deep to deep at places very deep, gravelly clay to Calcareous clayey at places strongly gravelly in the subsurface, on gently sloping interfluves and undulating interfluves, well drained gravelly clay loam with low to very low AWC, with slight to moderately erosion; Entisols are very shallow to shallow and at places moderately deep to very deep, well drained to somewhat excessively drained, gravelly loam to loamy soils and at places clayey over sandy (Table 1.5a and Fig 1.8 and Fig. 1.9). Occurring on ridges and rolling lands and inter hill basins, low to very low in AWC; Vertisols are deep to very deep, moderately well drained to well drained, calcareous cracking clay soils, on gently sloping to undulating interfluves with slight to moderate erosion and patches of salinity under canal irrigation; Inceptisols are moderately shallow to shallow, and at places deep to very deep, well drained, clayey soils on gently sloping to undulating interfluves with moderate erosion and patches of slight salinity and low to very low in AWC and while Alfisols are moderately deep to very deep and at places moderately shallow, well drained, gravelly clay to clayey soils on gently sloping to undulating interfluves with medium to low AWC and with slight to moderate erosion.

**Table 1.5a: Soils of Ballari District**

<b>Sl. No.</b>	<b>Soil</b>	<b>Area (Ha)</b>	<b>%</b>	<b>Characteristics</b>
1	Aridisols	291982.00	35.91	Moderately deep to deep at places very deep, gravelly clay to Calcareous clayey at places strongly gravelly in the subsurface, on gently sloping interfluves and undulating interfluves, well drained gravelly clay loam with low to very low AWC, with slight to moderately erosion.
2	Entisols	148280.60	18.23	Very shallow to shallow and at places moderately deep to very deep, well drained to somewhat excessively drained, gravelly loam to loamy soils and at places clayey over sandy. Occurring on ridges and rolling lands and inter hill basins, low to very low in AWC.
3	Vertisols	139760.70	17.19	Deep to very deep, moderately well drained to well drained, calcareous cracking clay soils, on gently sloping to undulating interfluves with slight to moderate erosion and patches of salinity under canal irrigation
4	Inceptisols	122828.05	15.10	moderately shallow to shallow, and at palace deep to very deep, well drained, clayey soils on gently sloping to undulating interfluves with moderate erosion and patches of slight salinity and low to very low in AWC.
5	Alfisols	84340.35	10.37	Moderately deep to very deep and at place moderately shallow, well drained, gravelly clay to clayey soils on gently sloping to undulating interfluves with medium to low AWC and with slight to moderate erosion
6	Rockland	26004.30	3.20	
<b>Total</b>		<b>813196.0</b>	<b>100.00</b>	

**Fig 1.8: Soil map of Ballari district**



**Table 1.5b: SOIL LEGEND – BALLARI DISTRICT, KARNATAKA**

Map Symbol	Description Major soils	Classification		Area	
		Major soils	Inclusions	Ha	%
<b>SOILS OF SOUTH DECCAN PLATEAU</b>					
4	Deep, somewhat excessively drained, gravelly clay soils on gently sloping interfluves, with moderate erosion;	Fine, kaolinitic, Kandic Paleustalfs	Loamy-skeletal, mixed, Typic ustropepts	9959	1.18
	Deep, somewhat excessively drained, clayey	Fine, kaolinitic, rhodic kandiuustalfs	Fine, mixed, Typic Rhodustalfs		
6	Deep, well-drained, gravelly clay soils on gently sloping interfluves, with slight erosion;	Clayey-skeletal, mixed, Rhodic Paleustalfs	Fine, mixed Typic Haplustallfs	9	0
	Moderately shallow, well-drained, gravelly soils	Clayey-skeletal, mixed, Typic Rhodustalfs	Clayey-skeletal, mixed,		

			TypicUstrop epts		
9	Very deep, well- drained, clayey soils on undulating interfluves, with slight erosion;	Fine, mixed, Rhodic Paluetafals	Clayey- skeltal, mixe d, Typic Rhodustafals	6862	0.81
	Shallow, somewhat excessively drained, gravelly clay soils, moderately eroded	Clayey- skeletal, mixed, Lithic Ustropepts	Loamy- skeletal, mix ed, Typic, Ustropepts		
11	Moderately shallow, well- drained, gravelly clay soils with very low AWC on undulating interfluves, with moderate erosion;	Clayey- skeletal, mixed, Typic Rhodustafals	Fine- loamy, mixe d, Typic Ustropepts	26709	3.17
	Moderately deep, well- drained, gravelly clay soils with very low AWC	Clayey- skeletal, mixed, Typic Haplustafals			
13	Moderately shallow, well- drained, gravelly clay soils on gently sloping interfluves, with slight erosion;	Clayey- skeletal, mixed, Typic Rhodustafals	Clayey- skeletal, mix ed, Typic Ustorhents	79397	9.42
	Moderately shallow, well- drained, gravelly clay soils, moderately eroded	Clayey- skeletal, mixed, Typic Ustropepts	Fine, mixed, Rhodic Paluetafals		
16	Moderately deep, well- drained, clayey soils with medium AWC on undulating interfluves, with moderate erosion;	Fine, mixed, Typic Haplustalfss	Fine, mixed, Typic Ustropepts	2463	0.29
	Moderately deep, somewhat excessively drained, gravelly clay soils, strongly gravelly in the sub-soil	Clayey- skeletal, mixed, TypicRhodustafals	Fine, mixed, Rhodic Paleustafals		
17	Moderately deep, moderately well-drained, calcareous, clayey soils on gently sloping interfluves, with drainage problems and slight erosion; Associated with	Fine, montmorillonitic Ustollic Calciorthids	Fine, montmorillo nitic, Entic Chromusterts	29264	3.47
	Shallow, well- drained, calcareous, clayey soils, moderately eroded	Clayey, mixed, Lithic Ustollic Calciorthids	Loamy- skeletal, mix ed, Lithic Ustic Torriorthents		
20	Moderately deep, well- drained, gravelly clay soils with low AWC, strongly	Clayey- skeletal, mixed, Typic	Clayey- skeletal, mix ed, Ustic	11936 6	14.16

	gravelly in the sub-soil on undulating interfluves, with moderate erosion;	Camborthids	torriorthents		
	Shallow, well-drained, gravelly clay soils with very low AWC, severely eroded	Clayey skeletal, mixed, Lithic, Caborthids			
21	Moderately deep well-drained, gravelly clay soils with low AWC, strongly gravelly in the sub-soil on undulating interfluves, with moderate erosion;	Clayey-skeletal, mixed, Typic Camborthids	Clayey-skeletal, mixed, Lithic Camborthids	15707	1.86
	Moderately deep, well-drained gravelly clay soils with low AWC, strongly gravelly in the sub-soil	Clayey-skeletal, mixed, Typic Paleargids			
22	Moderately deep, well-drained, gravelly clay soils with low AWC, strongly gravelly in the sub-soil on gently sloping interfluves, with moderate erosion; Associated with	Clayey-skeletal, mixed, Typic Camborthids	Loamy-skeletal, mixed, Ustic Torriorthents	16198	1.92
	Deep, well-drained, clayey soils	Fine, mixed, Typic Haplargids			
23	Moderately deep, well-drained, gravelly clay soils with low AWC, strongly gravelly in the sub-soil on undulating interfluves, with moderate erosion;	Clayey-skeletal, mixed, Typic Camborthids	Rock land	36199	4.3
	Moderately shallow, well-drained, clayey soils	Fine, mixed, Typic Paleargids	Loamy, skeletal, mixed, Typic Camborthids		
24	Very Deep, well-drained, clayey soils on gently sloping interfluves, with slight erosion; undulating interfluves, with slight erosion;	Fine, mixed, Typic Camborthids	Fine, mixed, Typic Haplargids	34461	4.09
	Moderately shallow, well-drained, gravelly clay soils with medium AWC	Clayey-skeletal, mixed, Typic Paleargids			
25	Deep, moderately well-drained, clayey soils of valleys, with saline patches smaller than 2 ha;	Fine, mixed, Typic Camborthids	Mixed, Ustic Torripsamments	21676	2.57
	Very deep, moderately well-	Coarse-	Fine, mixed,		

	drained, loamy over sandy soils	loamy over sandy, mixed, Ustic Torrifluvents	Ustollic Calciorthids		
28	Moderately shallow, well-drained, gravelly clay soils with low AWC, strongly gravelly in the sub-soil on gently sloping interfluves, with moderate erosion; Associated with	Clayey-skeletal, mixed, Typic Ustropepts	Loamy, mixed, Lithic Ustorthents	5568	0.66
	Shallow, somewhat excessively drained, clayey soils with low AWC	Clayey, mixed, Lithic Haplustalfs			
30	Shallow, well-drained, gravelly clay soils with very low AWC, strongly gravelly in the sub-soil on undulating interfluves; Associated with	Clayey-skeletal, mixed, Typic Ustropepts	Fine, mixed, Typic Haplustalfs	2755	0.33
	Very deep, moderately well-drained, calcareous, cracking clay soils, moderately eroded	Very-fine, montmorillonitic, Typic Pellusterts	Fine montmorillonitic, Vertic Ustropepts		
32	Very deep, moderately well-drained, clayey soils of valleys, with problems of drainage and slight salinity in patches;	Fine, mixed, Typic Ustropepts	Fine, mixed, Aquic Ustropets	14439	1.71
	Moderately deep, well-drained, loamy soils	Clayey, Over loamy, mixed Typic Ustifluvents			
33	Deep, moderately well-drained, clayey soils of valleys, with problems of drainage and slight valleys, with saline patches smaller than 2 ha; salinity in patches;	Fine, mixed, Typic Ustropetps	Fine, mixed, Aeric Tropaquepts	30256	3.59
	Deep, imperfectly drained, clayey over sandy soils	Fine mixed, Typic Ustifluvents			
43	Deep, well-drained, calcareous, cracking clay soils on undulating interfluves, with moderate erosion;	Very fine, montmorillonitic, Typic Chromusterts	Very-fine, montmorillonitic, Typic Pellusterts	15038	1.78
	Moderately deep, well-drained, calcareous, clayey soils with slight salinity under irrigation	Fine, montmorillonitic, Vertic Ustropepts			



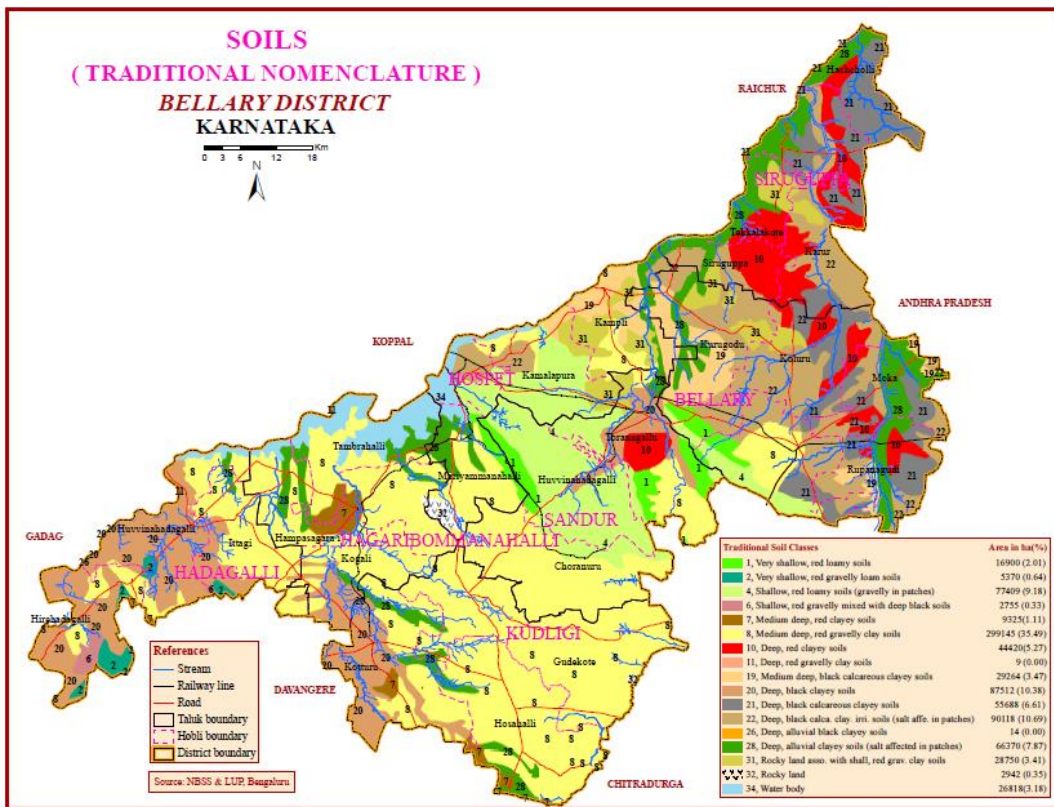
48	Very deep, moderately well-drained, sloping interfluves and valleys, with slight erosion; Associated with	Very fine, Montmorillonitic, Typic Chromusterts	Fine mixed, Typic Ustropepts	56473	6.7
	Deep, well-drained, calcareous, clayey soils	Fine, montmoirllonitic, Vertic Ustropepts			
49	Deep, moderately well drained, calcareous, cracking clay soils on gently sloping interfluves, with slight erosion;	Very-fine, montmorillonitic, Typic Chromusterts	Very-fine, Montmorillonitic, Typic Pellusterts	27185	3.23
	Moderately shallow, moderately well-drained, calcareous, clayey soils	Fine, montmorillonitic, Ustollic Calciorothids			
50	Deep, moderately well-drained, cracking clay soils on gently sloping interfluves, with severe erosion;	Very fine, montmorillonitic, Typic Chromusterts	Fine, montmorillonitic, Vertic Ustropepts	15069	1.79
	Deep, moderately well-drained, calcareous, cracking clay soils	Very fine, montmorillonitic, Typic Pellusterts			
52	Deep, moderately well drained, calcareous, cracking clay soils on gently sloping interfluves, with slight erosion and patches of salinity under canal irrigation; Associated with	Very-fine, montmorillonitic, Typic Chromusterts	Fine, mixed, Vertic Torrifluvents	90236	10.71
	Moderately shallow, well-drained, calcareous, clayey soils with medium AWC	Fine, montmoirllonitic, Ustollic Calciorthids			
53	Very deep, moderately well-drained, calcareous, cracking clay soils on gently sloping interfluves, with slight erosion;	Very-fine, montmorillonitic, Typic Pellusterts	Very-fine montmorillonitic, Typic Chromusterts	13347	1.58
	Deep, well-drained, calcareous, clayey soils, moderately eroded	Fine, montmorillonitic, Vertic Ustropepts			
55	Deep, moderately well drained, cracking clay soils on gently sloping interfluves, with moderate erosion; Associated with	Fine, montmorillonitic, Typic Pellusterts	Fine, montmorillonitic Vertic Ustorthents	15984	1.9
	Very deep, moderately well drained, calcareous,	Fine, montmorillonitic,	Fine, montmorillo		

	cracking clay soils	Typic Chromusterts	nitic, Vertic Ustropepts		
56	Shallow, somewhat excessively, drained loamy soils with very low AWC on ridges, with severe erosion;	Loamy, mixed, Lithic Ustic Torriorthents	Rock Land	77409	9.18
	Moderately shallow, well-drained, clayey soils with low AWC, slightly eroded	Fine, mixed Ustic, Torriorthents	Clayey-skeletal, mixed, Typic Camborthids		
57	Very shallow, well-drained, loamy soils on rolling lands and inter-hills basins, with severe erosion; Associated with	Loamy, mixed, Lithic Ustic Torriorothents	Fine, mixed, Typic Paleargids	16900	2.01
	Moderately shallow, well-drained, loamy soils with low AWC, moderately eroded	Fine-loamy, mixed, Typic Camborthids	Loamy-skeletal, mixed Typic Haplargids		
61	Very shallow, well-drained, gravelly loam soils on rolling lands, strongly gravelly in the sub-soil, with severe erosion;	Loamy-skeletal, mixed, Lithic Ustorthents	Fine, mixed, Typic Rhodustalfs	2930	0.35
	Moderately shallow, well-drained, clayey soils with low AWC, moderately eroded	Fine, mixed, Typic Ustropepts	Fine, mixed, Typic Paleustalfs		
62	Very shallow, excessively drained, gravelly loam soils on ridges, with severe erosion;	Loamy-skeletal, mixed, Lithic Ustorthents	Clayey, skeletal, mixed, Typic Ustorthents	2440	0.29
	Shallow, somewhat excessively drained, gravelly clay soils with very low AWC, moderately eroded	Clayey-skeletal, mixed, Lithic Ustropepts	Rock land		
75	Rock outcrops Associated with	Rock land	Fine, mixed, Typic Haplargids	7583	0.9
	Shallow, somewhat excessively drained, gravelly clay soils with very low AWC on ridges and gently sloping interfluves, moderately eroded	Clayey-skeletal, mixed, Lithic Camborthids			
76	Rock outcrops; Associated with	Rock land	Clayey-skeletal, mixed, Typic Ustropepts	21168	2.51

	Shallow, somewhat excessively drained, gravelly clay soils on ridges, severely eroded	Clayey-skeletal, mixed, Lithic Ustropepts			
77	Rockoutcrops	Rock land		2942	0.35
	<b>TOTAL</b>			<b>813196</b>	<b>99.99</b>

Note: 1. Soil map units represent the association of 2 or 3 soil families ie: 1.dominant soil (occupying 50% area), 2.subdominant soil (35% area) and 3.inclusion (15% area) in the map unit. 2. The soil temperature regime is isohyperthermic. AWC = available water capacity

**Fig. 1.9: Soil map of Ballari district (Traditional)**

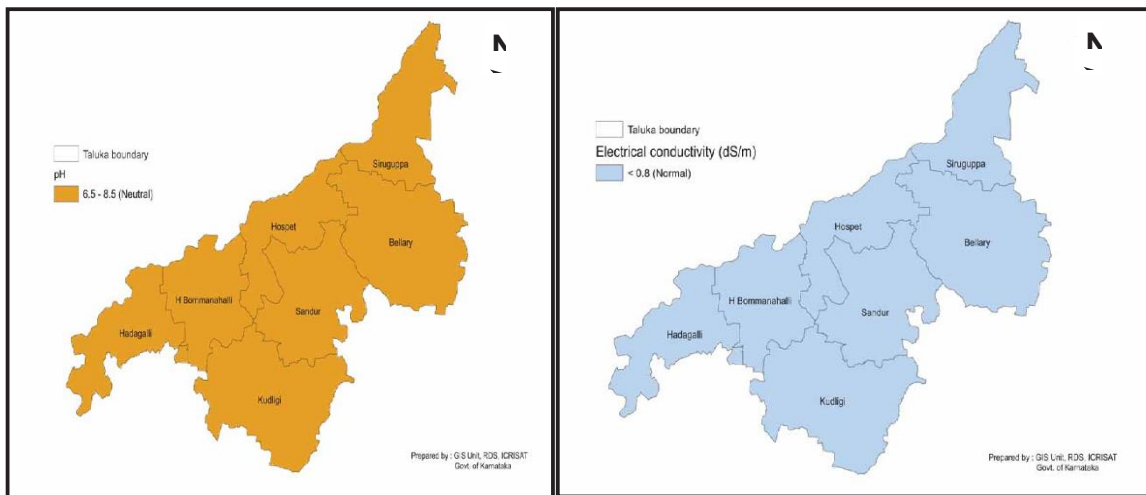


The soils of the district are derived from Granites, Gneisses and Schistose rocks. Sandy loam soil is observed along the stream beds, Red soil in elevated places, while, black soil is seen in irrigated land and in other parts. They are permeable and mildly alkaline in nature. The thickness of the soil varies from 0.2 to 1.0m. The Red soil are the major type of soil in the district, found mainly at elevated places especially at fringes of hills due to decomposition of rocks and surrounding granitic and gneissic 7 hills. These soils are with high permeability and neutral pH. Black soil is with high initial infiltration rate when dry and cracked. On getting wet, cracks will close and infiltration rate will be very low. The Black

soil is found in the prolonged submerged areas and canal command areas having low permeability. It is calcareous and mildly alkaline in nature. The black soils of Tungabhadra project area are two to four feet deep, heavy in texture with 45-55% clay and contain free calcium carbonate throughout the profile. There is generally a zone of salt concentration in the soil profile at a depth of 45 to 90 cm, the principal salt being gypsum. Below the gypsum occurs murram, which is practically impermeable to water.

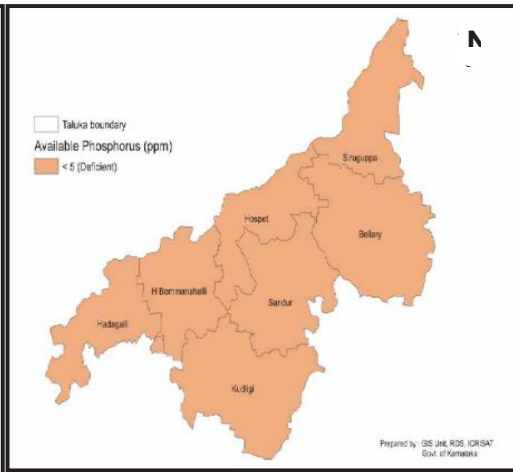
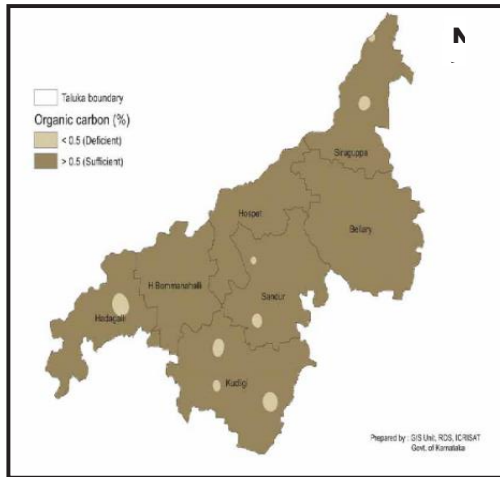
The soils of the district are neutral (6.5 – 8.5) in pH, normal (<0.8 dS/m) in electrical conductivity, sufficient (> 0.5 %) in organic carbon, available zinc (> 0.75 ppm) and available boron (>0.58 ppm). They are deficient (< 5 ppm) in available phosphorous. The soils of the major parts of the district are sufficient (> 50 ppm) in available potassium and deficient (< 50 ppm) in parts of Kudligi, Hospet, Siruguppa, Sandur and Hadagali. Taluk-wise details about soil fertility status and soil pH are presented in Fig. 1.10.

**Fig. 1.10: Soil Fertility Maps**



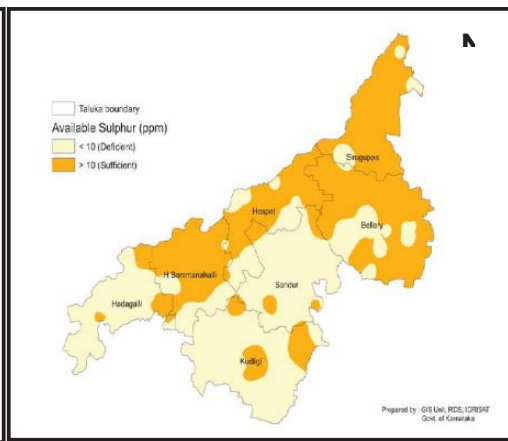
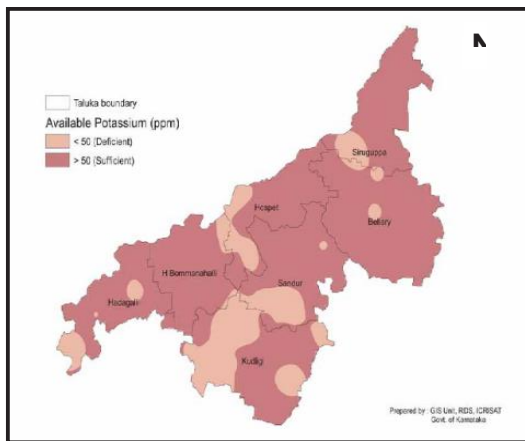
**pH status in Ballari district**

**E.C. status in Ballari district**



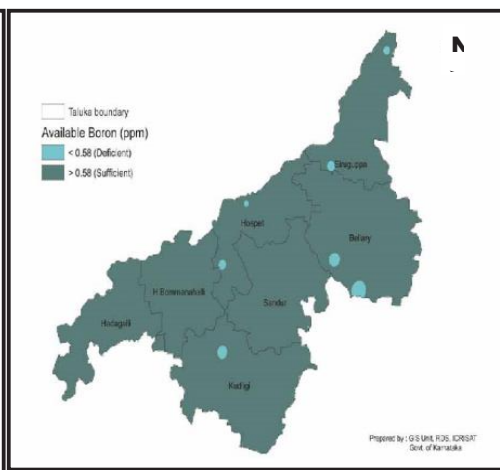
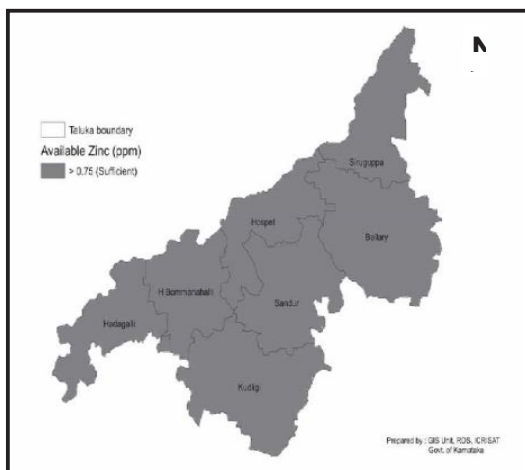
**Organic Carbon status in Ballari district**

**Av. Phosphorous status in Ballari Dist**



**Av. Potassium status in Ballari district**

**Av. Sulphur status in Ballari district**



**Av. Zinc status in Ballari district**

**Av. Boron status in Ballari district**

The district may be classified as Northern Maidan region with monotonous, treeless, and expansive plateau landscape. The step like landscape, hills and ridges are the general features of the northern maidan region. The central part of the Ballari district is occupied by hills and plains to east and west. The Sandur hills run North West of the district dividing the district in to two distinct parts. The eastern part consists of Hospet, Ballari and Siruguppa taluks. The western part consists of Hadagali, Hagaribommanahalli, Kudligi and Sandur taluks. The Tungabhadra River forms the eastern and northern boundary of the district.

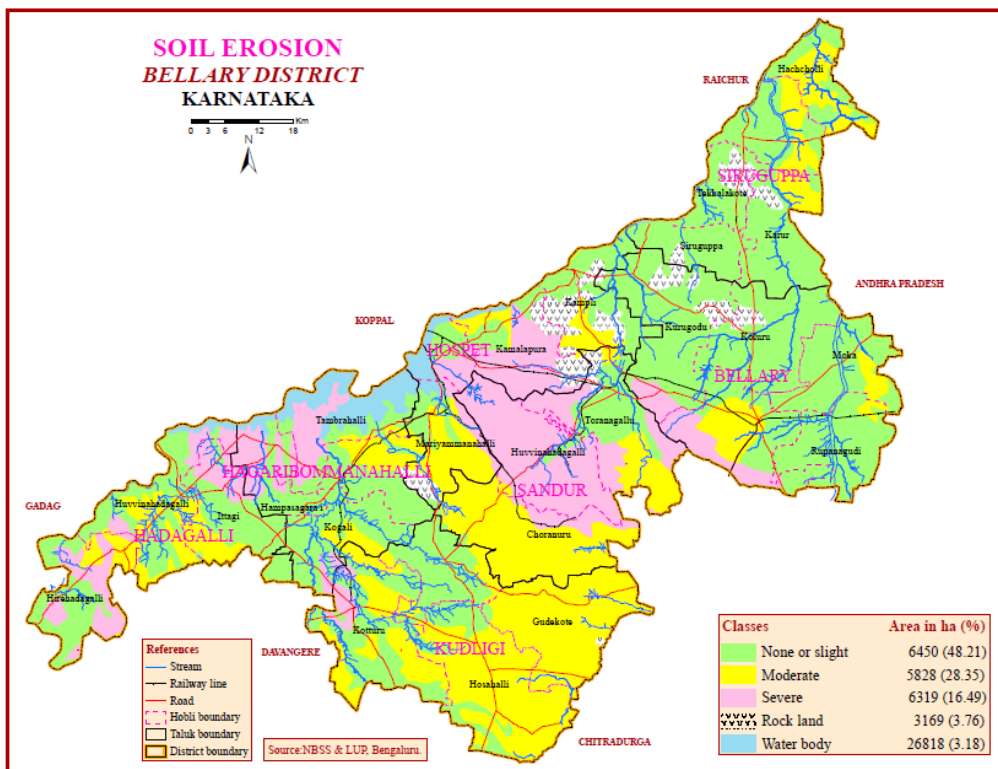
### **1.6: Soil Erosion, Land Capability/Irrigability Classes and Runoff Status:**

Soil erosion which occurs at varying rates is a widespread threat to sustainable resource management. Major causes of soil erosion were cultivation without proper soil and water conservation measures in area not suitable for crops, denuded areas without vegetation, cultivated fallow on moderate slopes, degraded forests/pastures on steep slopes and poorly managed forest cover. Appropriate soil conservation and land management techniques for the different soil erosion classes were suggested. It is generally associated with agricultural practices, leading to decline in soil fertility, bringing in a series of negative environmental impacts and has become a threat to sustainable agricultural production and water quality.

Soil erosion is one form of soil degradation. Soil erosion is a naturally occurring process on all lands. The agents of soil erosion are water and wind, each contributing a significant amount of soil loss each year. Soil erosion may be a slow process that continues relatively unnoticed, or it may occur at an alarming rate causing serious loss of topsoil. The loss of soil from farmland may be reflected in reduced crop production potential, lower surface water quality and damaged drainage networks.

The soils of Ballari district are mainly none to slightly eroded in an area of 392,042 ha (48.21%) occurring in Siruguppa, Ballari, Hagar Bommanahalli and Hadagali taluks. Soils that are moderately eroded account for 230,541 ha (28.35 %) of the district and are observed mainly in Kudligi and sparsely spread in the remaining taluks. The severely eroded soils occur in an area of 134,096 ha (16.49 %), occurring mainly in Sandur, Hospet, Hagar Bommanahalli and Hadagali taluks and at some parts of Kudligi taluk. Surface runoff is high in nearly 44.84 % of the area that is moderately eroded to severely eroded, resulting in loss of water, soil fertility and top soil. Necessary water conservation measures are needed to be taken up to conserve water and soil in the district. The soil erosion in Ballari district is shown in Fig. 1.11.

**Fig 1.11: Soil Erosion map of Ballari district**

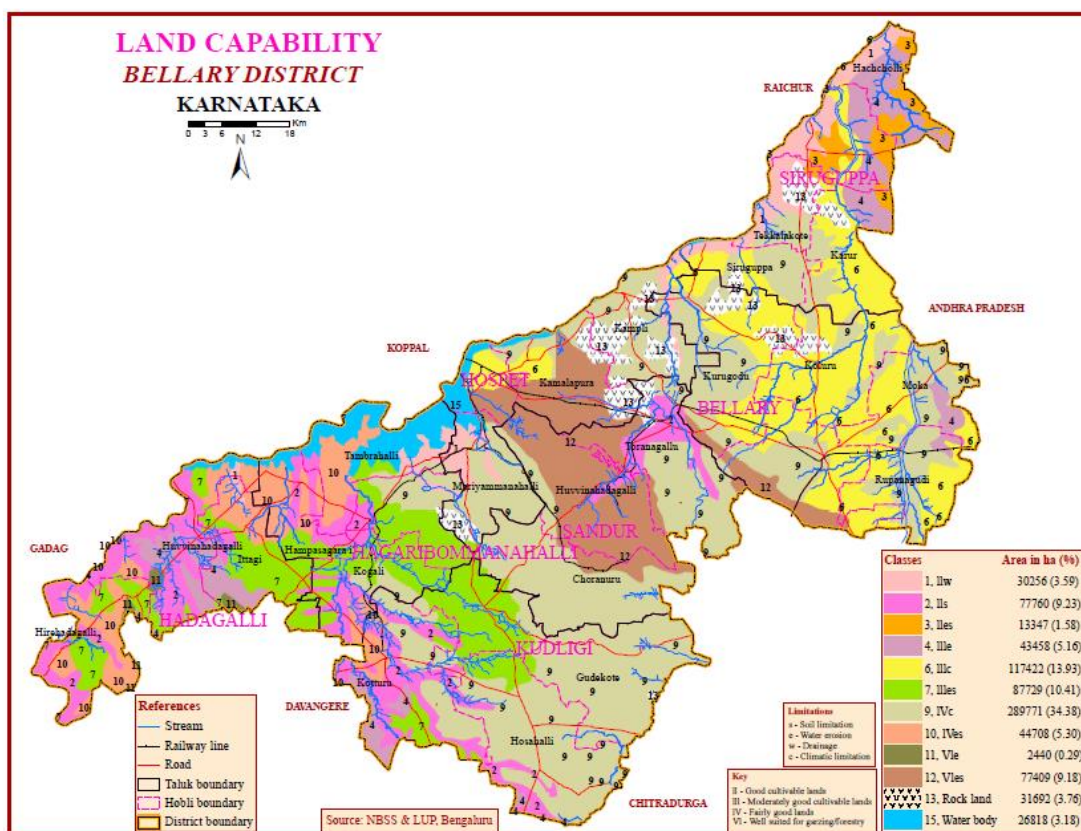


### 1.6b: Land Capability Classes

The lands of the district are classified under the land capability classes II, III, IV, and VI (Fig 1.12). Lands of Kudligi, Hagari Bommanahalli, Ballari, Sandur and Hospet taluks that are classified as Class IV lands – fairly good lands suited for occasional or limited cultivation are found in an area of 334479 ha (41.13 %), followed by lands under Class III – moderately good cultivable spread over an area of 248,609 ha (30.57 %) are mainly found in Ballari, Siruguppa, Hagari Bommanahalli and Hadagali taluk; Class II – good cultivable lands are in an area of 121,363 ha (14.92 %) mainly in Siruguppa, Hagari Bommanahalli and Hadagali taluks, while lands of Class VI – well suited for grazing or forestry. Non-arable lands are spread over an area of 79,849 ha (9.82 %) in Sandur, Hospet and in a small patches in Ballari taluk.



**Fig. 1.12: Land Capability Classes in Ballari district**

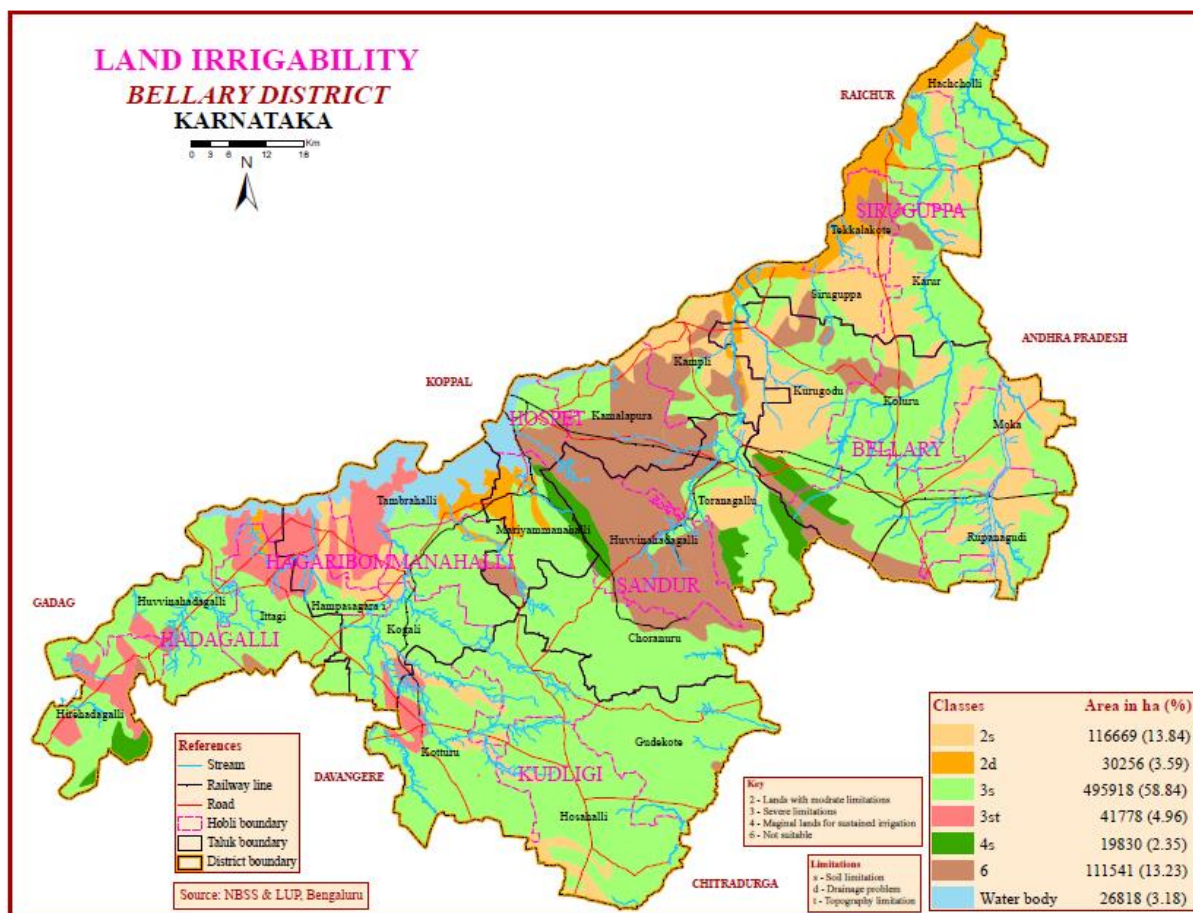


### 1.6c: Land Irrigability Classes

The lands of Ballari district are grouped under the Land Irrigability Classes 2, 3, 4 and 6. The lands having severe limitations for sustained use under irrigation is found in all the taluks spread over an area of 537,696 ha (63.8 %), having soil and topographic limitations (Fig.1.13). Lands that have moderate limitation for sustained use under irrigation – Class 2 lands, are in Siruguppa, Ballari, Hospet and in a small area in Kudligi taluk spread over an area of 146,925 ha (17.43 %). Class 4 lands – lands that are marginal for sustained use under irrigation because of very severe limitations mainly soil limitation are found in small patches in Ballari, Sandur, Hagaribommanahalli and Hadagalitaluks in an area of 19,830 ha (2.35 %), while lands coming under Class 6 – lands not suitable for sustained use under irrigation are found in Sandur, Hospet and in small patches in Ballari, Siruguppa and Hagaribommanahalli taluks spread over 111,541 ha (13.23 %).



**Fig 1.13: Land Irrigability classes in Ballari district**



**1.7: Land Use pattern:**

Out of the geographical area of 813,196 ha, the net sown area is 439,865 ha (54%), area sown more than once is 124,017 ha and the cropping intensity is 128%, Forest area in the district is 97,017 ha (11.9 %), area under waste land is 163,768 ha (20.1%) and the area put to other uses account for 112,546 ha (13.8%).

Among the taluks, net area sown is highest (98047 ha) in Ballari taluk, followed by Kudligi (88668 ha), Hadagali (69547 ha), Siruguppa (64711ha), H.Bommanahalli (52643 ha) and Hospet (34296 ha). The lowest net area (31953 ha) is in Sandur taluk. Area under forest land is the highest (33661 ha) in Kudligi taluk and the lowest forest area is in Ballari taluk (2877 ha). The land use pattern of Ballari district is shown in Table 1.7 and Fig. 1.14 and Fig. 1.15.

**Table 1.7: Land Use pattern in Ballari district**

SL. NO	Name of the Block	Total Geographical Area	Area under Agriculture				Area under Forest	Area under Waste land	Area under other uses
			Gross Cropped Area	Net Sown Area	Area sown more than once	Cropping Intensity (%)			
1	Ballari	169027	141424	98047	43377	144	2877	29347	38756
2	Hadagali	94853	89512	69547	19965	129	4738	14922	5646
3	H.B.Halli	97599	62744	52643	10101	119	4482	26306	14168
4	Hospet	93374	47486	34296	13190	138	24970	24934	9174
5	Kudligi	159706	99852	88668	11184	113	33661	23932	13445
6	Sandur	94359	51312	31953	19359	161	24118	31030	7258
7	Siruguppa	104278	71552	64711	6841	111	2171	13297	24099
	<b>TOTAL</b>	<b>813196</b>	<b>563882</b>	<b>439865</b>	<b>124017</b>	<b>128</b>	<b>97017</b>	<b>163768</b>	<b>112546</b>

**Fig 1.14 : Taluk-wise Geographical Area of Ballari district**

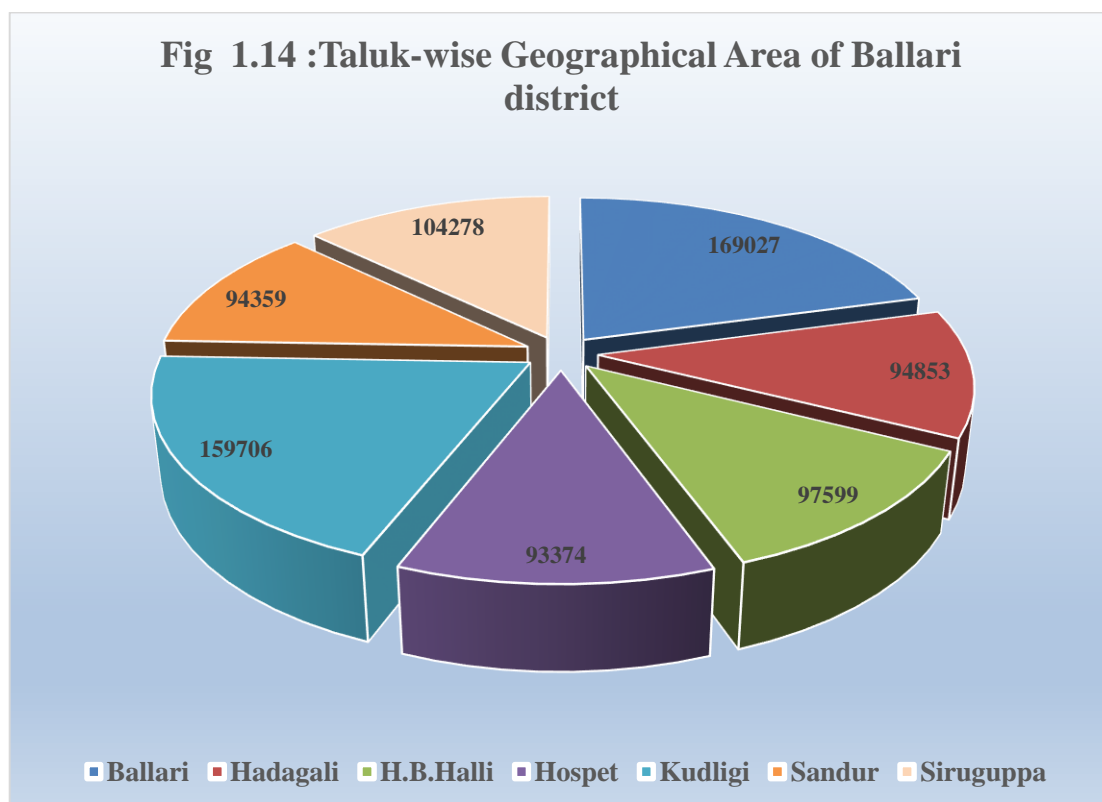
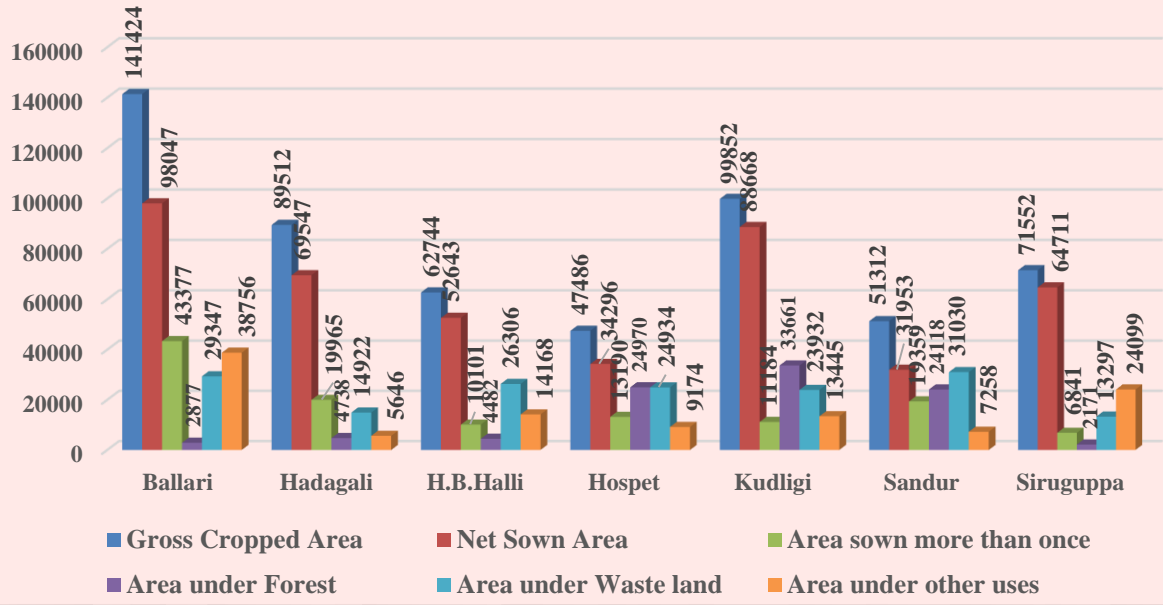


Fig 1.15: Land Use Pattern in Ballari district



## CHAPTER II

### DISTRICT WATER PROFILE

#### **2.1. Area-wise, Crop-wise Irrigation Status:**

Taluk wise, season wise, crop wise area under major crop categories under irrigated and rainfed conditions in Ballari district is furnished in Table 2.1 and the crop-wise details are appended in Appendix 2.1. Field crops are cultivated on an area of 537,187 ha. Of this, crops on 220,408 ha (41%) are cultivated under irrigated conditions and the area under rainfed crops covers 316,779 ha (59%). During Kharif season, area covered is 359,018 ha (66.8%), comprising 12,964 ha (36.1 %) under irrigated and 229,384 ha (63.9%) under rainfed condition. During rabiseason, field crops are cultivated in an area of 117,766 (21.9%), comprising 30371 ha (25.8%) under irrigated and 87395 ha (74.2%) under rainfed condition. During summer season, field crops are cultivated under irrigated condition on an area of 60403 ha (11.3%).

Horticulture crops are cultivated in an area of 52838 ha, comprising 45248 ha under irrigation and 7590 ha under rainfed condition.

#### **2.2. Production and productivity of major crops:**

Among the cereals, Paddy crop has recorded the highest productivity of 39.86 qtls/ha followed by Maize with 29.12 qtls/ha. The average productivity of Cereals is 23.06 qtls/ha, which is on par with the State average. In case of Pulses and Oilseeds, average productivity is 8.45qtls/ha and 10.71 qtls/ha, respectively. In case of Cotton, average productivity is 4.60qtls/ha. Productivity of Pulses, Oilseeds and Cotton is lower than the State average. There is a dire need to improve the productivity of major crops to increase the income of farming community (Table 2.1, 2.2, Fig. 2.1).

**Table 2.1: Area-wise, Crop-wise Irrigation Status**

Name of the Block	Crop Type	Kharif(Area in Ha)			Rabi(Area in ha)			Summer(Area in ha)			Total (Area in ha)		
		Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total
Ballari	Cereals	27506	618	28124	6195	6353	12548	10115	0	10115	43816	6971	50787
Ballari	Pulses	36	155	192	4721	28590	33311	67	0	67	4824	28745	33570
Ballari	Oilseeds	165	425	590	1002	2180	3182	50	0	50	1217	2605	3822
Ballari	Cotton	2354	18545	20899	0	0	0	0	0.0	0	<b>2354</b>	<b>18545</b>	<b>20899</b>
Ballari	Sugarcane	554	0	554	0	0	0	0	0.0	0	<b>554</b>	<b>0</b>	<b>554</b>
Hadagali	Cereals	12215	34629	46844	1488	2346	3834	2900	0	2900	16603	36975	53578
Hadagali	Pulses	90	2885	2975	646	18623	19269	1400	0	1400	2136	21508	23644
Hadagali	Oil Seeds	637	7213	7849	851	825	1676	2480	0	2480	3968	8038	12005
Hadagali	Cotton	507	2058	2565	0	0	0	0	0.0	0	<b>507</b>	<b>2058</b>	<b>2565</b>
Hadagali	Sugarcane	2111	0	2111	0	0	0	300	0.0	300	<b>2411</b>	<b>0</b>	<b>2411</b>
Hadagali	Tobacco	0	12	12	0	0	0	0	0.0	0	<b>0</b>	<b>12</b>	<b>12</b>
H.B.Halli	Cereals	9778	24240	34018	942	157	1099	3129	0	3129	13849	24397	38246
H.B.Halli	Pulses	27	1952	1979	1659	6631	8290	850	0	850	2536	8583	11119
H.B.Halli	Oil Seeds	814	7870	8684	4568	935	5503	2838	0	2838	8220	8805	17025
H.B.Halli	Cotton	1315	143	1457	0	135	135	0	0.0	0	<b>1315</b>	<b>278</b>	<b>1592</b>
H.B.Halli	Sugarcane	1156	0	1156	5		5	1550	0.0	1550	<b>2711</b>	<b>0</b>	<b>2711</b>
Hospet	Cereals	18124	6550	24674	865	95	960	8308	0	8308	27297	6645	33942
Hospet	Pulses	214	335	549	790	550	1340	332	0	332	1336	885	2221
Hospet	Oil Seeds	597	689	1286	280	10	290	531	0	531	1408	699	2107
Hospet	Cotton	2273	1084	3357	0	0	0	0	0.0	0	<b>2273</b>	<b>1084</b>	<b>3357</b>
Hospet	Sugarcane	4297	0	4297	3600	0	3600	1356	0.0	1356	<b>9253</b>	<b>0</b>	<b>9253</b>
Kudligi	Cereals	6939	26027	32967	405	990	1395	205	0	205	7549	27017	34567
Kudligi	Pulses	193	2806	2999	0	4115	4115	135	0	135	328	6921	7249
Kudligi	Oil Seeds	796	44121	44917	455	1725	2180	4770	0	4770	6021	45846	51867

Name of the Block	Crop Type	Kharif(Area in Ha)			Rabi(Area in ha)			Summer(Area in ha)			Total (Area in ha)		
		Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total
Kudligi	Cotton	1207	2042	3248	0	130	130	0	0.0	0	<b>1207</b>	<b>2172</b>	<b>3378</b>
Kudligi	Sugarcane	3	0	3	0		0	55	0.0	55	<b>58</b>	<b>0</b>	<b>58</b>
Kudligi	Tobacco	0	0	0	25	40	65	0	0.0	0	<b>25</b>	<b>40</b>	<b>65</b>
Sandur	Cereals	3549	18876	22426	852	0	852	1130	0	1130	5531	18876	24408
Sandur	Pulses	17	670	687	81	0	81	67	0	67	165	670	835
Sandur	Oil Seeds	33	1493	1526	169	0	169	246	0	246	448	1493	1941
Sandur	Cotton	1509	4201	5710	0	0	0	0	0.0	0	1509	4201	5710
Sandur	Sugarcane	4	0	4	0	0	0	10	0.0	10	<b>14</b>	<b>0</b>	<b>14</b>
Siruguppa	Cereals	27506	618	28124	330	1650	1980	17165	0	17165	45001	2268	47269
Siruguppa	Pulses	36	155	192	285	9845	10130	4	0	4	325	10000	10326
Siruguppa	Oil Seeds	165	425	590	157	1470	1627	30	0	30	352	1895	2247
Siruguppa	Cotton	2354	18545	20899	0	0	0	0	0.0	0	<b>2354</b>	<b>18545</b>	<b>20899</b>
Siruguppa	Sugarcane	554	0	554	0	0	0	380	0.0	380	<b>934</b>	<b>0</b>	<b>934</b>

Source: Department of Agriculture, GoK

**Table 2.2: Taluk-wise Production and Productivity of Major Crops by Irrigation Status**

**Production in Tons; Productivity Kg/ha**

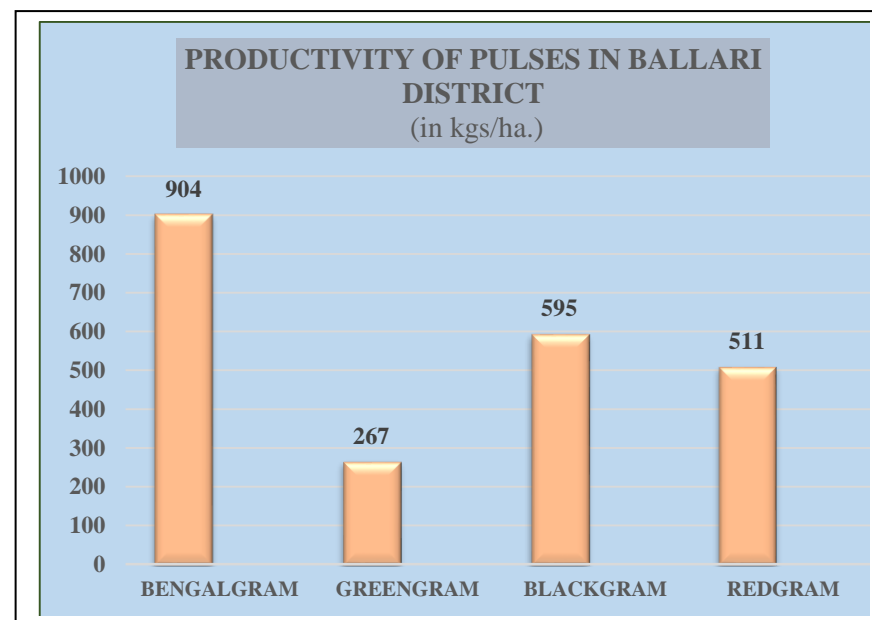
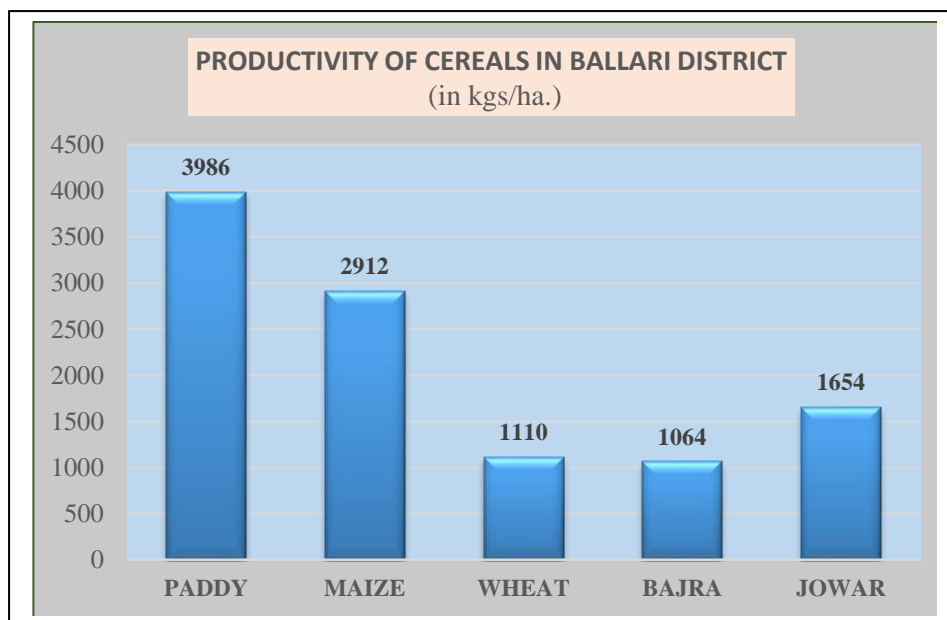
Name of the Block	Crop Type	Rain-fed		Irrigated		Total	
		Production	Productivity	Production	Productivity	Production	Productivity
Ballari	Cereals	4591.053	693	165908.5	3986	170499.6	3534
Ballari	Pulses	15752.23	577	5825.362	1271	21577.6	677
Ballari	Oilseeds	899.4833	363	1493.358	1291	2392.842	659
Ballari	Cotton	17099.89	971	9594.653	4291	26694.54	1345
Ballari	Sugarcane	0	0	41866.67	79549	41866.67	79549
Hadagali	Cereals	60829.17	1732	71377.8	4525	132207	2597
Hadagali	Pulses	10556.84	517	2344.842	1156	12901.68	574
Hadagali	Oil Seeds	4083.725	535	5405.158	1434	9488.883	832
Hadagali	Cotton	1331.647	681	2033.868	4223	3365.515	1381
Hadagali	Sugarcane	0	0	190965	83374	0	0
Hadagali	Tobacco	0	0	0	0	0	0
H.B.Halli	Cereals	35892.66	1549	54804.39	4166	90697.05	2496
H.B.Halli	Pulses	3217.93	395	2734.783	1135	5952.714	564
H.B.Halli	Oil Seeds	4179.45	500	9149.3	1172	13328.75	824
H.B.Halli	Cotton	175.3529	665	4657.529	3729	4832.882	3195
H.B.Halli	Sugarcane	0	0	86700	33664	86700	33664
Hospet	Cereals	9277.225	1470	107280.1	4137	116557.4	3615
Hospet	Pulses	334.0833	397	1468.558	1157	1802.642	854
Hospet	Oil Seeds	331.7583	500	2085.758	1559	2417.517	1208
Hospet	Cotton	1022.968	993	13933.02	6453	14955.99	4690
Hospet	Sugarcane	0	0	761753.3	86655	761753.3	86655

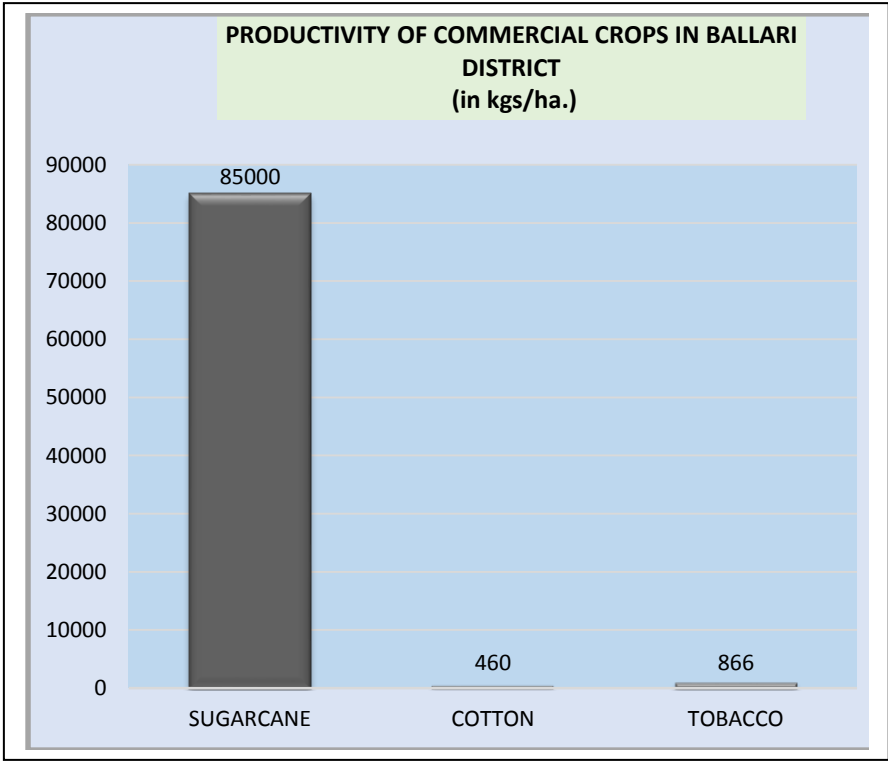
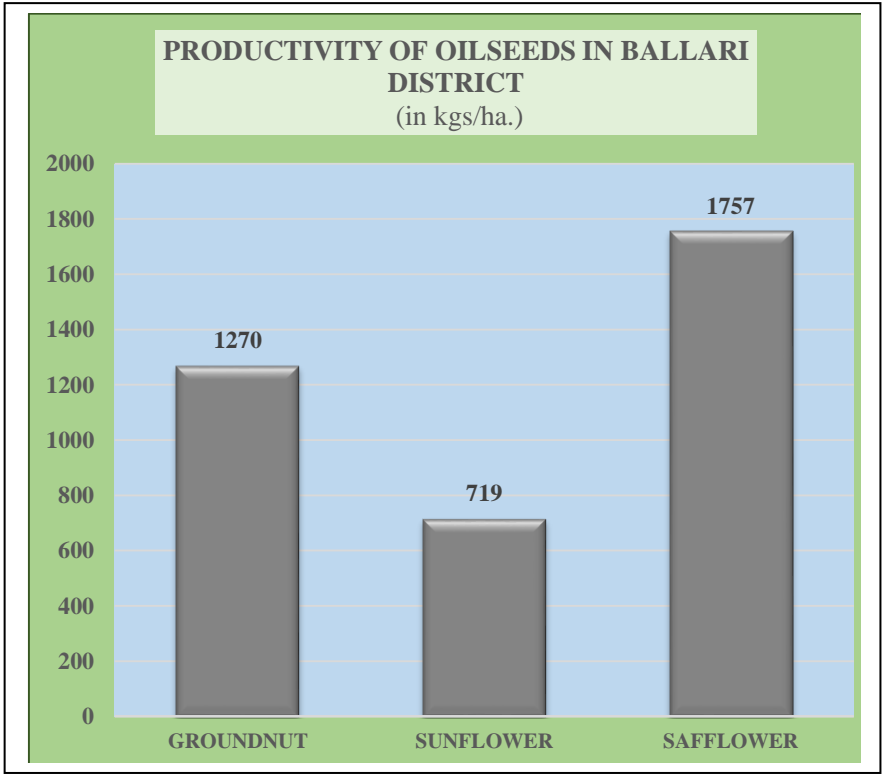
Name of the Block	Crop Type	Rain-fed		Irrigated		Total	
		Production	Productivity	Production	Productivity	Production	Productivity
Kudligi	Cereals	33307.75	1298	34078.33	4752	67386.08	2052
Kudligi	Pulses	2942.687	448	299.5717	960	3242.258	471
Kudligi	Oil Seeds	18955.17	435	9935.125	1737	28890.29	586
Kudligi	Cotton	2194.257	1064	4196.985	3661	6391.243	1991
Kudligi	Sugarcane	0	0	160	2921	0	0
Kudligi	Tobacco	0	0	5	211	0	0
Sandur	Cereals	27372.83	1526	26212.74	4988	53585.57	2311
Sandur	Pulses	220.4533	346	179.45	1147	399.9033	504
Sandur	Oil Seeds	835.977	589	660.8167	1553	1496.794	812
Sandur	Cotton	3009.179	754	5785.24	4036	8794.419	1621
Siruguppa	Cereals	1369.103	635	140757.8	3293	142126.9	3165
Siruguppa	Pulses	4958.483	522	373.5617	1209	5332.045	544
Siruguppa	Oil Seeds	642.4333	357	362.2083	1082	1004.642	471
Siruguppa	Cotton	17099.89	971	9594.653	4291	26694.54	1345
Siruguppa	Sugarcane	0	0	70366.67	0	70366.67	0

Source: Department of Agriculture, GoK



**Fig. 2.1: Productivity of Cereals, Pulses, Oilseeds and Commercial crops.**





### 2.3. Irrigation based classification:

Ballari district has very good network of canal irrigation. The district has a net irrigated area of 206,174 ha and the gross irrigated area is 283,875 ha. Moreover, 97,423 ha are partially irrigated by different sources like tank, wells & bore wells and lift irrigation (Table 2.3). About 237,852 ha area is un-irrigated or totally rainfed in the district.

**Table 2.3: Irrigation Based Classification of Ballari district**

SL.N O.	Name of the Block	Irrigated(Area in ha)		Rainfed(Area in ha)	
		Gross Irrigated Area	Net Irrigated Area	Partially Irrigated/Protect ive Irrigation *	Un -Irrigated or Totally Rainfed
1	Ballari	108492	77684	16861	29470
2	Hadagali	38516	26042	14967	53302
3	H.B.Halli	19173	13210	17320	26444
4	Hospet	37834	28442	6637	7216
5	Kudligi	24501	16629	16187	77232
6	Sandur	12698	8130	3832	25633
7	Siruguppa	42661	36037	21619	18555
	<b>TOTAL</b>	<b>283875</b>	<b>206174</b>	<b>97423</b>	<b>237852</b>

Source: Agriculture Statistics, Irrigation of CWC, Indian Statistics, Open Government Data platform

Ballari district falls in Krishna basin. The Tungabhadra perennial river forms major drainage system in Ballari district. Major inter-state irrigation project constructed across this river is at Mallapuram village in Hospet taluk with a catchment area of 28179 sq.km. ChikkaHagari and Hagari/Vedavathi are the tributaries of Tungabhadra runs south to north from the southern tip of the district.

The Net irrigated area of the district is 206,174 ha and the gross irrigated area is 283,875ha. Net irrigated area is highest in Ballari taluk – 77684 ha (37.7%), followed by Siruguppa with 36037 ha (17.5ha), Hospet with 28442 ha (13.8%), Hadagali with 26042 ha (12.6%), Kudligi with 16629 ha (8.1%) and H.Bommanahalli with 13210 ha (6.4%). Sandur taluk has the lowest net irrigated area of 8130 ha (3.9%). Apart from this, an area of 97,423 ha receives partial/protective irrigation and remaining area of about 237,852 ha is under rainfed condition.

Canals are the major source of irrigation in the district. About 91,000 ha area is irrigated through canals mainly in Ballari, Hospet and Siruguppa taluks. Next important

source of irrigation is bore wells. Nearly 66,000ha is irrigated through bore wells in the district. Other sources of irrigation are lift irrigation (about 36000 ha), tanks (about 120 ha), open wells (about 3135 ha) and other sources (8701 ha).Taluk wise details are furnished at Annexure 2.3.

## CHAPTER III

### WATER AVAILABILITY

#### **3.1. Status of Water availability:**

The ground water estimation is worked out based on the methodology recommended by Ground Water Estimation Committee. The ground water resource of the entire State has been computed by Central Ground Water Board (CGWB, 2012). The salient features of the ground water resources are given below. The data has been computed Block-wise. The areas having slopes of > 20 % have been excluded from the recharge computation. Further, the ground water recharge and draft has been computed separately for command and non-command areas. The information has been calculated separately for each taluk.

Ballari district is principally representing a typical dryland eco-system with an annual rainfall ranging from 503 to 750 mm under the National categorization of various agro-ecological zones. Ballari falls under arid eco-system with PET exceeding the rainfall. The frequent drought and widely varying precipitation and unpredictability of rains are common in Ballari district. Except Sandur taluk, the rainfall is received in 33 to 43 rainy days, restricting the crop production to a single crop.

The acute shortage of water, in general, has severely affected the performance of the crops in most parts of the district. The district is presently depending on TBP canal, Lift irrigation scheme, minor irrigation tanks as well as the ground water for irrigation purpose. The total surface water available in the district is to the tune of 0.8573 BCM, which includes the canal water (0.70206 BCM), tanks (0.0577 BCM), Lift irrigation (0.0604 BCM), other water bodies (0.026 BCM) and the treated effluents from sewage treatment plants (0.011 BCM) (Table 3.1). In addition, the district also depends on the ground water availability of around 0.652 BCM. Thus, total water available from surface and underground sources in the district amounts to 1.51004 BCM. There is excellent scope in the district to expand the process of harvesting the surface water in the form of ponds, tanks, barrages and various other storage structures. The potentiality of using the ground water in the form of open wells utilizing the shallow aquifers is also bright in Ballari, Siruguppa and Sandur taluks. Considering un-irrigated area under cultivation (2.35 lakh ha) the vast unirrigated lands needs to strengthen the activities related to rain water harvesting and ground water recharging.

**Table 3.1 Status of water availability (BCM)**

Sl. No.	Sources	Kharif	Rabi	Summer	Total
<b>1</b>	<b>Surface Irrigation</b>				
(i)	Canal(Major & Medium Irrigation)				
	Ballari dvn. No . canal	0.577	0.123	--	0.70000
		0.00099	0.00099	--	0.00198
	Hadagalli dvn	0.0000010	--	--	0.0000010
	RBLLC Munirabad dvn.	0.00000262	0.0000048	--	0.0000074
	RBHLC Munirabad dvn.	0.00000674	--	--	0.0000067
	VNC Munirabad dvn.	0.00000309	0.0000020	--	0.0000050
	Tanks (5 Nos) Munirabad dvn.	0.00000129	0.0000013	--	0.0000026
	Hagaribommanahalli Munirabad dvn.	0.00000204	--	--	0.0000020
	Narihalla projecti Munirabad dvn.	0.00000097	--	--	0.0000010
	<b>Total</b>				<b>0.702057</b>
(ii)	Minor Irrigation tanks	<b>0.05774</b>	<b>0</b>	--	0.05774
(iii)	Lift Irrigation/ diversion	0.03774	0.02264	--	0.06038
(iv)	Various Water Bodies including Rain Water Harvesting	0.02614	0	--	0.02614
(v)	Treated Effluent Received from STP	0.011	0	0	0.011
(vi)	Untreated effluent	--	--	--	
(vii)	Perennial sources of water	--	--	--	
	<b>Total surface water</b>				<b>0.8572657</b>
<b>2</b>	<b>Ground Water#</b>				
(i)	Open well				0.65277
(ii)	Deep Tube Well				
(iii)	Medium Tube Well				
(iv)	Shallow Tube Wells				
	<b>Total</b>				<b>1.5100357</b>

Source: Irrigation Department, Ballari district, #- Central Underground Water Board Brochure- Ballari district, 2012

### **3.2 Status of Ground water availability:**

The situation of underground water in Ballari district appears to be highly comfortable despite the poor rainfall. Out of the net annual ground water availability (0.65277 BCM), Siruguppa, Ballari and Hospet have higher share (> 0.1 BCM each) than Kudluga (0.049 BCM), Hagari Bommanahalli (0.052 BCM). The ground water utilization is generally low in most taluks except Hadagali and HB Halli taluks, which falls under over exploited region. Hospet and Siruguppa taluks are fully safe in respect of ground water utilization, as the draft of ground water is less than 50 % of natural recharge. The natural recharge in these two taluks is strengthened by the water bodies and canals. The dry areas of these two taluks will

have an advantage of harnessing the ground water in a more efficient way. Sandur and Ballari taluks also have got 83 to 95 % of their respective geographical area under safe category indicating the adequate unused ground water potential. In Hadagali taluk, 100 % area is over exploited offering no scope for further exploration of ground water. In Hagari Bommanahalli only 20 % is safe and 50 % area is over exploited indicating the limitation of further exploration and utilization of ground water.

In the overall analysis, the ground water situation in Ballari district is safe in most parts due to efficient natural recharge by rainfall and supplemented the supply from man-made water bodies (Table 3.2, Fig. 3.1).

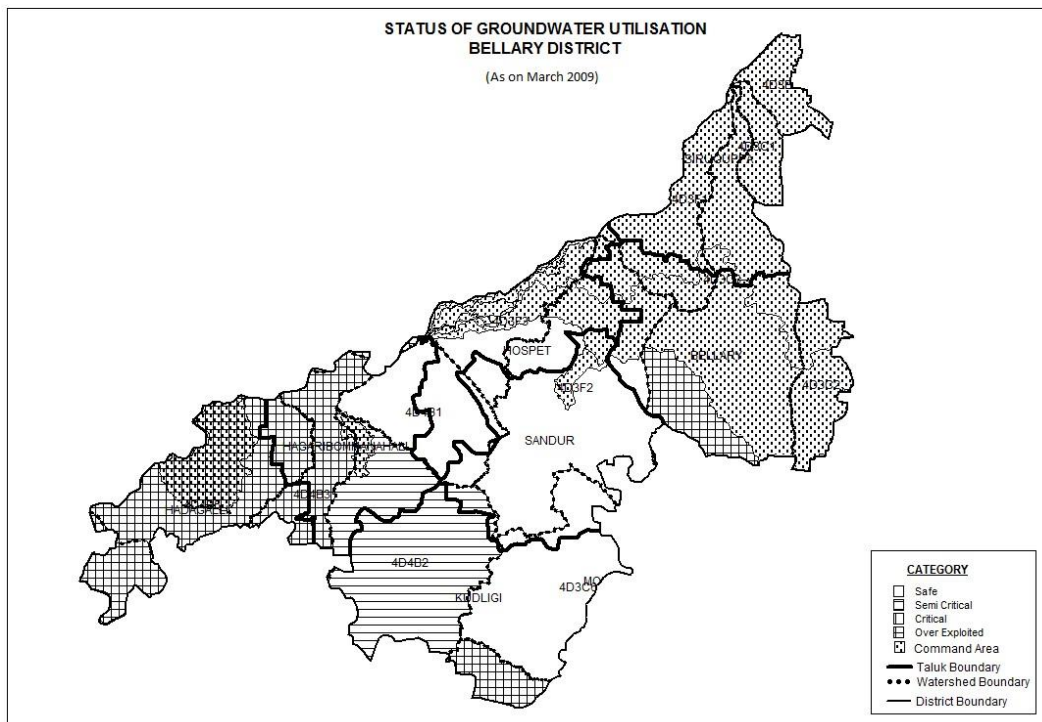
**Table 3.2 Status of ground water in Ballari district**

Taluk	Status of ground water exploitation- taluk wise (% area in each taluk)				Status of ground water draft, recharge (BCM)		Gap
	Safe	Semi critical	Critical	Over exploited	Net Annual available	Total draft for all purposes	
Ballari	83	--	--	17	0.15326	0.04822	0.10504
Hadagali	--	--	--	100	0.06078	0.06381	-0.00303
H.B.Halli	20	30	--	50	0.05223	0.05358	-0.00135
Hospet	100	--	--	--	0.10408	0.03112	0.07296
Kudligi	40	50	--	10	0.04914	0.03694	0.0122
Sandur	95	5	--	--	0.07065	0.03618	0.03447
Siruguppa	100	--	--	--	0.16263	0.01567	0.14696
<b>Total</b>					<b>0.65277</b>	<b>0.28572</b>	<b>0.36705</b>

(Adapted from CGWB Brochure of Ballari District, 2012) \* Calculated considering the natural recharge from all sources \*\* Calculated after considering other sector's needs

The district has nearly 18,000 bore-wells and 4600 open wells. The bore-wells are mainly dug in dry taluks of Hadagalli, Hagari Bommanahalli and Kudligi, which do not have facility of canal irrigation. The number of bore wells in Sandur, Siruguppa and Hospet taluks ranges from 600 to 1600, irrigating an area of around 3500 ha each. The open dug wells in Kudligi, Hagari Bommanahalli are mostly dried up with no substantial contribution to irrigation. However, in Ballari and Hadagalli taluks, the dug wells are more successful contributing to around 2400 ha of irrigated area. The potentiality to harness the shallow aquifers and using the open wells is very high in taluks like Siruguppa, Ballari and Sandur to enable the dryland farmers to provide protective irrigation to their crops.

**Fig 3.1 Status of ground water utilization**



**3.3. Status of Command area:**

Ballari district is mainly irrigated by Tunga Bhadra Right Bank canal. The canal irrigation is restricted to Ballari, Hospet, Siruguppa and to a limited extent in Sandur taluks. Out of the total canal irrigated area 141,322.99 ha, nearly 92,389.17 ha is restricted to Ballari taluk, 16450.4 ha to Hospet taluk and 31381.64 ha to Siruguppa taluk. Hadagalli, Hagari Bommanahalli and Kudluga taluks have no canal irrigated area. The average irrigation intensity in Ballari district works out to 146 % indicating the canal water availability in all three taluks for both the seasons in large areas. This has supported the double cropping system in all these taluks. Sandur taluk has limited canal irrigated area mainly by the water bodies created in the form of barrages (Table 3.3).



**Table 3.3. STATUS OF COMMAND AREA (existing) AREA IN HA**

Sl. No	Name of the Command Area	Command Area		
		Total Area	Developed Area	Undeveloped Area
1	Tunga Bhadra Right Bank canal - Ballari	92389.17	92389.17	-
2	-Sandur	1101.76	1101.76	--
3	-Hospet	16450.42	16648.00	--
4	-Siruguppa	31381.64	31381.64	--
<b>Total</b>		<b>141322.99</b>	<b>141520.57</b>	<b>--</b>

Source: Irrigation Department & Agriculture Department

### 3.4. Existing type of irrigation:

The total irrigated in the district is to the tune of 2.06 lakh ha. This is mainly distributed in Ballari taluk (77,684 ha), Siruguppa taluk (36,037 ha), Hospet taluk (28,442 ha) and Hadagalli taluk (26,042 ha). The major tube well irrigated area is in the taluks Hadagalli, Hagari Bommanahalli and Kudligi. The area under tube well irrigation in Sandur, Siruguppa and Hospet taluks is limited to 3000 to 5000 ha. Ballari taluk, Hadagalli and Siruguppa taluks have an advantage of lift irrigation which contribute 7804, 6366 and 18364 ha respectively. The tanks are limited to 151 in Ballari district. In Ballari, Siruguppa, Hagari Bommanahalli and Kudligi taluks no tank irrigation is reported. In Sandur and Hospet taluks, an area of 550 to 600 ha has been reported under tank irrigation (Table 3.4).

**Table 3.4. Status of Existing type of irrigation (area in ha).**

Sl. No.	Taluk	Canal	Tanks	Open wells	Tube wells	Lift irrigation	Others	Total
1	Ballari	60619	0	1437	7620	7804	0	77684
2	Hadagalli	0	129	983	13855	6366	660	26042
3	H.B.Halli	0	0	0	17320	2282	0	13210
4	Hospet	17232	608	0	4950	1079	4676	28442
5	Kudligi	0	0	87	16100	0	0	16629
6	Sandur	1232	545	337	2950	0	0	8130
7	Siriguppa	11568	0	291	2964	18364	3365	36037
<b>Total</b>		<b>90651</b>	<b>1282</b>	<b>3435</b>	<b>65759</b>	<b>35895</b>	<b>8701</b>	<b>206174</b>

Ballari district at a glance, 2014-15

### 3.5 Water availability from various sources:

Water is available from underground water (as per Central Groundwater Board Booklet, 2012) and surface water from canals and tanks maintained by Zilla Panchayats and Minor Irrigation. Total water available for the district from underground tube wells is 0.53161 BCM and these wells are safe in most of the taluks except HB Halli and Hadagali (overexploited taluks). There is less scope for further improvement unless proper recharge structures are created. Water from irrigation canals and tanks (maintained by Zilla Panchayats and Minor Irrigation Departments) is 0.8572657 BCM. Here also, efforts are to be made to recharge these tanks for utilization – mostly for drinking, industrial or other purposes (Table 3.4). Further, water from canals is providing drinking water facility to some of the taluks.

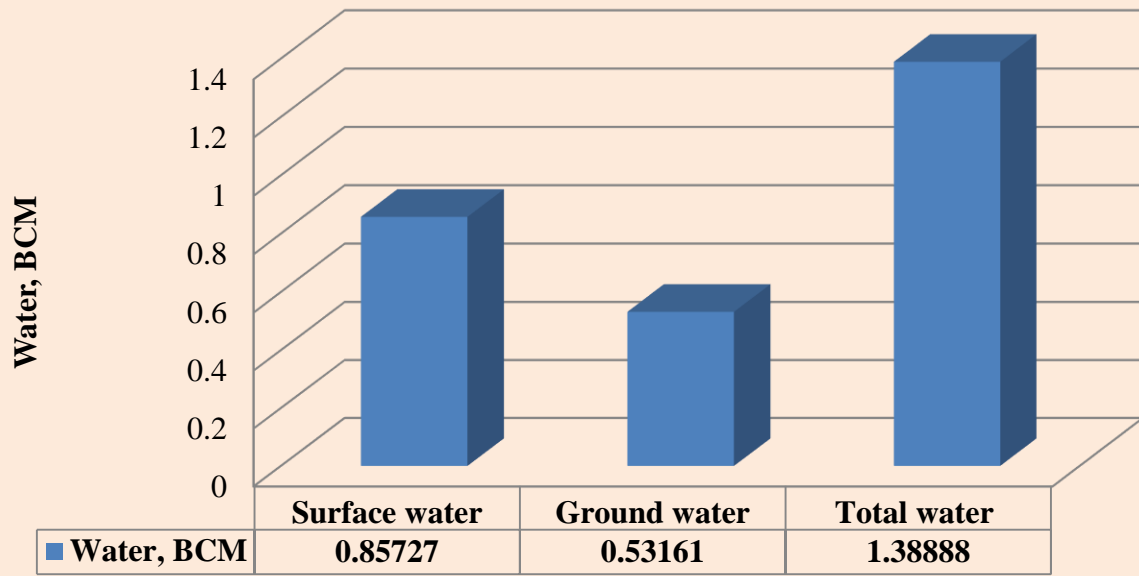
The total water available from various sources for Ballari district is 1.388876 BCM (Table 3.5, Fig. 3.2).

**Table 3.5. Water available from various sources in Ballari district**

Taluks	Net ground water available, BCM#	Surface water from canals*	Total water available
Ballari	0.12703	0.857266	
Hadagali	0.06242		
H.B.Halli	0.07544		
Hospet	0.06654		
Kudligi	0.09634		
Sandur	0.08778		
Siruguppa	0.01606		
<b>Total</b>	<b>0.53161</b>	<b>0.857266</b>	<b>1.388876</b>

#- Central Ground Water Board Brochure- Ballari district, 2012; Surface water – canals and minor irrigation tanks.

**Fig. 3.2. Water available from various sources in Ballari district**



## CHAPTER IV

### WATER REQUIREMENT/ DEMAND

Water is a precious natural resource provided by nature to mankind for usage in various activities. Life does not exist without water. All living organisms depend on water for performing various vital functions for survival. Major portion of water is used for agriculture all over India and that too in Karnataka. Although water is a renewable resource, it is quite dynamic and becoming scarce due to spatial and temporal variation in rainfall. Water is needed to ensure food security, feed livestock, maintain organic life (sustain lifestyle of human beings, living creatures, conserve biodiversity and environment), industrial use, etc. However, with reckless abuse and increasing demand due to growing population and undesirable lifestyle, many states are facing severe water crisis. It is not only due to rapid population growth alone, but also on account of many other factors such as rise in per capita water demand arising out of continuous upward movement of living standards, increased reliance on irrigated agriculture, massive urbanization and industrialization etc. The available utilizable water resource of the country is considered insufficient to meet all future needs. Under such a situation, in order to face the challenge of water deficit, apart from accelerating pace of development of available utilizable water resources, all out efforts, on the part of people from every walk of life, would need to be made to conserve every drop of water and improve efficiency in all areas of water use.

The National Commission on Agriculture in 1976 estimated water resources in the country for 1974 and projected for 2000 and 2025 based on certain empirical formulae and assumptions related to runoff characteristics of soil, rainfall events and vegetation cover. India is a vast country with a geographical area of 328 Mha and receiving annual precipitation of 1156 mm. This amounts to availability of 400 Mha-m (million hectare meter) of water to India. Out of this, 17.5% goes as immediate evaporation (70 Mha-m), 53.8% as precipitation into soil (215 Mha-m) and 28.7% as surface runoff (115 Mha-m, which includes 10 Mha-m as snowfall). Further, total precipitation received on the soil is further divided into 41.3% (165 Mha-m) as soil moisture available for crops and 12.5% as ground water (50 Mha-m). Water is lost through evaporation to an extent of 20% in medium and major reservoirs and 40% in tanks. This assumption is followed for Karnataka also (Bhaskar *et al.*, 2016).

Karnataka has total geographical area of 19.05 million ha receiving an annual precipitation of 1156mm (average of 55 years from 1960 to 2014). About 71% of rainfall is received during south west monsoon (June to September), while north east monsoon contributes 17%

(October to December) and early showers by 12%. The south west monsoon sustains agricultural activity in most parts of the state, as large proportion of agriculture is rainfed farming. Taking geographical area and rainfall into consideration, available water due to precipitation is 21.76 Mha-m to Karnataka (215.2864 BCM or 7688.8 TMC). Following NCA 1976 recommendation, out of 215.2864 BCM (7688.8 TMC) of water, 53.8% percolates into soil (115.822 BCM or 4136.57 TMC), 17.5% as immediate evaporation loss (37.674 BCM or 1345.54 TMC), and 28.7% as surface water runoff (61.7876 BCM or 2206.69 TMC).

The average annual rainfall in Karnataka is 1156 mm. The state is divided into four meteorological zones viz. North Interior Karnataka, South Interior Karnataka, Malnad and Coastal Karnataka. Coastal Karnataka with an average annual rainfall of 3456 mm is one of the rainiest regions in the country. Contrasting this, the region of South Interior Karnataka and North Interior Karnataka receive only 786 and 731 mm of average annual rainfall. ([https://en.wikipedia.org/wiki/Rainfall\\_in\\_Karnataka](https://en.wikipedia.org/wiki/Rainfall_in_Karnataka)).

With a surface water potential of about 102 kilometers, Karnataka accounts for about six percent of the country's surface water resources. Around 60% of this is provided by the west flowing rivers, while the remaining comes from the east flowing rivers. There are seven river basins in all formed by the Godavari, Cauvery, Krishna, the west-flowing rivers, North Pennar River, South Pennar, and Palar.

([http://waterresources.kar.nic.in/river\\_systems.htm](http://waterresources.kar.nic.in/river_systems.htm));

[https://en.wikipedia.org/wiki/Geography\\_of\\_Karnataka](https://en.wikipedia.org/wiki/Geography_of_Karnataka)).

Ballari district has a total geographical area of 813196ha receiving an annual precipitation of 60.0 cm. Sandur, Siruguppa and Hadagali taluks receive higher rainfall of 78.3 to 59.6 cm, followed by other taluks, while the rainfall is relatively lower in Ballari and H.B. Halli taluks (50.3 to 50.6 cm). Most of rain (60.6%) is received during south west monsoon (June to September), followed by rains during October to December (north-east rains - 23.9%). The south west monsoon sustains agricultural activity in most parts of the state, as large proportion of agriculture is rainfed farming. Taking geographical area and rainfall into consideration, available water due to precipitation is 4.7952BCM to Ballari. Following NCA 1976 recommendation, out of 4.7952BCM of water, 53.8% percolates into soil (2.5798 BCM), 17.5% as immediate evaporation loss (0.8392 BCM), 28.7% as surface water runoff (1.3763 BCM) and 12.5% as underground water (0.5994 BCM).

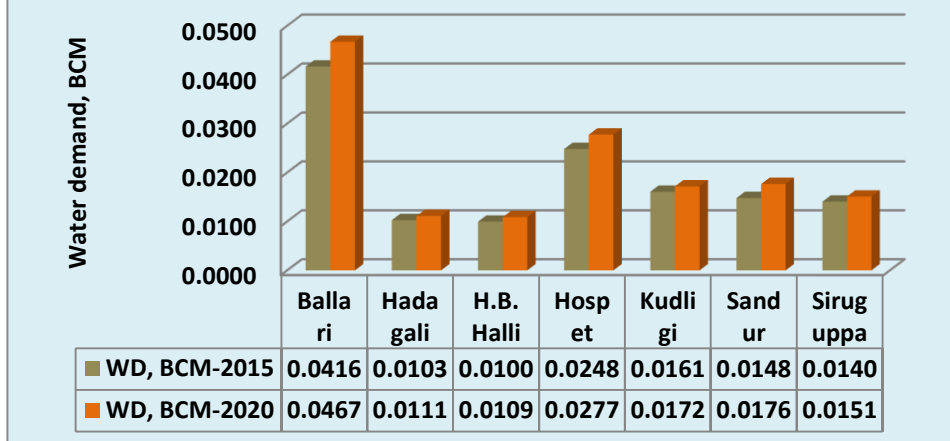
#### **4.1. Water Demand for domestic need:**

A number of factors like climate, culture, food habits, work and working conditions, level and type of development, and physiology determine the requirement of water. The per capita water requirement in urban areas is more than that in the rural areas. As per the Bureau of Indian Standards, IS:1172-1993, a minimum water supply of 200 liters per capita per day (lpcd) should be provided for domestic consumption in cities with full flushing systems. IS:1172-1993 also mentions that the amount of water supply may be reduced to 135 lpcd for the LIG and the economically weaker sections (EWS) of the society and in small towns [Modi, 1998]. However, in the Tenth Plan (2002-07), the cities with planned sewerage systems are classified into two groups based on population, i e, metropolitan or megacities (minimum water supply level is 150 lpcd) and non-metropolitan cities (135 lpcd) [Government of India 1997, 2002]. Over and above the aforesaid demand, 15% losses may be allowed for determining the quantity of raw water required.

During 2015, water requirements for domestic use in Ballari and Hospet taluks are relatively higher (0.0416457 to 0.0247935 BCM), while it is lower in taluks of H.B. Halli and Hadagali (0.009951037 to 0.010254867 BCM). The water requirements in these taluks corresponded to the prevalent population. For district as a whole, water demand is 0.1315191 BCM in 2015 (Table 4.3). With projected growth of population of 21% during 2011 to 2020, the domestic water requirements in the taluks of Ballari district followed the same trend (Table 4.1, Fig. 4.1).

Thus, domestic water requirement is projected at 0.14631842 BCM in 2020 from the present consumption level of 0.1315191 BCM during 2015 (Table 4.1, Fig. 4.1).

**Fig. 4.1. Water demand for domestic purposes of Ballari district - present and projected for 2020**



**Table 4.1. Domestic water demand (BCM) of Ballari district - present (2015) and projected 2020**

Blocks/ Taluku	Populati on in 2011	Water demand, BCM	Populati on in 2015	Water demand in 2015, BCM	Projected populatio n, 2020	Projected water demand by 2020, BCM
Ballari	770929	0.037987526	845169	0.041645702	948101	0.046717677
Hadagali	195219	0.009619416	208115	0.010254867	225438	0.011108457
H.B.Halli	188238	0.009275427	201949	0.00951037	220501	0.010865187
Hospet	459991	0.022666057	503165	0.024793455	562874	0.027735616
Kudligi	308901	0.015221097	325910	0.016059215	348494	0.017172042
Sandur	260213	0.012821996	299894	0.014777277	358109	0.017645821
Siruguppa	269104	0.0132601	284881	0.014037511	305908	0.015073617
<b>Total</b>	<b>2452595</b>	<b>0.120851619</b>	<b>2669083</b>	<b>0.131519064</b>	<b>2969425</b>	<b>0.146318417</b>

Water requirement for human being - 135 litres/head/day, lphd;

Domestic Water requirement/Demand in Billion cubic meter, BCM

= (Population X Water requirement, 135 lphd X 365 days)/ (1000 litres X 1,000,000,000)

Assumption: Increase in population during 2011 - 2021 is 21% similar to as that of decadal growth rate of population of 21% observed during 2001-2011 and 22.4% between 1991 to 2001.

{Source: Ballari district at a glance 2013-14, Zilla Panchayat, Ballari}

<http://www.census2011.co.in/census/district/262-mandya.html#>

**4.2. Water requirement for crops:** Field/horticultural/plantation crops grown in Ballari district are paddy, maize, groundnut, ragi (both in Kharif & rabi), jowar, bajra, Tur, black gram, green gram, cowpea, avare, horse gram, sesamum (in Kharif only), Bengal gram (rabi only) (under agriculture), fruit crops, and vegetable crops. For calculation of water

requirement of irrigated crops, following methodology and some assumptions have been used based on the recommendations of the NCA, 1976 and methodology suggested by Bhaskar et al. (2016).

Irrigation water requirement considered for calculation purpose for various crops are paddy (150 cm in rabi/summer, 100 cm in Kharif), maize - 60 cm, bajra/jowar - 45 cm, red gram - 70 cm, groundnut - 45 cm, other oilseeds - 40 cm, cowpea/green gram/other pulses - 40 cm, vegetable crops - 50 cm, and fruit crops - 60 cm. From this water requirement of various crops and the area of the crops grown under irrigation, irrigation water requirement for crops has been worked out.

**Assumption** - Rain water accounted for crop use is 50% of total rainfall occurring during the cropping season in Ballari district, considering the soil type (sandy loam, red soils, sandy clay loam soils) and the intensity of rain. Rain water used for the growth of rainfed crops is calculated for water requirement of rainfed crops.

Total water requirement of crops is relatively higher in Hospet, Siruguppa and Ballari taluks (0.374032 to 0.546957 BCM) in view of large area of irrigated crops (rice, groundnut, sugarcane, maize, tur, bengal gram, vegetables, fruit crops). Total water requirement of irrigated crops of the district is 1.808343 BCM, whereas total water requirement of rainfed crops is 0.4290110 BCM in view of large under crops (jowar, pulses - cowpea, avare, black gram, green gram, bengal gram, oilseeds - sunflower, sesamum, castor, niger) in taluks of Kudligi, Hadagali and Siruguppa. Water demand for total horticultural crops is 0.03738210 BCM for Ballari district, of which major share goes to vegetables (0.023799 BCM). Further, water demand of total horticulture crops is more in Ballari, Kudligi and Sandur taluks as compared to other taluks. The projected water demand for total crops is also worked out for 2020, keeping 10% increase in irrigated area due to efficient rain water use, more under area and other means. For Ballari district, the projected total water demand for crops is 2.5022096 BCM by 2020 as compared to the present demand of 2.274736 BCM, which amounts to 10% increase (Table 4.2, Fig. 4.2, 4.2a).



**Table 4.2. Water requirement of horticulture and agricultural crops (BCM) in Ballari district - 2014-15**

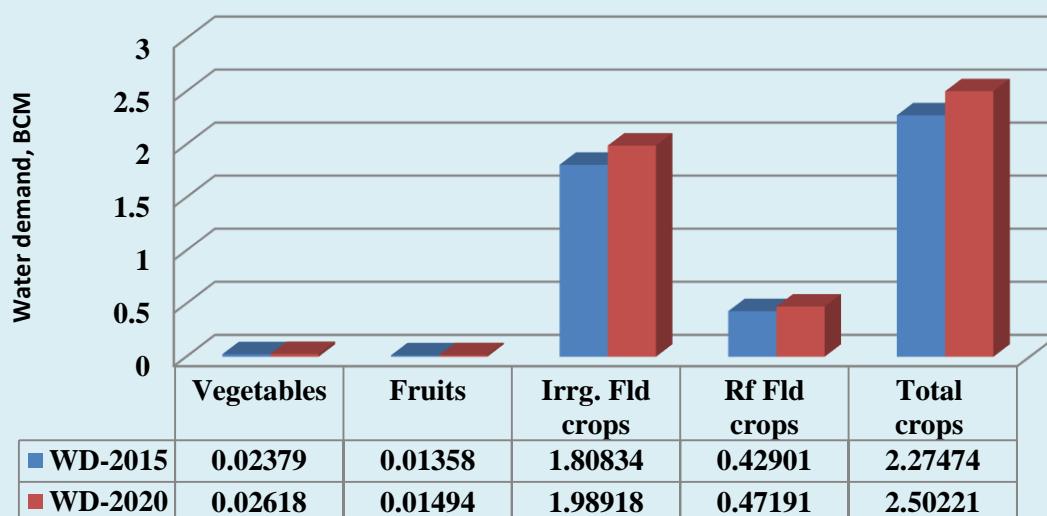
Taluks	Vegetables	Fruits	Total - Horticulture crops#	Rainfed field crops	Irrigated field crops	Agriculture crops (Irrigated + Rainfed)	Total crops
	Net Water requirement, BCM						
Ballari	0.0034506	0.00405853	0.00750913	0.0323548	0.507093	0.539448	0.546957
Hadagali	0.00025668	0.0014976	0.00175428	0.0933524	0.155368	0.248720	0.250474
H.B.Halli	0.0016132	0.00268583	0.00429903	0.0448454	0.195109	0.239954	0.244253
Hospet	0.001710855	0.0016065	0.003317355	0.0143678	0.356347	0.370715	0.374032
Kudligi	0.00485208	0.0015704	0.00642248	0.1029198	0.075997	0.178917	0.185340
Sandur	0.00974344	0.00124288	0.01098632	0.0550862	0.086634	0.141720	0.152706
Siruguppa	0.00217248	0.00092103	0.00309351	0.0859228	0.431797	0.517720	0.520814
<b>Total</b>	0.023799335	0.01358276	<b>0.03738210</b>	0.4290110	1.808343	<b>2.237354</b>	2.274736
<b>Projected for 2020 - 10% increase</b>	<b>0.02617927</b>	<b>0.01494104</b>	<b>0.04112031</b>	<b>0.4719121</b>	1.989177	2.461089	<b>2.5022096</b>

Water requirement for crops: Fruit crops - 60 cm, Vegetable crops - 50 cm, Maize - 60 cm, Pulses - 40 cm, Oilseeds - 40 cm, Groundnut - 45 cm, Tur - 70 cm, Jowar - 55 cm, Ragi - 45 cm; Rice - 150 cm during rabi/summer, 100 cm in Kharif, Sugarcane - 200 cm, Banana - 120 cm, Flowers - 40 cm, Tomato/Onion - 60 cm  
Irrigation water requirement, ha - cm = Area of the crop, ha X Water requirement of the crop, cm; One ha-cm = 1,00,000 liters or 100 cubic meters;

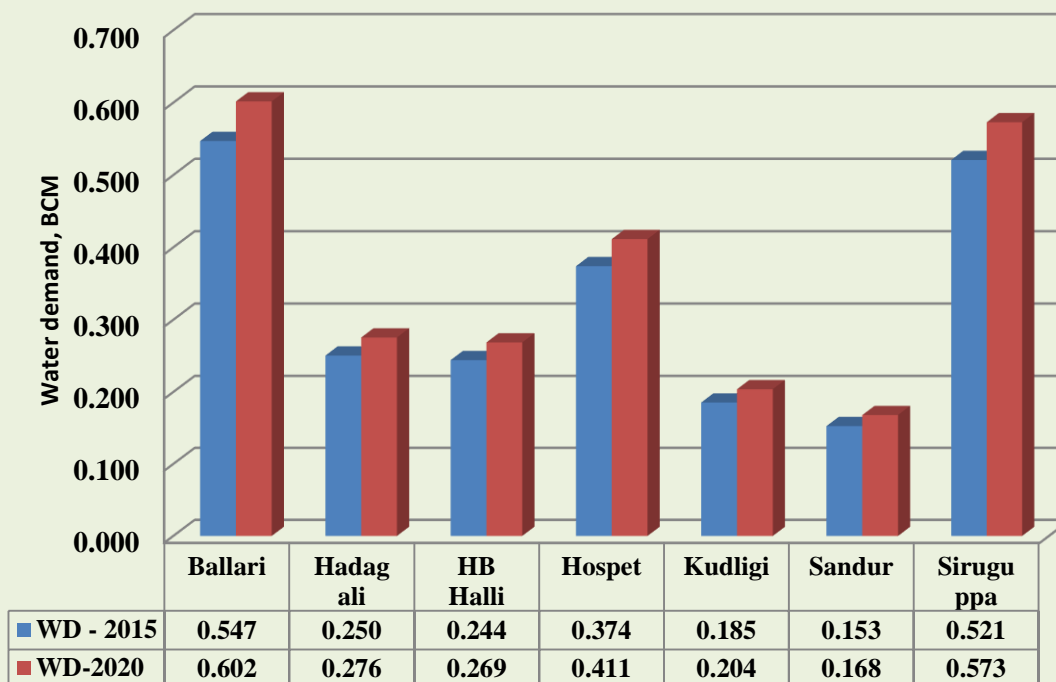
Source: Bllari district at a glance 2014-15; # - Includes flowers also;

Irrigation water requirement in BCM = {(Irrigation water requirement, ha-cm X 100)/100,000}

**Fig. 4.2. Water demand of crops in Ballari district - 2015 and 2020**



**Fig. 4.2a. Water demand of various crops - taluk wise in Ballari district - 2015 and 2020**



### 4.3. Water requirement of Livestock:

Livestock sector plays a significant role in rural economy of India. It contributes to 5% of total domestic gross product (DGP) and one fourth of total agricultural GDP (AgGDP). Livestock sector is unique in terms of providing employment opportunity particularly to two third of women workforce in India towards animal rearing. Livestock is an integral part of mixed farming of Indian agriculture. Both indigenous cattle and buffalo population registered an annual decline of 4.5 per cent and 4.3 per cent, respectively between 2007 and 2012 census periods, while that of crossbred cattle increased by 5.8 per cent (<https://www.Uttara%20Kannada/Livestock%20census%20Karnataka.pdf>). Besides, contributing food and inputs (draught energy and manure) for crop production, livestock are important as savings or investments for the poor household and provide food security or insurance through various ways in different production systems. Rainfed regions support the highest number of livestock units. Except buffalo and pigs, more than half of all livestock species (52.3 to 60.1%) are concentrated in the rainfed region. Even 43.1% of the total buffalo and 44.7% of pigs are reared in rainfed region. Irrigated region accounts for higher proportion of buffalo (43.1%) and except sheep it accounts for second highest population of all major livestock species. Although the resource degradation in rainfed areas has been observed, various support programmes of the government are encouraging mixed farming to stabilize the income of the resource poor farmers of arid and semi-arid regions of the state. Considering these facts, increase in total population of the livestock has been maintained at 5-10% in 2020 as compared to earlier census of 2012 (Anjani Kumar and Singh, 2008).

Water requirement for livestock and other animals namely - indigenous cattle, cross bred cattle, draft animals/bulls/others, sheep, goats, pigs, duck and poultry, have been calculated separately with the corresponding population for 2012. The projected water requirement for livestock population at 2020 has also been calculated separately for all live stocks. The total water requirement for livestock for 2012 and projected for 2020 is provided taluk wise in Table 4.3.

Total population of livestock and other animals in Ballari district is 48,14,868 during 2012 and their water requirement is 0.009243406 BCM. Considering the increase in the population of livestock at 5% from 2012 to 2020, their water demand would be 0.009705576 BCM with corresponding population of 5055,611 animals (Table 4.3, Fig. 4.3). Water demand

of livestock is more in Kudligi and Ballari taluks, followed by Hospet, H.B. Halli and Hadagali taluks, as reflection of corresponding livestock population in these taluks.

**Table 4.3. Water requirement of livestock and other animals in Ballari district in 2012 and projected for 2020**

Taluks	Water requirement of livestock, Billion cubic meters (BCM)			
	Population, 2012	Present Water requirement for 2012, BCM	Projected Population, 2020	Water requirement for 2020, BCM
Ballari	1102,626	0.001690155	1157757	0.001774663
Hadagali	237,667	0.001126989	249550	0.001183339
H.B.Halli	1534,466	0.001215334	1611189	0.001276101
Hospet	491,764	0.001102802	516352	0.001157942
Kudligi	957,626	0.002051423	1005507	0.002153994
Sandur	346,399	0.001093186	363719	0.001147845
Siruguppa	144,320	0.000963516	151536	0.001011692
<b>Total</b>	<b>4814,868</b>	<b>0.009243406</b>	<b>5055611</b>	<b>0.009705576</b>

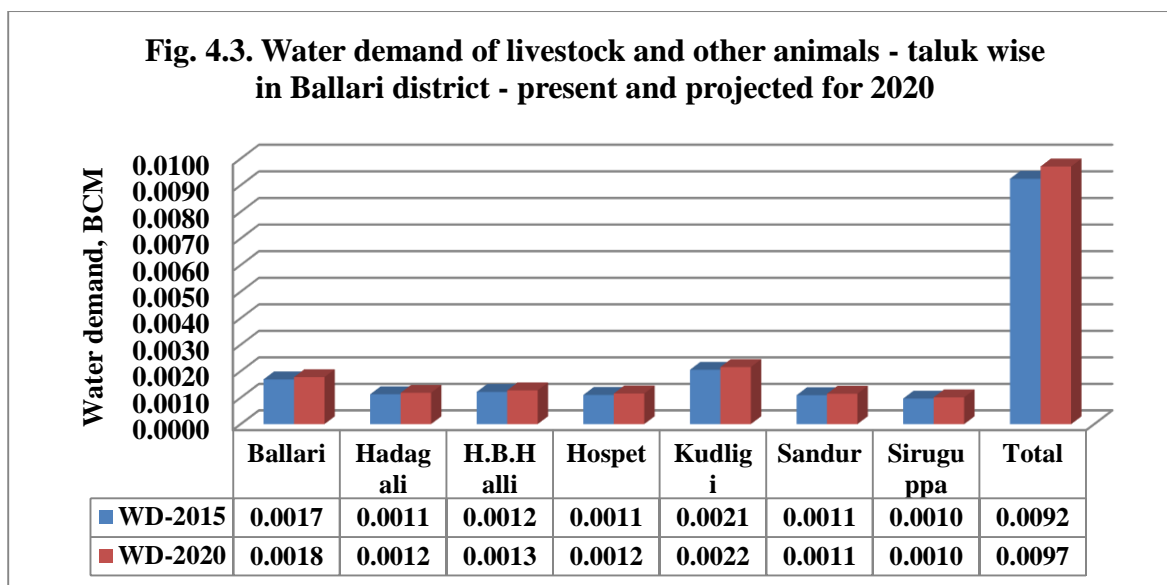
Water requirement for various livestock: liters/head/day, lphd: Indigenous cattle - 36 lit; Cross bred cattle/Buffalo - 55 lit; Sheep/Goat - 3.5 lit; Pigs - 6.3 lit; Poultry - 0.3 lit; Dog - 1.8 lit; Duck - 1.0 lit; Others (Bull/He Buffalo/Others) - 55 lit

Water requirement is calculated based on water requirement for various livestock(s), BCM = {(Population of livestock \* Water requirement for various livestock, lphd X 365 days)/1000\*1000,000,000}

Livestock population is projected to be increased by 5% between 2012 to 2020 census, due to encouragement in the government policies and more support for integrated farming systems. Though cattle population has decreased particularly in favour of indigenous cattle, this reduction is compensated with increase in the density of cross bred animals and other animals due to economic considerations.

(Anjani Kumar and Singh, D.K. 2008. Livestock production systems in India: An appraisal across agro-ecological regions. Indian Journal of Agricultural Economics, 63(4): 577-597)

Source: Deputy Director, Department of Animal Husbandry and Veterinary Services, Ballari, Ballari District at a glance - 2014-15



#### 4.4. Water demand for Industry

Surface water is the major source of water for the industries in India (41%) followed by groundwater (35%) and municipal water (24%). With greater demand for water, water availability to Industries is becoming scarce and has to invest more for getting water. In addition, industries have to adopt conservation measures and reuse of water after treatment. The water available from waste water treatment is being used for gardening.

While inadequate availability of water is the major risk facing the industries (37%), others agree that poor water quality is another major risk in the running of business (14%). Sectors like pharmaceuticals, power, food processing and agriculture feel the brunt of poor water quality. High costs for obtaining water are hindering the business interest of smaller industries and the ones which are located in the drier regions of the country. Around 14 per cent of the respondents also feel that environmental changes over the past few decades have had an impact on freshwater availability. A realization is gradually emerging that rectifying measures needs to be taken by industries to augment freshwater through rainwater harvesting and wastewater treatment and reuse.

Indian industry is becoming responsive to the fact that it should be the role of every user to undertake measures for water conservation. It is desirable that the shared responsibility of companies across sectors is to join hands with communities and governments to work on programmes for water conservation, recharge and wastewater treatment (FICCI, 2011).

In Ballari district, about 15 industries are located in taluks of Ballari (1 Nos.), H.B. Halli (3), Hospet (7), Sandur (1) and Siruguppa (3 Nos.). Total water demand at present (2015) for 17 industries is put at 0.00004961BCM during 2015 as well as 2020. The projected water demand is also same as that of 2015, as there is no new proposal (Table 4.4).

It is necessary to augment the requirement of fresh water by undertaking wastewater treatment and using it for horticulture, gardening, ash handling, washing of ore, flushing toilets, cleaning, fire-fighting and dust suppression activities. The industries must see a merit and an economical value in reusing wastewater for purposes where water quality is not an important criterion. There is need to take up water auditing to understand the complete water use pattern in their operations and look for water saving measures.

**Table 4.4 Water demand of Industries (category wise) in Ballari district - Present and future demand by 2020**

	Name of the Industry	Water demand, BCM	
		2015	2020
1	<b>Ballari</b> M/s Sathavahana Ispat Limited, Cantonment, Bellary Tq & Dist.	0.000009378	0.000009378
2	Hadagali	0	0
3	<b>H.B.Halli</b>		
a	Rukminirama Steel Rolligs Pvt Ltd., Vardapur/ Maribbihalu Village	0.000000023	0.000000023
b	M/s RBSSN 0.6 Ferrous Industries Hampapatna	0.000000075	0.000000075
c	M/s SLR Metaliks Limited, Narayanadevarakere Village, Lokappanahola	0.000000062	0.000000062
	<b>Total</b>	<b>0.0000006</b>	<b>0.00000016</b>
4	<b>Hospet</b>		
a	M/s RBSSN Iron Ore Benification plant Sanklapur Village, Kariganur Post	0.000000012	0.000000012
b	The Sanduru Manganese & Iron Ores Ltd., Vyasankere, Hanumanahalli Post, Mariymanahalli	0.000000022	0.000000022
c	The Indian Sugars & Refineries Ltd., Chitwadgi Hospet Tq	0.000000029	0.000000029
d	M/s BMM Ispat Ltd., 114 Danapur Village Hospet Tq	0.000006089	0.000006089
e	M/s BMM Ispat Ltd., 114 Danapur Village Hospet Tq	0.000013397	0.000013397

f	M/s United Spirits Chitwadgi, Hospet Tq	0.000000019	0.000000019
g	NMDC Limited, Donimalai, Sanduru Tq	0.000000064	0.000000064
	<b>Total</b>	<b>0.000019632</b>	<b>0.000019632</b>
5	Kudligi	0	0
6	Sandur - M/s JSW Steel Limited Vidyanagar Sandur Tq	<b>0.00000063</b>	<b>0.00000063</b>
7	Siruguppa		
a	M/s NSL Sugars and Chemicals	0.000000007	0.000000007
b	Sri rama electro cost pvt limited	0.000000003	0.000000003
c	M/s Poweranics Limited	0.000000003	0.000000003
	<b>Total</b>	<b>0.000000014</b>	<b>0.000000014</b>
	<b>Grand total</b>	<b>0.00004961</b>	<b>0.00004961</b>

Here rain water harvesting measures are to be created in the premises of the industries to augment the water demand and also to recharge the bore well.

**4.5. Water demand for power generation:** In Ballari district, there is one power generating unit located at Siruguppa and the water demand for power generation is 0.00000011 BCM. This water after power generation will be used for growing crops or other purposes. There is no new proposal for power generation. The water demand for 2020 will remain same as that of 2015 (Table 4.5).

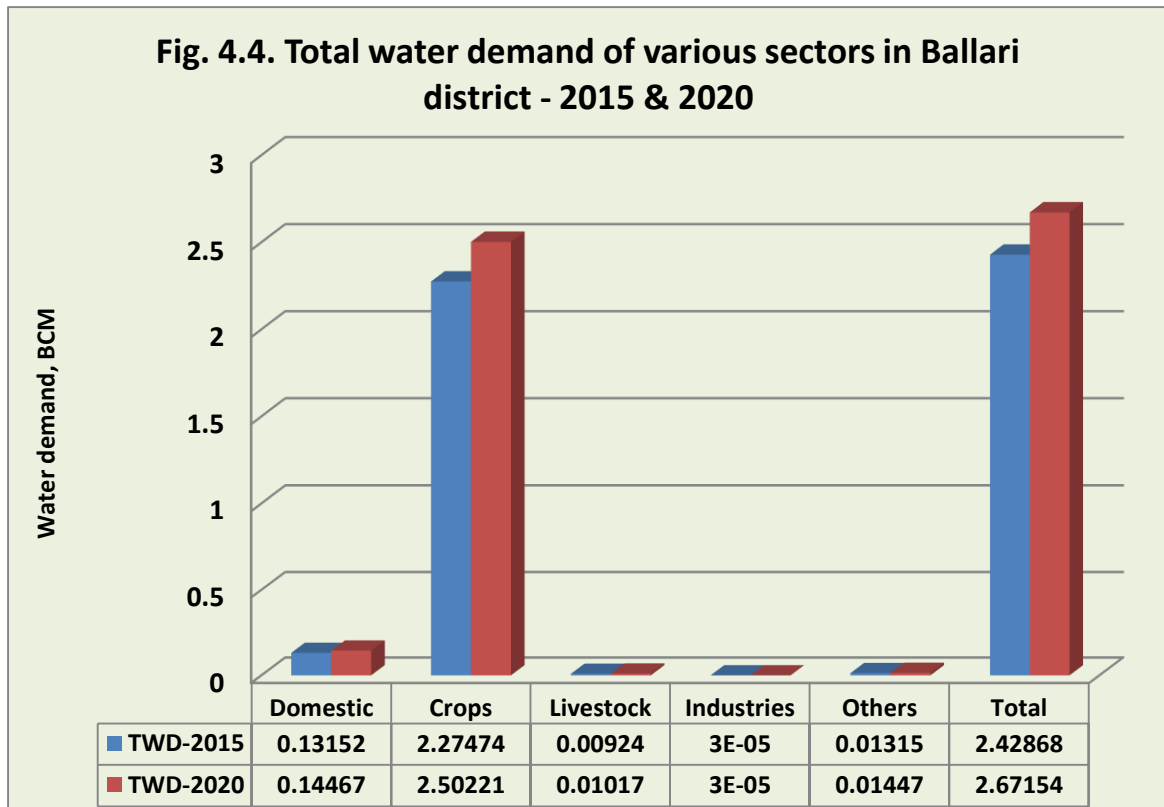
**Table 4.5 Water demand for power generation in Ballari district**

Block	Name of the power generating unit/ Power requirement	Present Water demand, BCM	Proposed for new power generating unit	Water demand at 2020, BCM
Siruguppa	Siruguppa, 6 MW	0.00000011	Same, one	0.00000011

**4.6. Water demand for other public purposes:**

Water is also required to be provided in public places like schools, colleges, offices, public toilets, bus station, railway stations, theatres, hostels, hotels, restaurants, hospitals, nursing homes and medical quarters, community hall and all other public places. Here, it is very difficult to work out the water demand for all these places, which require many parameters - number of persons involved in each activity, type facility available, etc. It is assumed that 10% of domestic requirement is considered as water demand for these public

places. The water demand for these public places amounted to 0.0131519 BCM in 2015, where as the water demand would be 0.014467 BCM by 2020 (Table 4.6, Fig. 4.4).



#### 4.7. Total water demand of the district for various sectors:

At present, water demand for all purposes in Ballari district is 2.4287 BCM, of which major share goes to crops' demand of 2.27474 BCM (93.7%). The next share of water demand is for domestic purposes amounting to 0.131519 BCM (5.4%). The water demand of livestock, industries and other purposes is around 0.9% of the total (Table 4.6, Fig. 4.4). The projected water demand of various sectors for 2020 followed the same trend of 2015 and would be to the tune of 2.67154 BCM.

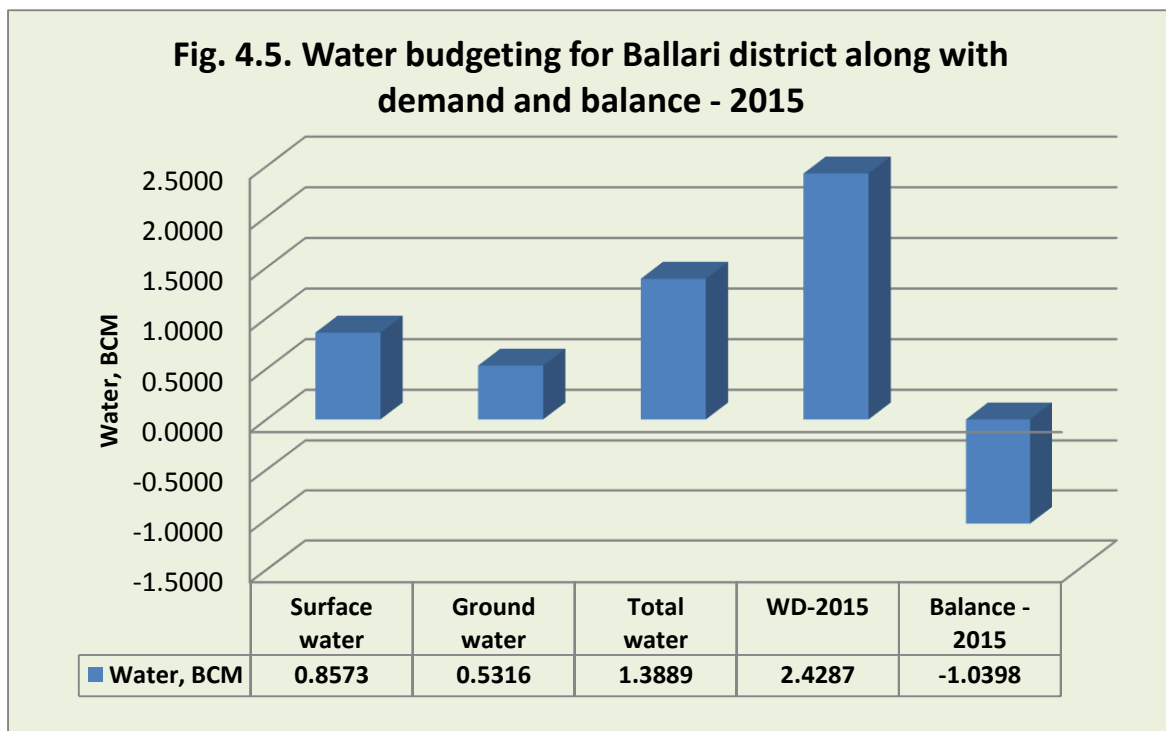


**Table 4.6. Total water demand for various sectors in Ballari district - present and projected demand for 2020**

Taluks	Water demand at present (2015), BCM						
	Domestic	Crops (Irrigated + Rainfed)	Livestock	Industries	Power generation	Other public places	Total water demand, BCM
Ballari	0.0416457	0.546957	0.001690	0.0000094	0	0.004165	0.594467
Hadagali	0.0102549	0.250474	0.001127	0	0	0.001026	0.262882
H.B.Halli	0.0099510	0.244253	0.001215	0.0000002	0	0.000995	0.256414
Hospet	0.0247935	0.374032	0.001103	0.0000196	0	0.002479	0.402427
Kudligi	0.0160592	0.185340	0.002051	0	0	0.016059	0.219509
Sandur	0.0147773	0.152706	0.001093	0.0000006	0	0.001478	0.170055
Siruguppa	0.0140375	0.520814	0.000964	0.00000001	0.0000001	0.0014038	0.537219
<b>Total</b>	<b>0.1315191</b>	<b>2.274736</b>	<b>0.009243</b>	<b>0.0000298</b>	<b>0.0000001</b>	<b>0.0131519</b>	<b>2.428680</b>
Taluks	Water demand for 2020, BCM						
Ballari	0.0458102	0.60165	0.0018592	0.0000094	0	0.0045810	0.6539103
Hadagali	0.0112804	0.27552	0.0012397	0	0	0.0011280	0.2891687
H.B.Halli	0.0109461	0.26868	0.0013369	0.0000002	0	0.0010946	0.2820577
Hospet	0.0272728	0.41144	0.0012131	0.0000196	0	0.0027273	0.4426724
Kudligi	0.0176651	0.20387	0.0022566	0	0	0.0176651	0.2414566
Sandur	0.0162550	0.16798	0.0012025	0.0000006	0	0.0016255	0.1870639
Siruguppa	0.015441	0.57289	0.0010599	0.0000000	0	0.0015441	0.5909352
<b>Total</b>	<b>0.144671</b>	<b>2.50221</b>	<b>0.0101678</b>	<b>0.0000298</b>	<b>0.0000001</b>	<b>0.0144671</b>	<b>2.6715458</b>

Assumption - Increase in population is 20%, crops by 10% between 2011 to 2020, livestock by 5% between 2012 to 2020, Industrial uses - 10% during 2015 to 2020, Power generation - Not proposed

**4.8. Water budgeting:** Total water available from surface water through canals (major, minor irrigation tanks maintained by ZP and Minor Irrigation Department) and underground water of Ballari district is 1.38889 BCM. Surface water accounts for 61.7% (from major, medium irrigation projects, minor irrigation tanks, lift irrigation, treated effluent) and available underground water is 38.3% (Table 4.7). Thus, total water availability for the district from all sources at present is 1.38889 BCM, which is less than the present requirement (2015) of 2.42868 BCM as well as demand for 2020 (2.67155 BCM) (Table 4.7, Fig. 4.5, 4.6). The negative water balance has been observed in all taluks of Ballari district for 2015 as well as 2020. The effort should be made to encourage water conservation structures to enhance the underground recharge and more impounding water in tanks/lakes etc.

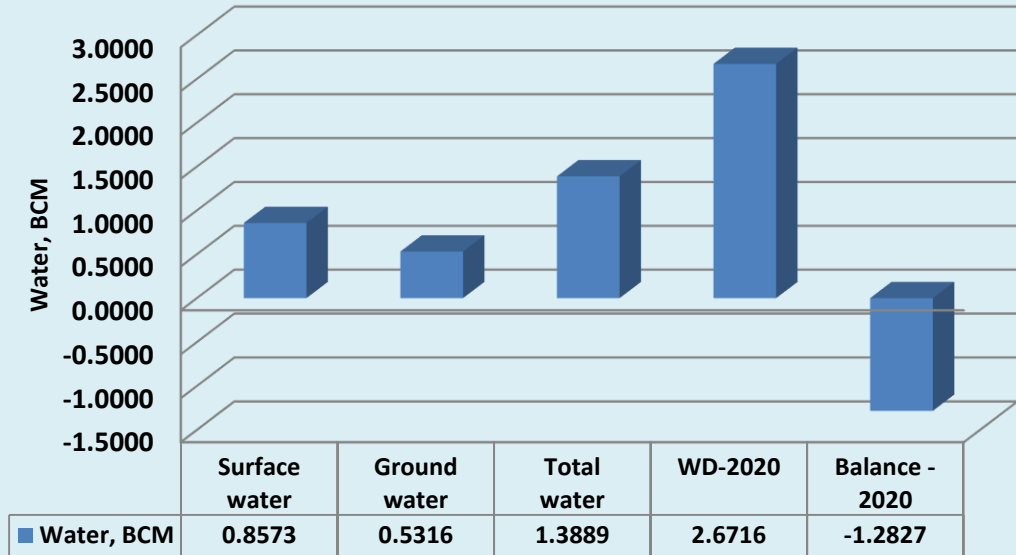


**Table 4.7. Water availability, demand and balance in Ballari district**

	Net underground water available, BCM (CGWB)#		Surface water, BCM	Total water available, BCM (Col. 1+2+3)
	1		2	3
Ballari	0.12703		0.85727	<b>1.38888</b>
Hadagali	0.06242			
H.B.Halli	0.07544			
Hospet	0.06654			
Kudligi	0.09634			
Sandur	0.08778			
Siruguppa	0.01606			
<b>Total</b>	<b>0.53161</b>		<b>0.85727</b>	<b>1.38888</b>
Taluks	Total water demand for various sectors, BCM - 2015	Water balance available after meeting all demands- 2015, BCM	Projected demand, BCM - 2020	Water balance available after meeting all demands- 2020, BCM
	4	5	6	7
Ballari	0.594467	-1.0398	0.6539103	-1.28267
Hadagali	0.262882		0.2891687	
H.B.Halli	0.256414		0.2820577	
Hospet	0.402427		0.4426724	
Kudligi	0.219509		0.2414566	
Sandur	0.170055		0.1870639	
Siruguppa	0.537219		0.5909352	
<b>Total</b>	<b>2.428680</b>	<b>-1.0398</b>	<b>2.6715458</b>	<b>-1.28267</b>

CGWB - Central Ground Water Board, 2012 for Ballari district - Net underground water available; Surface water – Water from canals (Major and medium), minor irrigation tanks, lift irrigation, treated effluent and other water bodies.

**Fig. 4.6. Water budgeting for Ballari district along with demand and balance - 2020**



## *CHAPTER V*

### **STRATEGIC ACTION PLAN FOR IRRIGATION IN BALLARI DISTRICT**

#### **5.1. Introduction**

Ballari represents a typical dry land ecosystem with precipitation inadequately meeting the demand of the crops. Hence, the performance of un-irrigated crops invariably suffers. With dominating agrarian economy, featured by high share of agriculturally dependent population, the general standard of living in rural areas is poor. There is an urgent necessity to plan for improved performance of dry land crops, in addition to more efficient use of all water resources of the district for long term sustainable agriculture. Although Ballari district has substantial agricultural area under irrigation by Tungabhadra Irrigation Project, rationalising irrigation through efficient planning as well as improvising the dry land agriculture by providing protective irrigation can only lead to agricultural prosperity.

In this background, drawing up of district irrigation plan on holistic basis derives great importance for considering all water resources of the district. Since many decades, more importance was given to construct reservoirs and provide canal irrigation to improve the performance of agriculture in the country. However, importance was not given to rationalise and regulate the use of ground water.

As per the Central Ground Water Board, the Net annual ground water availability in the district is 52961 ham, Gross ground water draft is 4132ham, and Ground water balance available for future ground water development is 34117 ham. Based on the stage of ground water development, 100% area in Hospet taluk, and almost 96 % of the area in Sandur taluk falls in safe category where there is scope for further ground water development. In Siruguppa, Bellary and Kudluga taluks it ranged from 40 to 51% of area falling in safe category, where proper ground water management practices to be followed for further ground water development. Hadagali taluk falls in Over Exploite category where it is required to recharge ground water with artificial recharge methods and further ground water development is to be avoided. 50% of the area in Kudluga taluk falls in Semi critical where it is to adopt proper management practices for avoiding further critical stage. Bellary about 60% and Siruguppa 49% of the area not covered under canal irrigation falls under OE which also requires attention. Similarly in Kudluga 10 % of the area falls in OE where proper ground recharge schemes to be implemented.

Similarly, desirable focus was not given in harvesting the surface flow rain water for its efficient usage. Adoption of micro irrigation is known to save substantial water, which can help increasing the irrigated area. Adoption of micro irrigation is still not very popular and needs encouragement in all respects.

The district level action plan is prepared as a part of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) for Ballari district duly considering the prominent canal irrigation facility available from Tungabhadra Irrigation Project as well as excellent underground water resources available in the district. Conjunctive use of rain water, well water along with other surface flow water can only lead to sustainable water management.

## 5.2: Taluk plans

**Table: 5.1: Strategic Action Plan Ballari Taluk**

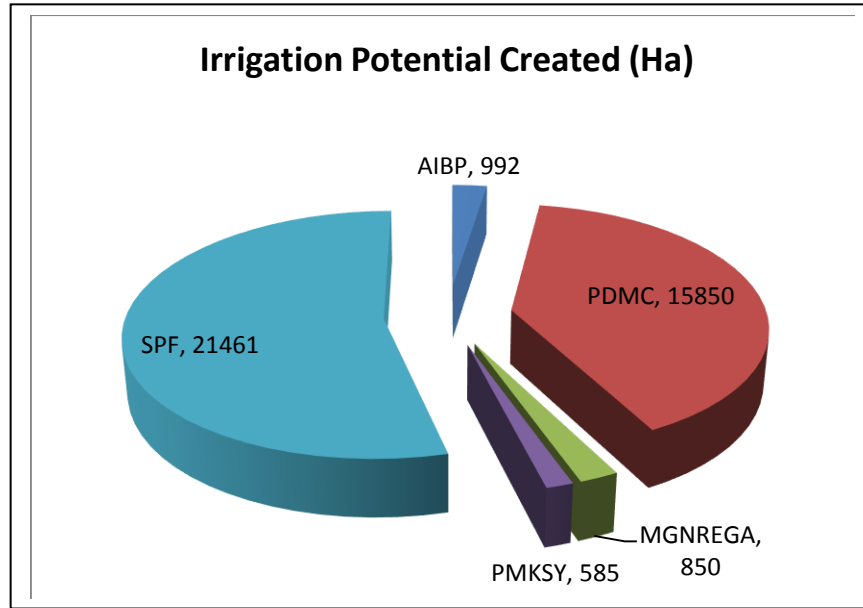
Concerned Ministry / Dept.	Component	Activity	Total number/capacity (cum)	Command Area/ Irrigation Potential (Ha)	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Period of implementation (5/7 yrs)	Total Estimated cost (Rs. in lakhs)	Table No in district plan	
1	2	3	4	5	6	7	8	9	10	11	12	13	
AIBP Major Irrigation		Modernisation of VNC canal/ ancuts	0.098	-	0	9742.33	9742.33	9742.33	0	3 yrs	29227	Table 5.8	
		Maintenance of RBHLC/ RBLLC canals	1.981	-	6333.33	6333.33	6333.33	0	0	3 yrs	19000		
		Minor irrigation Check dams / pick up dams /FRESH	9	432	104.8	104.8	104.8	104.8	104.8	5	524		
		Lift irrigation	5	560	147	147	147	147	147	5	735		
MOA&FWDAC & FW		DPAP DRIP										Table 5.9	
PDMC (MI)		Non DPAP sprinkler	300	300	10.6	10.6	10.6	10.6	10.6	5	53		
		Non DPAP Drip	250	250	45	45	45	45	45	5	225		
Supplementary water management activities: drought proofing													
MOA &FWDAC & FW		Field bund	7000	-	140	140	140	140	140	5	700		
		Farm pond	7000	14000	1260	1260	1260	1260	1260	5	6300		
		Secondary storage structure (KBY FP)	1000	1000	500	500	500	500	500	5	2500		
		On farm development (DP+ Sprinkler )	300	300	27	27	27	27	27	27	5	135	
MOA&FW	PMKS Y Watershed	<b>Newly created WHS</b>											
DAC&FW		Farm pond	250	100	36.6	36.6	36.6	36.6	36.6	36.6	5	183	Table 5.1
		Check Dams	105	315	94.6	94.6	94.6	94.6	94.6	94.6	5	473	

1	2	3	4	5	6	7	8	9	10	11	12	13
		Nallah Bunds	36	108	36	36	36	36	36	5	180	
		Percolation Tanks	12	24	9.6	9.6	9.6	9.6	9.6	5	48	
		Ground water recharging	38	38	1.4	1.4	1.4	1.4	1.4	5	7	
		Field pond	8100	-	116.6	116.6	116.6	116.6	116.6	5	583	
<b>Renovated WHS</b>												
<b>Newly created</b>												
Convergence with MGNREGA DORD-MORD	Bore well recharging:	1706	850	136.4	136.4	136.4	136.4	136.4	136.4	5	682	Table 5.11
	Improvement of MI tanks	-	-							-	-	
	Dry land horticulture / forestry											
<b>State Planned Scheme of Irrigation</b>												
State Irrigation Department Major Irrigation Dept.	Singatalur Irrigation Scheme	0.099 BCM	15132	0	0	8837	8837	0	2	17674	Table 5.1 2	
	Y kaggal Lift irrigation scheme	0.01 BCM	2688	0	0	3801.5	3801.5	0	2	7603		
	Kechanagudda Lift Irrigation scheme	0.01 BCM	1618	0	0	680	680	0	2	1360		
	Lift irrigation scheme for filling of 10 MI tanks	0.01	2023	0	0	2500	2500	0	2	5000		
Total			39738	8998.93	18741.27	34559.77	28226.43	2665.60		93192		

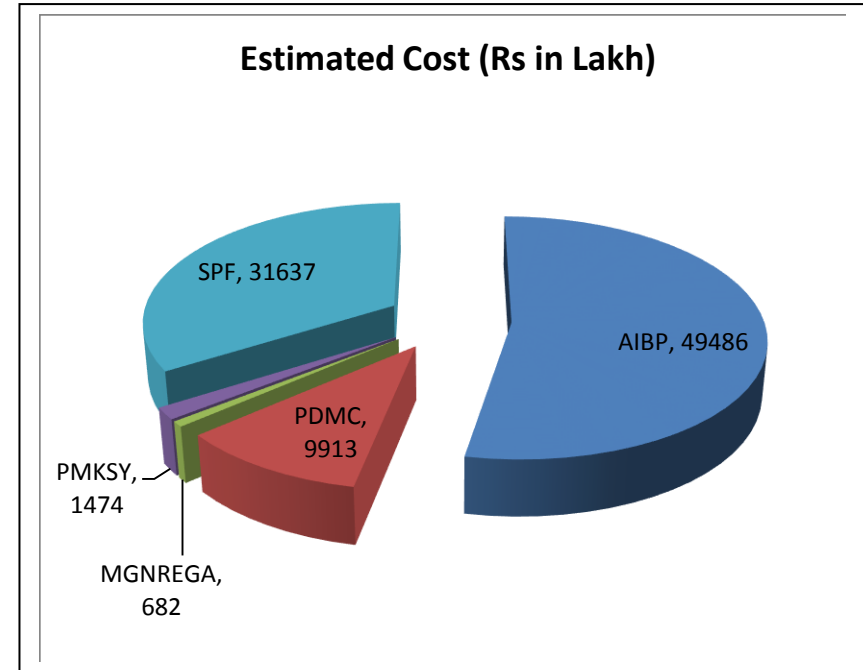
Note: Numbers of water harvesting structures (farm ponds, check dams and percolation tank) and other activities as well as their respective costs (Budget) proposed in the plan are based on the information provided by the JDA, Ballari district.



**Fig. 5.1: Irrigation Potential Created (ha)**



**Fig.5.2: Estimated Cost (Rs. in Lakh)**



**Table 5.2: STRATEGIC ACTION PLAN FOR HADAGALI TALUK**

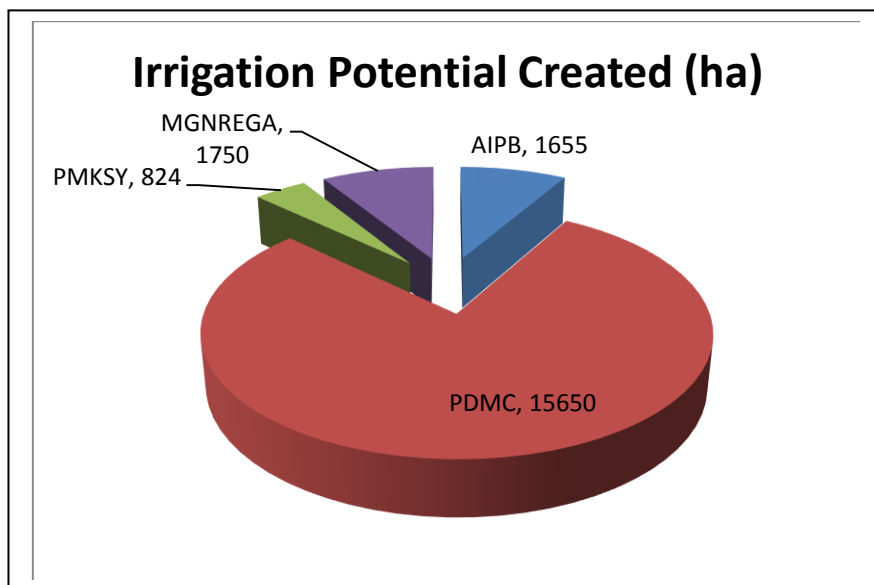
Concerned Ministry / Dept.	Component	Activity	Total number/capacity (cum)	Command Area/ Irrigation Potential (Ha)	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Period of implementation (5/7 yrs)	Total Estimated cost (Rs. in lakhs)	Table No in district plan
1	2	3	4	5	6	7	8	9	10	11	12	13
<b>AIBP</b>	<b>Minor Irrigation</b>											
	Check Dams / pickup dams : EXSTING	10 no	530	111.2	111.2	111.2	111.2	111.2	111.2	5 yrs	556	Table 5.8
	Check Dams / pickup dams : FRESH	12	545	137.8	137.8	137.8	137.8	137.8	137.8	5	689	
	Lift irrigation	8	580	260	260	260	260	260	260	5	1300	
MOA&FWDAC & FW PDMC (MI)	DPAP DRIP	500	500	90	90	90	90	90	90	5	450	Table 5.9
	DPAP sprinkler	500	500	17.6	17.6	17.6	17.6	17.6	17.6	5	88	

1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Supplementary water management activities: drought proofing</b>												
MOA&FWDAC & FW	Field bund	7200		144	144	144	144	144	5	720		
	Farm pond	7200	14400	1296	1296	1296	1296	1296	5	6480		
	On farm development (DP + Sprinkler )	250	250	22.6	22.6	22.6	22.6	22.6	5	113		
MOA&FW DAC&FW	<b>PMKSY Watershed</b>	<b>Newly created WHS</b>										
		Farm pond	250	100	36.50	36.50	36.50	36.50	36.50	5	182.5	Table 5.10
		Check Dams	160	480	144	144	144	144	144	5	720	
		Nallah Bunds	45	135	45	45	45	45	45	5	225	
		Percolation Tanks	28	56	28	28	28	28	28	5	140	
		Ground water recharging	53	53	1.908	1.908	1.908	1.908	1.908	5	9.54	
		Field bund	7600	-	109.44	109.44	109.44	109.44	109.44	5	547.2	

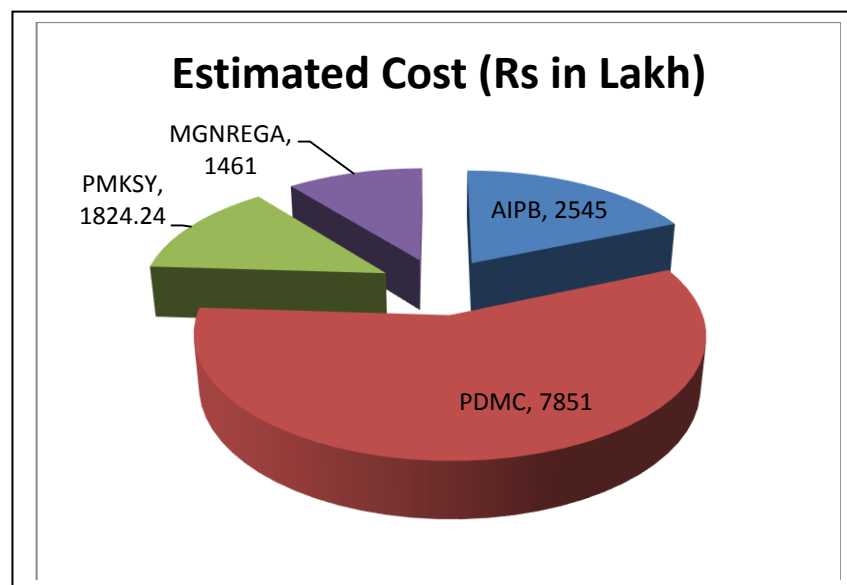
1	2	3	4	5	6	7	8	9	10	11	12	13
DORD-MORD		<b>Newly created</b>										
	Convergence with MGNREGA	Bore well recharging:	3152	1510	252.2	252.2	252.2	252.2	252.2	5	1261	Table 5.11
		Improvement of MI tanks	4	240	40	40	40	40	40	5	200	
		Dry land horticulture / forestry										
<b>Total</b>				<b>19879</b>	<b>2736.25</b>	<b>2736.25</b>	<b>2736.25</b>	<b>2736.25</b>	<b>2736.25</b>		<b>13681.24</b>	

Note: Numbers of water harvesting structures (farm ponds, check dams and percolation tank) and other activities as well as their respective costs (Budget) proposed in the plan are based on the information provided by the JDA, Ballari district.

**Fig. 5.3: Irrigation Potential Created (ha)**



**Fig.5.4: Estimated Cost (Rs. in Lakh)**



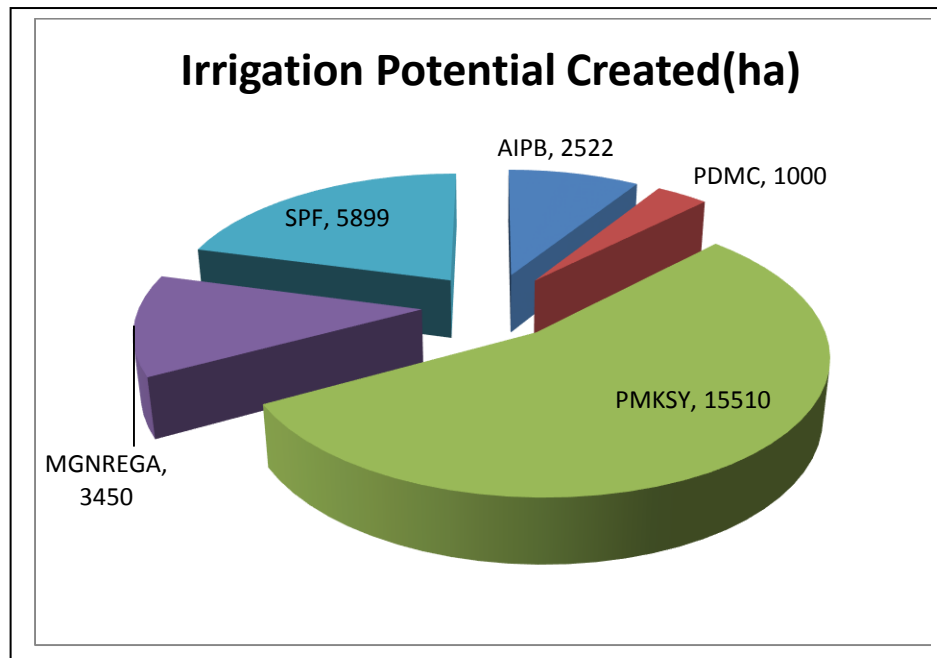
**Table 5.3: STRATEGIC ACTION PLAN FOR H.B.HALLI TALUK**

Concerned Ministry / Dept.	Component	Activity	Total number/ capacity (cum)	Command Area/ Irrigation Potential (Ha)	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Period of implementation (5/7 yrs)	Total Estimated cost (Rs. in lakhs)	Table No in district plan	
<b>AIBP</b>		<b>Minor Irrigation</b>											
		Check Dams / pickup dams : EXSTING	10 no	804	165	165	165	165	165	165	5 yrs	825	Table5 .8
		Check Dams / pickup dams : FRESH	12	973	214.2	214.2	214.2	214.2	214.2	214.2	5	1071	
		Lift irrigation	14	745	251.6	251.6	251.6	251.6	251.6	251.6	5	1258	
MOA&FWDAC & FW		DPAP DRIP	500	500	90	90	90	90	90	5	450	Table 5.9	
PDMC (MI)		DPAP sprinkler	500	500	17.6	17.6	17.6	17.6	17.6	5	88		
Supplementary water management activities: drought proofing													
MOA&FWDAC & FW		Field bund	7200	-	144	144	144	144	144	5	720		
		Farm ponds	7200	14400	1296	1296	1296	1296	1296	5	6480		
		On farm development	250	250	22.6	22.6	22.6	22.6	22.6	5	113		
MOA&F DAC&F	PMKSY Watershed	<b>Newly created WHS</b>											
		Farm pond	250	100	36.5	36.5	36.5	36.5	36.5	5	182.5	Table	

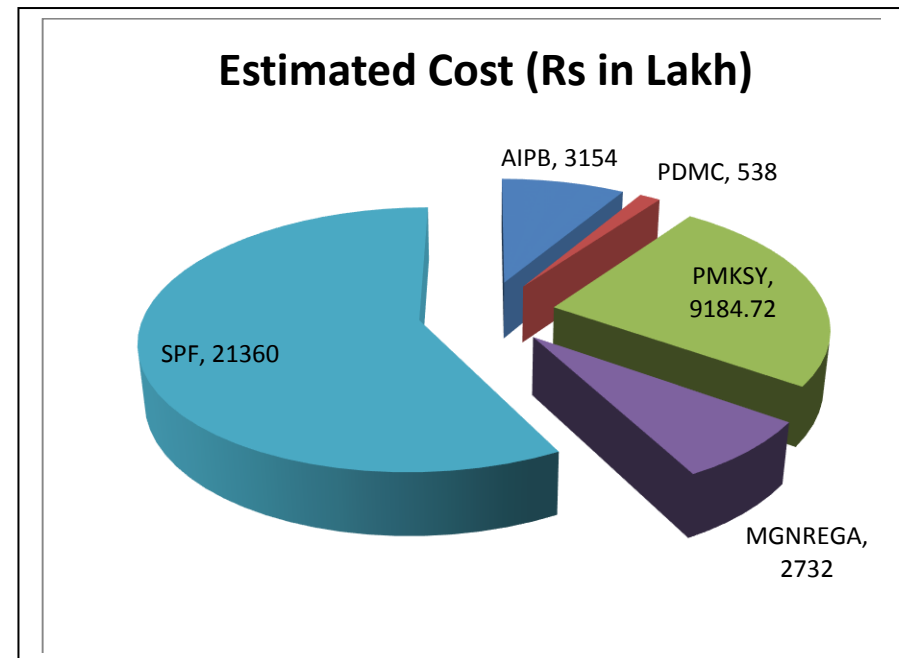
W												5.1
		Check Dams	155	465	139.5	139.5	139.5	139.5	139.5	5	697.5	
		Nallah Bunds	65	195	65	65	65	65	65	5	325	
		Percolation Tanks	18	36	18	18	18	18	18	5	90	
		Ground water recharging	64	64	2.304	2.304	2.304	2.304	2.304	5	11.52	
		Field bund	7850	-	113.04	113.04	113.04	113.04	113.04	5	565.2	
DOLR	Convergence with MGNREGA	Bunding										
		Bore well recharging:	6180	3090	494.4	494.4	494.4	494.4	494.4	5	2472	Table5 .11
		Improvement of MI tanks	6	360	52	52	52	52	52	5	260	
		Dry land horticulture / forestry										
<b>State Planned Scheme of Irrigation</b>												
State Irrigation Department		Narihalla Irrigation Project	0.08 BCM	3876	0	0	0	7500	7500	2	15000	Table5 .12
		Chiluvaraman lift irrigation scheme	0.01 BCM	2023	0	0	0	3180	3180		6360	
<b>Total</b>				<b>28381</b>	<b>3121.74</b>	<b>3121.74</b>	<b>3121.74</b>	<b>13801.74</b>	<b>13801.74</b>		<b>36968.72</b>	

Note: Numbers of water harvesting structures (farm ponds, check dams and percolation tank) and other activities as well as their respective costs (Budget) proposed in the plan are based on the information provided by the JDA, Ballari district.

**Fig. 5.5: Irrigation Potential Created (ha)**



**Fig.5.6: Estimated Cost (Rs. in Lakh)**



**Table 5.4: STRATEGIC ACTION PLAN FOR HOSPET TALUK**

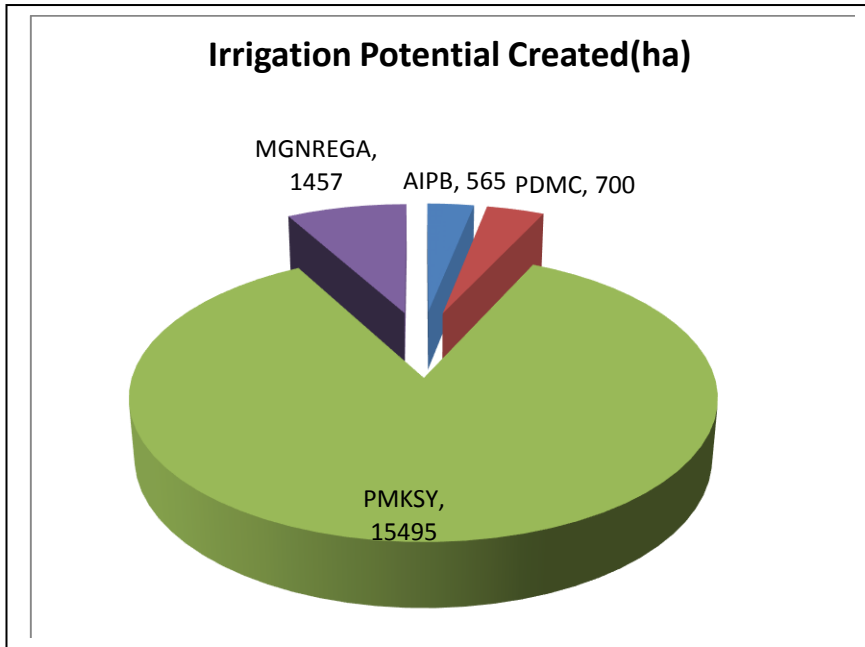
Concerned Ministry / Dept.	Component	Activity	Total number /capacity (cum)	Command Area/ Irrigation Potential (Ha)	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Period of implementation (5/7 yrs)	Total Estimated cost (Rs. in lakhs)	Table No in district plan
<b>AIBP</b>		<b>Minor Irrigation</b>										
		Check Dams / pickup dams : FRESH	9	435	104.8	104.8	104.8	104.8	104.8	5	524	
		Lift irrigation	2	130	20	20	20	20	20	5	100	
MOA&FWDAC & FW		Non DPAP DRIP	250	250	45	45	45	45	45	5	225	Table
PDMC (MI)		Non DPAP sprinkler	450	450	15.8	15.8	15.8	15.8	15.8	5	79	5.9
Supplementary water management activities: drought proofing												
MOA&FWDAC & FW		Field bund	7000	-	140	140	140	140	140	5	700	
		Farm pond	7000	14000	1260	1260	1260	1260	1260	5	6300	
		Secondary storage structure (KBY FP)	500	500	250	250	250	250	250		1250	
		On farm development structures	250	250	22.6	22.6	22.6	22.6	22.6	22.6	5	113



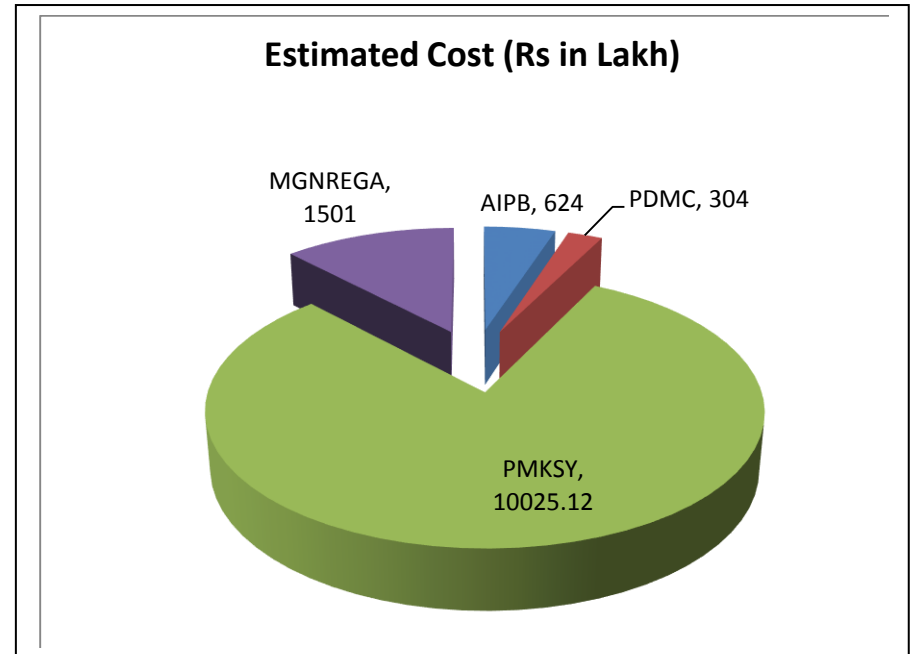
MOA&F W DAC&F W	PMKSY Watershed	<b>Newly created WHS</b>										
		Farm pond	250	100	36.5	36.5	36.5	36.5	36.5	5	182.5	Table
		Check Dams	82	246	73.8	73.8	73.8	73.8	73.8	5	369	5.1
		Nallah Bunds	108	324	108	108	108	108	108	5	540	
		Percolation Tanks	13	26	13	13	13	13	13	5	65	
		Ground water recharging	49	49	1.76	1.76	1.76	1.76	1.78	5	8.82	
	Field bund	6900	-	99.36	99.36	99.36	99.36	99.36	5	496.8		
DORD- MORD	Convergence with MGNREGA	<b>Newly created</b>										
		Bunding										
		Bore well recharging:	1614	807	129.2	129.2	129.2	129.2	129.2	5	646	Table 5.11
		Improvement of MI tank	13	650	171	171	171	171	171	5	855	
	Dry land horticulture / forestry											
<b>Total</b>			<b>18217</b>	<b>2490.82</b>	<b>2490.82</b>	<b>2490.82</b>	<b>2490.82</b>	<b>2490.84</b>		<b>12454.12</b>		

Note: Numbers of water harvesting structures (farm ponds, check dams and percolation tank) and other activities as well as their respective costs (Budget) proposed in the plan are based on the information provided by the JDA, Ballari district.

**Fig. 5.7: Irrigation Potential Created (ha)**



**Fig.5.8: Estimated Cost (Rs. in Lakh)**



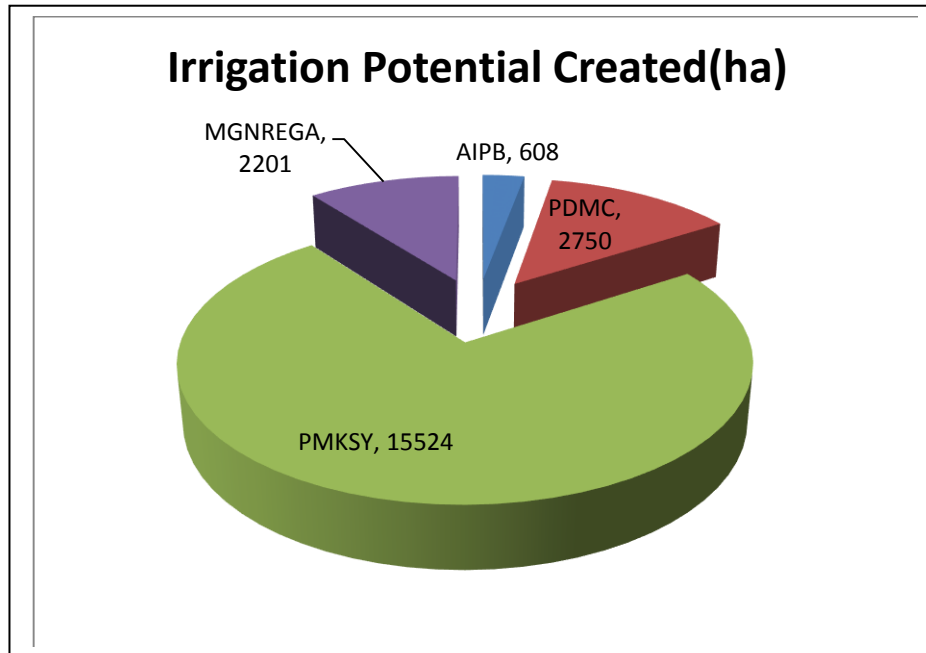
**Table5.5: STRATEGIC ACTION PLAN FOR KUDLIGI TALUK**

Concerned Ministry / Dept.	Component	Activity	Total number/capacity ( cum)	Command Area/ Irrigation Potential (Ha)	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Period of implementation (5/7 yrs)	Total Estimated cost ( Rs. in lakhs)	Table No in district plan
<b>Minor Irrigation</b>												
<b>AIBP</b>		Check Dams / pickup dams : EXSTING	7 no	356	104.6	104.6	104.6	104.6	104.6	5yr	523	Table 5.8
		Check Dams / pickup dams : FRESH	5	252	93	93	93	93	93	5	465	
		Lift irrigation	-	-						-	-	
	MOA&FWDAC & FW	DPAP DRIP	250	250	45	45	45	45	45	5	225	Table
	PDMC (MI)	DPAP sprinkler	2500	2500	88.2	88.2	88.2	88.2	88.2	5	441	5.9
<b>Supplementary water management activities: drought proofing</b>												
	MOA&FWDAC & FW	Improvement of existing tank	7200	-	144	144	144	144	144	5	720	
		Farm pond	7200	14400	1296	1296	1296	1296	1296	5	6480	
		On farm development	250	250	22.6	22.6	22.6	22.6	22.6	5	113	
<b>MOA&amp;F W</b>	<b>PMKSY Watershed</b>	<b>Newly created WHS</b>										
		Farm pond	250	100	36.5	36.5	36.5	36.5	36.5	36.5	5	182.5

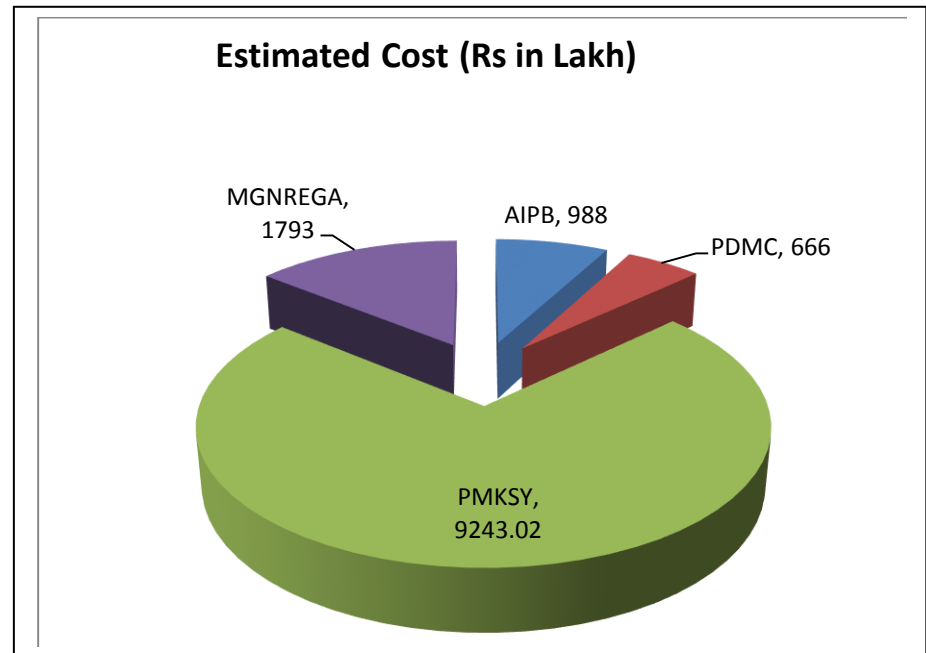
DAC&F W		Check Dams	125	375	112.5	112.5	112.5	112.5	112.5	5	562.5	5.1
		Nallah Bunds	92	276	92	92	92	92	92	5	460	
		Percolation Tanks	32	64	32	32	32	32	32	5	160	
		Ground water recharging	59	59	2.124	2.124	2.124	2.124	2.124	5	10.62	
		Field bund	7700	-	110.8 8	110.8 8	110.8 8	110.8 8	110.88	5	554.4	
DORD- MORD		<b>Newly created</b>										
	Convergen ce with MGNREG A	Bunding										
		Bore well recharging:	3595	1801	287.6	287.6	287.6	287.6	287.6	5	1438	Table 5.11
		Improvent of MI tank	8	400	71	71	71	71	71	5	355	
		Dry land horticulture / forestry										
<b>Total</b>			<b>22485</b>	<b>2538.00</b>	<b>2538.00</b>	<b>2538.00</b>	<b>2538.00</b>	<b>2538.00</b>	<b>2538.00</b>		<b>12690.02</b>	

Note: Numbers of water harvesting structures (farm ponds, check dams and percolation tank) and other activities as well as their respective costs (Budget) proposed in the plan are based on the information provided by the JDA, Ballari district.

**Fig. 5.9: Irrigation Potential Created (ha)**



**Fig.5.10: Estimated Cost (Rs. in Lakh)**



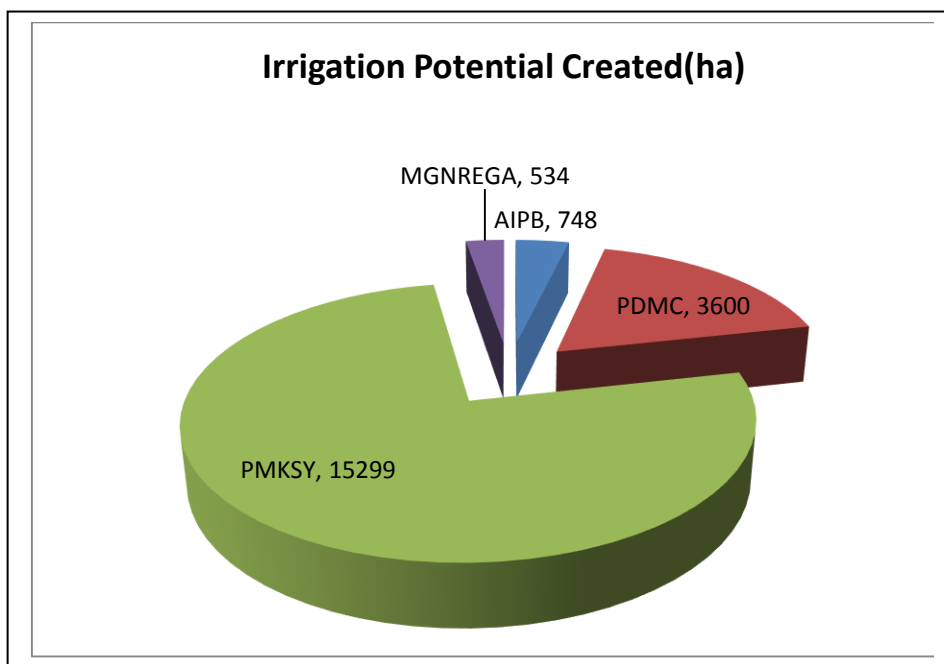
**Table 5.6: STRATEGIC ACTION PLAN FOR SANDUR TALUK**

Concerned Ministry / Dept.	Component	Activity	Total number/ capacity ( cum)	Command Area/ Irrigation Potential (Ha)	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Period of implementation (5/7 yrs)	Estimated cost ( Rs. in lakhs)	Table No in district plan
<b>Minor Irrigation</b>												
<b>AIBP</b>		Check Dams / pickup dams : EXISTING	9 no	458	101.6	101.6	101.6	101.6	101.6	5 yrs	508	Table 5.8
		Check Dams / pickup dams : FRESH	6	290	77.4	77.4	77.4	77.4	77.4	5	387	
		DPAP DRIP	100	100	18	18	18	18	18	5	90	Table
	MOA&FWDAC & FW	DPAP sprinkler	3500	3500	123.4	123.4	123.4	123.4	123.4	5	617	5.9
<b>Supplementary water management activities: drought proofing</b>												
	MOA&FWDAC & FW	Field bund	7200	-	144	144	144	144	144	5	720	
		Farm pond	7200	14400	1296	1296	1296	1296	1296	5	6480	
		On farm development structures	250	250	22.6	22.6	22.6	22.6	22.6	5	113	

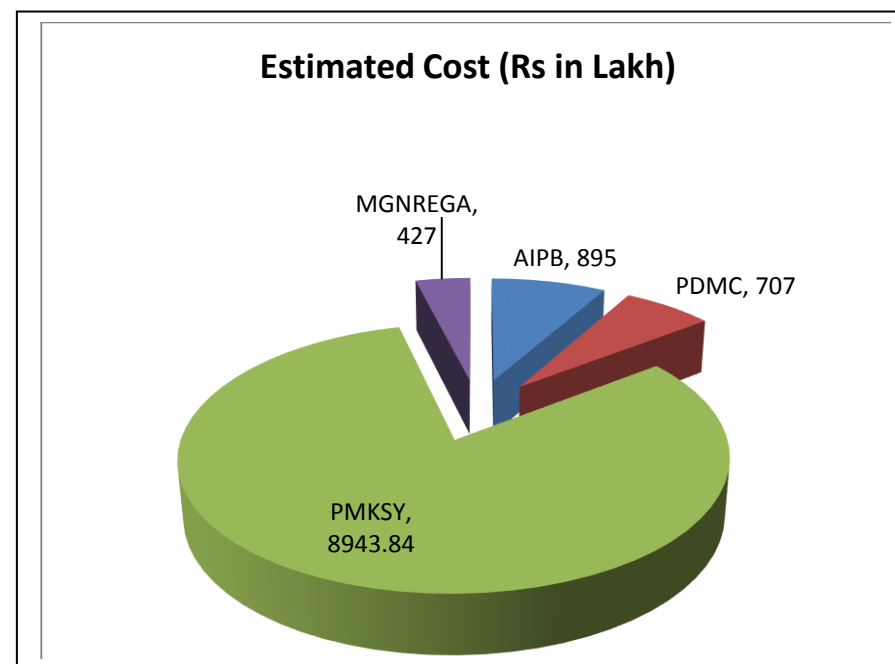
MOA&F W	PMKSY Watershed	Newly created WHS											
DAC&F		Farm pond	190	76	27.74	27.74	27.74	27.74	27.74	27.74	5	138.7	Table
W		Check Dams	85	225	76.5	76.5	76.5	76.5	76.5	76.5	5	382.5	5.1
		Nallah Bunds	90	270	90	90	90	90	90	90	5	450	
		Percolation Tanks	15	30	15	15	15	15	15	15	5	75	
		Ground water recharging	48	48	1.728	1.728	1.728	1.728	1.728	1.728	5	8.64	
		Field bund	800	-	115.2	115.2	115.2	115.2	115.2	115.2	5	576	
DORD- MORD	Convergen e with MGNREGA	Newly created											
		Bunding											
		Bore well recharging:	1068	534	85.4	85.4	85.4	85.4	85.4	85.4	5	427	Table 5.11
		Improvement of MI tank	-	-								-	
	Dry land horticulture / forestry												
<b>Total</b>			<b>20181</b>	<b>2194.57</b>	<b>2194.57</b>	<b>2194.57</b>	<b>2194.57</b>	<b>2194.57</b>	<b>2194.57</b>		<b>10972.84</b>		

Note: Numbers of water harvesting structures (farm ponds, check dams and percolation tank) and other activities as well as their respective costs (Budget) proposed in the plan are based on the information provided by the JDA, Ballari district.

**Fig. 5.11: Irrigation Potential Created (ha)**



**Fig.5.12: Estimated Cost (Rs. in Lakh)**





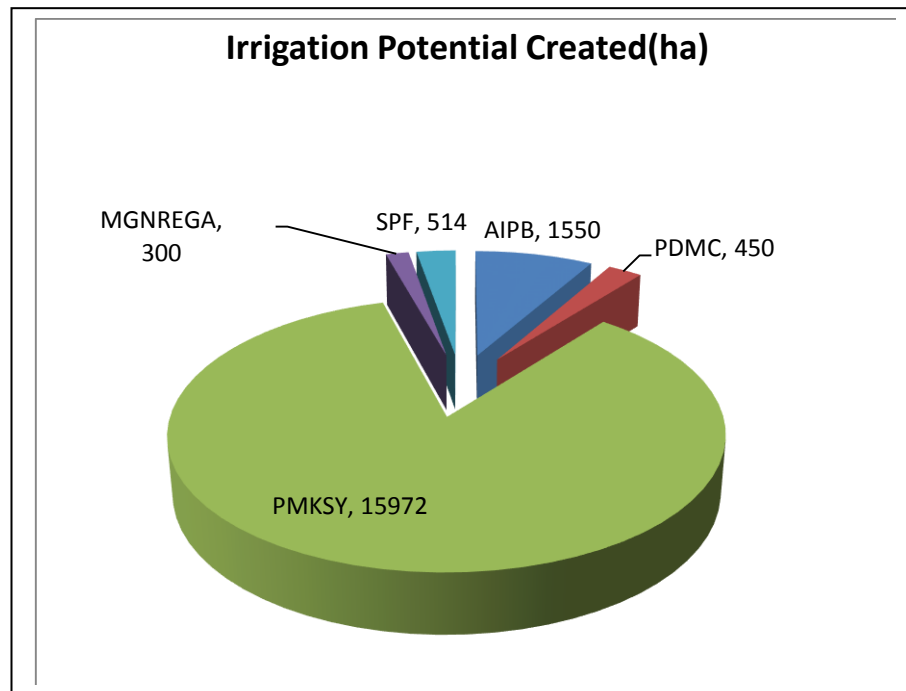
**Table 5.7: STRATEGIC ACTION PLAN FOR SIRUGUPPA TALUK**

Concerned Ministry / Dept.	Component	Activity	Total number/capacity (cum)	Command Area/ Irrigation Potential (Ha)	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Period of implementation (5/7 yrs)	Total Estimated cost ( Rs. in lakhs)	Table No in district plan
<b>AIBP</b>		<b>Minor Irrigation</b>										
		Maintenance of RBHLC/ RBLLC canals	1.981 BCM		6633.33	6633.33	6633.33	0	0	3 yrs	19900	Table 5.8
		Check dams : FRESH	1	500	360	360	360	360	360	5	1800	
		LIFT irrigation	7	1050	121	121	121	121	121	5	605	
	MOA&FWDAC & FW	Non DPAP DRIP	250	250	45	45	45	45	45	5	225	Table 5.9
	PDMC (MI)	Non DPAP sprinkler	200	200	7	7	7	7	7	5	35	
Supplementary water management activities: drought proofing												
	MOA&FWDAC & FW	Improvement of existing tank	7200	-	144	144	144	144	144	5	720	
		Farm pond	7200	14400	1296	1296	1296	1296	1296	5	6480	
		Secondary storage structure (KBY FP)	1000	1000	500	500	500	500	500	5	2500	
		On farm development structures	250	250	22.6	22.6	22.6	22.6	22.6	5	113	

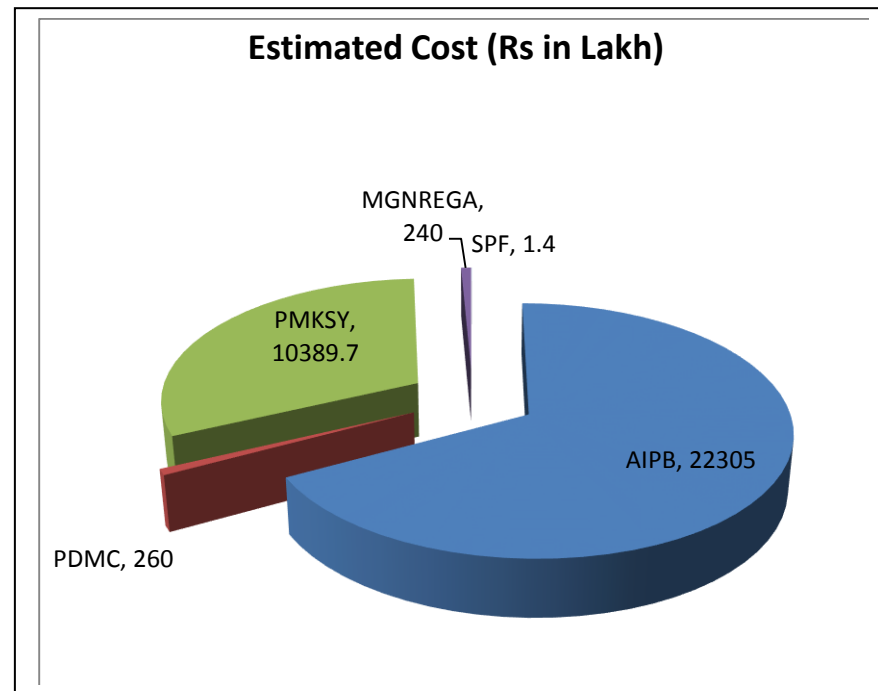
MOA&F W DAC&F W	PMKSY Watershed	<b>Newly created WHS</b>										Table 5.1
		Farm pond	100	40	14.6	14.6	14.6	14.6	14.6	5	73	
		Check Dams	60	180	54	54	54	54	54	5	270	
		Nallah Bunds	25	75	25	25	25	25	25	5	125	
		Percolation Tanks	6	12	6	6	6	6	6	5	30	
		Ground water recharging	15	15	0.54	0.54	0.54	0.54	0.54	5	2.7	
Fild bunds	1050	-	15.2	15.2	15.2	15.2	15.2	5	76			
DORD- MORD	Convergence with MGNREGA	<b>Newly created</b>										Table 5.11
		Bunding										
		Bore well recharging:	599	300	48	48	48	48	48	5	240	
		Improvement of MI tank	-	-						-		
<b>State Plan Scheme of Irrigation</b>												
State Irrigation Departme nt	Major irrigation Dept	Karur Lift irrigation scheme		514	0.7	0.7	0	0	0	2	1.4	Table 5.12
<b>Total</b>				<b>18786</b>	<b>9292.97</b>	<b>9292.97</b>	<b>9292.27</b>	<b>2658.94</b>	<b>2658.94</b>		<b>33196.10</b>	

Note: Numbers of water harvesting structures (farm ponds, check dams and percolation tank) and other activities as well as their respective costs (Budget) proposed in the plan are based on the information provided by the JDA, Ballari district.

**Fig. 5.13: Irrigation Potential Created (ha)**



**Fig.5.14: Estimated Cost (Rs. in Lakh)**



## 5.2. DISTRICT IRRIGATION PLANS BY COMPONENT

**Table 5.8: District Irrigation Plan - AIBP works**

Sl. No	Name of the Blocks/sub Districts	Concerned Ministry/ Department	Activity	Total Number/Capacity (cum)	Command Area/Irrigation Potential (Ha)	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Period of Implementation (5/7yrs)	Total Estimated cost (in lakh)
<b>Major irrigation</b>												
	Ballari	MoWR	Modernisation of VNC canal / ancuts	0.098	-	0	9742.33	9742.33	9742.33	0	3	29227
	Ballari	MoWR	Maintenance of RBHLC / RBLLC canals	1.981	-	0	6333.33	6333.33	6333.33	0	3	19000
	Siruguppa			1.98 BCM	-	3980	3980	3980	0	0	3	19900
			Minor irrigation									
	Ballari	MoWR	Check dams / pick up dams/ EXISTING	-	-						-	-
	Hadagali			10	530	111.2	111.2	111.2	111.2	111.2	5	556
	H.B.Halli			10	804	165	165	165	165	165	5	825
	Hospet			-	-						-	-
	Kudligi			7	356	104.6	104.6	104.6	104.6	104.6	5	523
	Sandur			9	458	101.6	101.6	101.6	101.6	101.6	5	508
	Siruguppa			-	-						-	-

	Ballari	MoWR	Check dams / pick up dams/ FRESH	9	432	104.8	104.8	104.8	104.8	104.8	5	524	
	Hadagali			12	545	137.8	137.8	137.8	137.8	137.8	137.8	5	689
	H.B.Halli			12	973	214.2	214.2	214.2	214.2	214.2	214.2	5	1071
	Hospet			9	435	104.8	104.8	104.8	104.8	104.8	104.8	5	524
	Kudligi			5	252	93	93	93	93	93	93	5	465
	Sandur			6	290	77.4	77.4	77.4	77.4	77.4	77.4	5	387
	Siruguppa			1	500	360	360	360	360	360	360	5	1800
	Ballari			MoWR	Lift irrigation	5	560	147	147	147	147	147	5
	Hadagali	8	580			260	260	260	260	260	260	5	1300
	H.B.Halli	14	745			251.6	251.6	251.6	251.6	251.6	251.6	5	1258
	Hospet	2	130			20	20	20	20	20	20	5	100
	Kudligi	-	-									-	-
	Sandur	-	-									-	-
	Siruguppa	7	1050			121	121	121	121	121	121	5	605
<b>Total</b>					<b>8640</b>	<b>15340.66</b>	<b>25082.99</b>	<b>25082.99</b>	<b>12116.33</b>	<b>2374</b>	<b>-</b>	<b>79997</b>	

Note: Numbers of water harvesting structures (farm ponds, check dams and percolation tank) and other activities as well as their respective costs (Budget) proposed in the plan are based on the information provided by the JDA, Ballari district.

**Table 5.9: District irrigation plan – Per Drop More Crop-Micro Irrigation**

Sl. No	Name of the Blocks/sub Districts	Concerned Ministry/ Department	Activity	Total Number/Capacity (cum)	Command Area/Irrigation Potential (Ha)	1 Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Period of Implementation (5/7yrs)	Total Estimated cost (in lakh Rs.)
	Ballari	MoA&F WDAC& FW	Non DPAP sprinkler	300	300	10.6	10.6	10.6	10.6	10.6	5	53
	Hospet			450	450	15.8	15.8	15.8	15.8	15.8	5	79
	Siruguppa			200	200	7	7	7	7	7	5	35
	Ballari	MoA&F WDAC& FW	Non DPAP drip	250	250	45	45	45	45	45	5	225
	Hospet			250	250	45	45	45	45	45	5	225
	Siruguppa			250	250	45	45	45	45	45	5	225
	Hadagali			500	500	90	90	90	90	90	5	450
	H.B.Halli			500	500	90	90	90	90	90	5	450
	Kudligi			250	250	45	45	45	45	45	5	225
	Sandur			100	100	18	18	18	18	18	5	90
	Siruguppa			-	-	-	-	-	-	-	-	-
	Ballari	MoA&F WDAC& FW	DPAP Sprinkler	-	-	-	-	-	-	-	-	-
	Hadagali			500	500	17.6	17.6	17.6	17.6	17.6	5	88
	H.B.Halli			500	500	17.6	17.6	17.6	17.6	17.6	5	88
	Hospet			-	-	-	-	-	-	-	-	-
	Kudligi			2500	2500	88.2	88.2	88.2	88.2	88.2	5	441
	Sandur			3500	3500	123.4	123.4	123.4	123.4	123.4	5	617
	Siruguppa			-	-	-	-	-	-	-	-	-
Supplementary water management activities – drought proofing												
	Ballari	MOA&F	Field bund	7000	-	140	140	140	140	140	5	700

	Hadagali	WDAC& FW		7200	-	144	144	144	144	144	5	720	
	H.B.Halli			7200	-	144	144	144	144	144	5	720	
	Hospet			7000	-	140	140	140	140	140	5	700	
	Kudligi			7200	-	144	144	144	144	144	5	720	
	Sandur			7200	-	144	144	144	144	144	5	720	
	Siruguppa			7200	-	144	144	144	144	144	5	720	
	Ballari	MOA&F WDAC& FW	Farm pond	7000	14000	1260	1260	1260	1260	1260	5	6300	
	Hadagali			7200	14400	1296	1296	1296	1296	1296	1296	5	6480
	H.B.Halli			7200	14400	1296	1296	1296	1296	1296	1296	5	6480
	Hospet			7000	14000	1260	1260	1260	1260	1260	1260	5	6300
	Kudligi			7200	14400	1296	1296	1296	1296	1296	1296	5	6480
	Sandur			7200	14400	1296	1296	1296	1296	1296	1296	5	6480
	Siruguppa		7200	14400	1296	1296	1296	1296	1296	1296	5	6480	
	Ballari	MOA&F WDAC& FW	Secondary storage structure (KBYFB)	1000	1000	500	500	500	500	500	5	2500	
	Hospet			500	500	250	250	250	250	250	250	5	1250
	Siruguppa			1000	1000	500	500	500	500	500	500	5	2500
	Ballari	MOA&F WDAC& FW	On farm developmen t (DP+Sprink ler)	300	300	27	27	27	27	27	5	135	
	Hadagali			250	250	22.6	22.6	22.6	22.6	22.6	22.6	5	113
	H.B.Halli			250	250	22.6	22.6	22.6	22.6	22.6	22.6	5	113
	Hospet			250	250	22.6	22.6	22.6	22.6	22.6	22.6	5	113
	Kudligi			250	250	22.6	22.6	22.6	22.6	22.6	22.6	5	113
	Sandur			250	250	22.6	22.6	22.6	22.6	22.6	22.6	5	113
	Siruguppa		250	250	22.6	22.6	22.6	22.6	22.6	22.6	5	113	
	<b>Total</b>				<b>40000</b>	<b>4047.8</b>	<b>4047.8</b>	<b>4047.8</b>	<b>4047.8</b>	<b>4047.8</b>		<b>20239</b>	

Note: Numbers of water harvesting structures (farm ponds, check dams and percolation tank) and other activities as well as their respective costs (Budget) proposed in the plan are based on the information provided by the JDA, Ballari district.

**Table 5.10: District Irrigation Plan- PMKSY-Water shed**

Sl.No	Name of the Blocks/sub Districts	Concerned Ministry/Department	Activity	Total Number/Capacity (cum)	Command Area/Irrigation Potential (Ha)	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Period of Implementation (5/7yrs)	Estimated cost (in lakh Rs.)
17		DOLR-MORD	Newly created WHS									
17.1	Ballari	DOLR-	Farm Ponds	250	100	36.6	36.6	36.6	36.6	36.6	5	183
	Hadagali	MORD		250	100	36.6	36.6	36.6	36.6	36.6	5	183
	H.B.Halli			250	100	36.6	36.6	36.6	36.6	36.6	5	183
	Hospet			250	100	36.6	36.6	36.6	36.6	36.6	5	183
	Kudligi			250	100	36.6	36.6	36.6	36.6	36.6	5	183
	Sandur			190	76	27.8	27.8	27.8	27.8	27.8	5	139
	Siruguppa			100	40	14.6	14.6	14.6	14.6	14.6	5	73
17.2	Ballari	DOLR-		CHECK dams	105	315	94.6	94.6	94.6	94.6	94.6	5
	Hadagali	MORD	160		480	144	144	144	144	144	5	720
	H.B.Halli		155		465	139.5	139.5	139.5	139.5	139.5	5	697.5
	Hospet		82		246	73.8	73.8	73.8	73.8	73.8	5	369
	Kudligi		125		375	112.5	112.5	112.5	112.5	112.5	5	562.5
	Sandur		85		225	76.4	76.4	76.4	76.4	76.4	5	382
	Siruguppa		60		180	54	54	54	54	54	5	270
17.3	Ballari	DOLR-	Naliah Bunds		36	108	36	36	36	36	36	5
	Hadagali	MORD		45	135	45	45	45	45	45	5	225
	H.B.Halli			65	195	65	65	65	65	65	5	325
	Hospet			108	324	108	108	108	108	108	5	540



	Kudligi			92	276	92	92	92	92	92	5	460	
	Sandur			90	270	90	90	90	90	90	5	450	
	Siruguppa			25	75	25	25	25	25	25	5	125	
17.4	Ballari	DOLR-MORD	Percolation Tanks	12	24	9.6	9.6	9.6	9.6	9.6	5	48	
	Hadagali			28	56	28	28	28	28	28	28	5	140
	H.B.Halli			18	36	18	18	18	18	18	18	5	90
	Hospet			13	26	13	13	13	13	13	13	5	65
	Kudligi			32	64	32	32	32	32	32	32	5	160
	Sandur			15	30	15	15	15	15	15	15	5	75
	Siruguppa			6	12	6	6	6	6	6	6	5	30
	Ballari			DOLR-MORD	Ground water recharge structure	38	38	1.4	1.4	1.4	1.4	1.4	5
	Hadagali	53	53			1.9	1.9	1.9	1.9	1.9	1.9	5	9.5
	H.B.Halli	64	64			2.3	2.3	2.3	2.3	2.3	2.3	5	11.5
	Hospet	49	49			1.764	1.764	1.764	1.764	1.764	1.764	5	8.82
	Kudligi	59	59			2.12	2.12	2.12	2.12	2.12	2.12	5	10.6
	Sandur	48	48			1.72	1.72	1.72	1.72	1.72	1.72	5	8.6
	Siruguppa	15	15			0.54	0.54	0.54	0.54	0.54	0.54	5	2.7
	Ballari	DOLR-MORD	Field bund	8100	-	116.6	116.6	116.6	116.6	116.6	5	583	
	Hadagali			7600	-	109.4	109.4	109.4	109.4	109.4	109.4	5	547
	H.B.Halli			7850	-	113	113	113	113	113	113	5	565
	Hospet			6900	-	99.36	99.36	99.36	99.36	99.36	99.36	5	496.8
	Kudligi			7700	-	110.88	110.88	110.88	110.88	110.88	110.88	5	554.4
	Sandur			800	-	115.2	115.2	115.2	115.2	115.2	115.2	5	576
	Siruguppa			1050	-	15.2	15.2	15.2	15.2	15.2	15.2	5	76
<b>TOTAL</b>					<b>79209</b>	<b>10216.92</b>	<b>10216.92</b>	<b>10216.92</b>	<b>10216.92</b>	<b>10216.94</b>	<b>--</b>	<b>51084.64</b>	

**Table 5.11: District Irrigation Plan: Convergence with MGNREGA**

Taluk	Activity	Total number/capacity ( cum)	Command Area/ Irrigation Potential (Ha)	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Period of implementation (5/7 yrs)	Estimated cost ( Rs. in Lakhs)
Ballari	Bore well recharging:	1706	850	136.4	136.4	136.4	136.4	136.4	5	682
Hadagali	Bore well recharging:	3152	1510	252.2	252.2	252.2	252.2	252.2	5	1261
	Improvement of MI tanks	4	240	40	40	40	40	40	5	200
H B Halli	Bore well recharging:	6180	3090	494.4	494.4	494.4	494.4	494.4	5	2472
	Improvement of MI tanks	6	360	52	52	52	52	52	5	260
Hospet	Bore well recharging:	1614	807	129.2	129.2	129.2	129.2	129.2	5	646
	Improvement of MI tank	13	650	171	171	171	171	171	5	855
Kudaligi	Bore well recharging:	3595	1801	287.6	287.6	287.6	287.6	287.6	5	1438
	Improvement of MI tank	8	400	71	71	71	71	71	5	355
Sandur	Bore well recharging:	1068	534	85.4	85.4	85.4	85.4	85.4	5	427
Siriguppa	Bore well recharging:	599	300	48	48	48	48	48	5	240
<b>Total</b>			<b>10542</b>	<b>1767.2</b>	<b>1767.2</b>	<b>1767.2</b>	<b>1767.2</b>	<b>1767.2</b>	<b>55</b>	<b>8836</b>

**Table 5.12: District Irrigation Plan: State Plan Schemes of Irrigation**

Name of the Blocks/sub Districts	Activity	Total Number/ Capacity (cum)	Command Area/Irrigation Potential (Ha)	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Period of Implementation	Total Estimated cost (in lakh Rs.)
Ballari	Singatalur irrigation scheme (Maj. Irri)	0.099 BCM	15132	8837	8837	0	0	0	2	17674
Ballari	Y Kaggal lift irrigation scheme (Maj. Irri)	0.01 BCM	2688	3801.5	3801.5	0	0	0	2	7603
Ballari	Kechanagudda lift irrigation scheme (Maj. Irri)	0.01 BCM	1618	0	0	680	680		2	1360
Ballari	Lift irrigation scheme for filling of 10 MI tanks (Maj. Irri)	0.01	2023	0	0	0	2500	2500	2	5000
H.B.Halli	Narihalla Irrigation Project	0.08	3876	7500	7500	0	0	0	2	15000
H.B.Halli	Chiluvrabandi lift irrigation scheme	0.01 BCM	2023	3180	3180	0	0	0	2	6360
Siruguppa	Karur Lift irrigation scheme (Maj. irri)	-	514	0.7	0.7	0	0	0	2	1.4
<b>Total</b>			<b>27874</b>	<b>23319.2</b>	<b>23319.2</b>	<b>680</b>	<b>3180</b>	<b>2500</b>		<b>52998.4</b>

Note: Numbers of water harvesting structures (farm ponds, check dams and percolation tank) and other activities as well as their respective costs (Budget) proposed in the plan are based on the information provided by the JDA, Ballari district.

**Table 5.13: District Irrigation Plan: Treatment and Use of Sewage Water**

Taluka	Details	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Budget required (Rs. in lakhs)
Ballari	Completion of laying of underground sewers and attending to remaining works in existing STP of 45 MLD	0	8000	0	0	0	8000
Ballari	Refilling of 0.35 TMC treated sewage water through the pipe network	0	0	0	2000	0	2000
Ballari	Conveying 0.35 TMC treated sewage water to thermal plant through pipeline network	0	0	0	0	5400	5400
Hadagali	Completion of laying of underground sewers and attending of remaining works in existing STP of 4.27 MLD	0	0	4000	0	0	4000
Kudligi	Completion of laying of underground sewers and attending to remaining works in existing STP of 4.26MLD	2000	0	0	0	0	2000
Total		2000	8000	4000	2000	5400	21400

Note: Numbers of water harvesting structures (farm ponds, check dams and percolation tank) and other activities as well as their respective costs (Budget) proposed in the plan are based on the information provided by the JDA, Ballari district.

#### 5.4.ABSTRACT OF BALLARI DISTRICT IRRIGATION PLAN

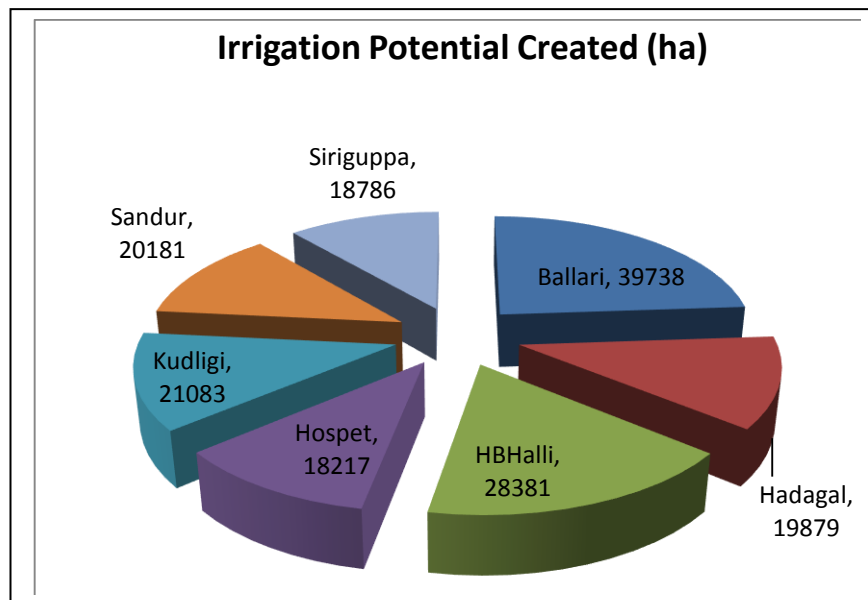
**Table 5.14: COMPONENT WISE NEW IRRIGATION POTENTIAL CREATED (in HA)**

Component	Ballari	Hadagali	HBHalli	Hospet	Kudligi	Sandur	Siriguppa	District
AIBP	992	1655	2522	565	608	748	1550	<b>8640</b>
PDMC	15850	15650	1000	700	2750	3600	450	<b>40000</b>
MGNREGA	850	1750	3450	1457	2201	534	300	<b>10542</b>
PMKSY	585	824	15510	15495	15524	15299	15972	<b>79209</b>
SPF	21461	0	5899	0	0	0	514	<b>27874</b>
<b>Total</b>	<b>39738</b>	<b>19879</b>	<b>28381</b>	<b>18217</b>	<b>21083</b>	<b>20181</b>	<b>18786</b>	<b>166265</b>

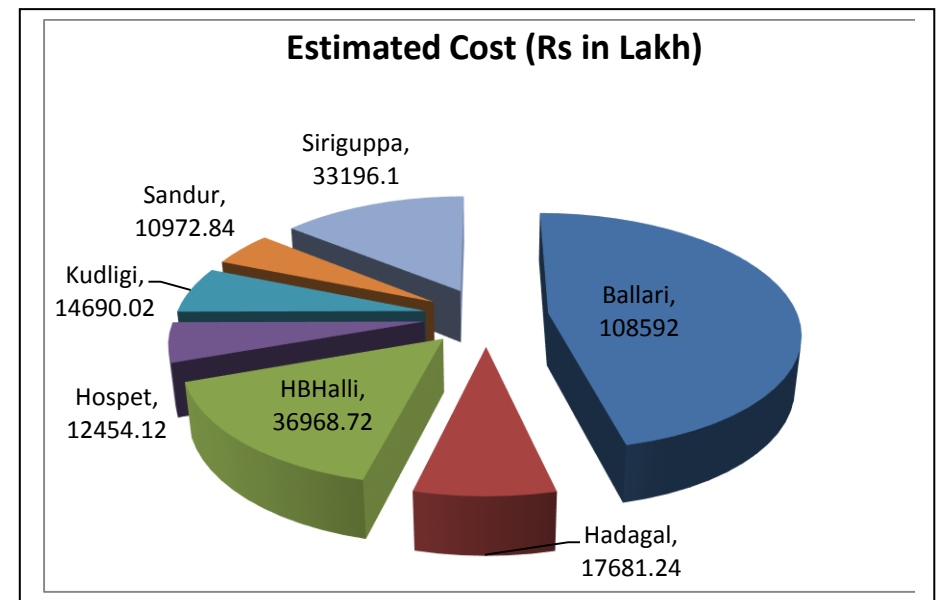
**Table 5.15: COMPONENT WISE BUDGET REQUIREMENT (in lakh Rs)**

Component	Ballari	Hadagali	HBHalli	Hospet	Kudligi	Sandur	Siriguppa	District
AIBP	49486	2545	3154	624	988	895	22305	<b>79997</b>
PDMC	9913	7851	538	304	666	707	260	<b>20239</b>
MGNREGA	682	1461	2732	1501	1793	427	240	<b>8836</b>
PMKSY	1474	1824.24	9184.72	10025.12	9243.02	8943.84	10389.7	<b>51084.64</b>
SPF	31637	0	21360	0	0	0	1.4	<b>52998.4</b>
<b>Total</b>	<b>93192</b>	<b>13681.24</b>	<b>36968.72</b>	<b>12454.12</b>	<b>12690.02</b>	<b>10972.84</b>	<b>33196.1</b>	<b>213155</b>
Sewage water treatment	15400	4000	-	-	2000	-	-	<b>21400</b>
<b>Grand Total</b>	<b>108592</b>	<b>17681.24</b>	<b>36968.72</b>	<b>12454.12</b>	<b>14690.02</b>	<b>10972.84</b>	<b>33196.1</b>	<b>234555</b>

**Fig 5.15: Taluk-wise Irrigation Potential Created (Area in ha)**



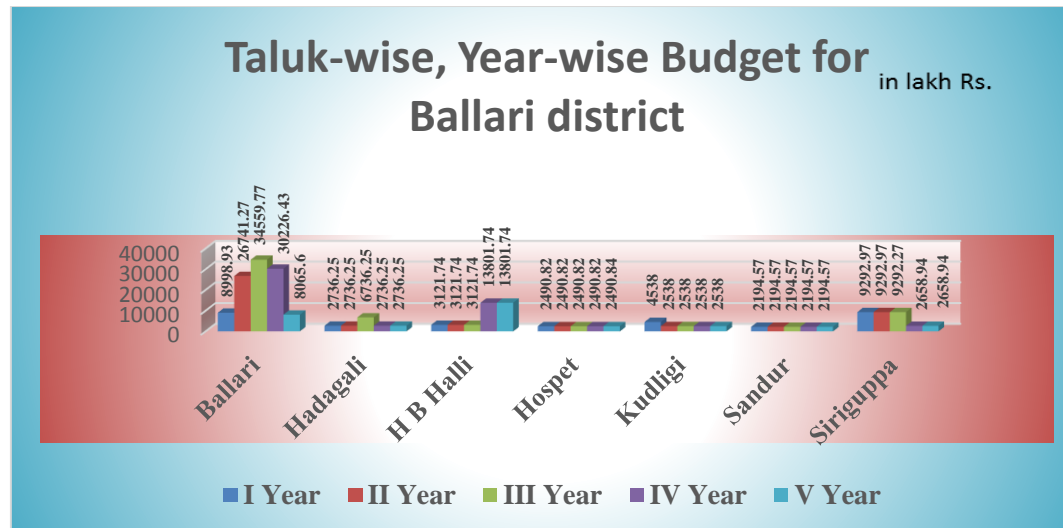
**Fig. 5.16: Taluk-wise Estimated Cost (Rs in Lakh)**



**Table 5.16: Taluk-wise, Year-wise Budget for PMKSY-DIP Ballari district (Rs. In lakhs)**

Year	Ballari	Hadagali	H B Halli	Hospet	Kudligi	Sandur	Siriguppa	District
1	8998.93	2736.25	3121.74	2490.82	4538.00	2194.57	9292.97	<b>33373.29</b>
2	26741.27	2736.25	3121.74	2490.82	2538.00	2194.57	9292.97	<b>49115.62</b>
3	34559.77	6736.25	3121.74	2490.82	2538.00	2194.57	9292.27	<b>60933.42</b>
4	30226.43	2736.25	13801.74	2490.82	2538.00	2194.57	2658.94	<b>56646.76</b>
5	8065.60	2736.25	13801.74	2490.84	2538.00	2194.57	2658.94	<b>34485.94</b>
<b>Total</b>	<b>108592.00</b>	<b>17681.24</b>	<b>36968.72</b>	<b>12454.12</b>	<b>14690.02</b>	<b>10972.84</b>	<b>33196.10</b>	<b>234555.04</b>

**Fig. 5.17**

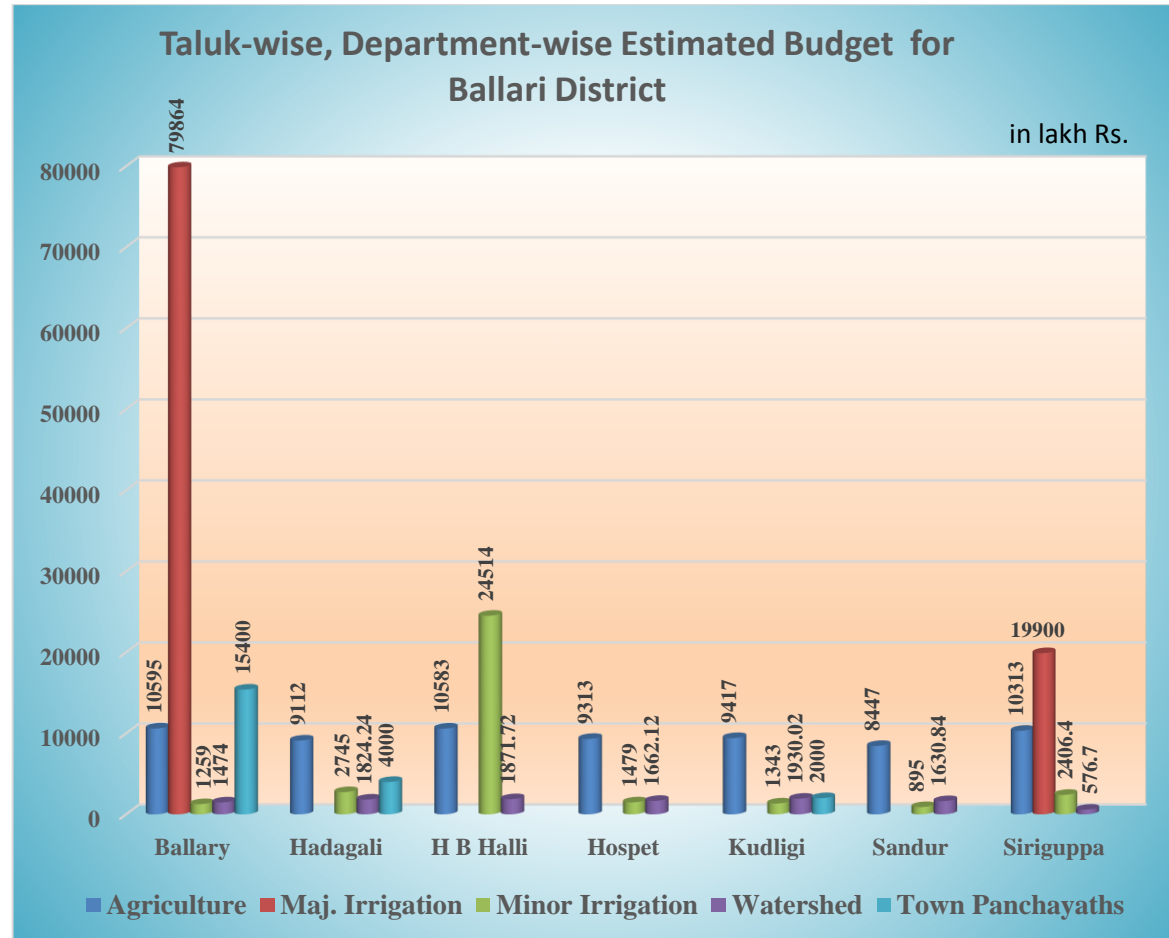


**Table 5.17: Taluk-wise, Department-wise Estimated Budget for PMKSY-DIP, Ballari District (Rs. In lakhs)**

<b>SL. No</b>	<b>Taluk</b>	<b>Agriculture</b>	<b>Maj. Irrigation</b>	<b>Minor Irrigation</b>	<b>Watershed</b>	<b>Municipalities/ Town Panchayaths</b>	<b>Total</b>
1	Ballary	10595	79864	1259	1474	15400	<b>108592</b>
2	Hadagali	9112		2745	1824.24	4000	<b>17681.24</b>
3	H B Halli	10583		24514	1871.72		<b>36968.72</b>
4	Hospet	9313		1479	1662.12		<b>12454.12</b>
5	Kudligi	9417		1343	1930.02	2000	<b>14690.02</b>
6	Sandur	8447		895	1630.84		<b>10972.84</b>
7	Siriguppa	10313	19900	2406.4	576.7		<b>33196.10</b>
	<b>Total</b>	<b>67780</b>	<b>99764</b>	<b>34641.4</b>	<b>10969.64</b>	<b>21400</b>	<b>234555.04</b>



**Fig 5.18**



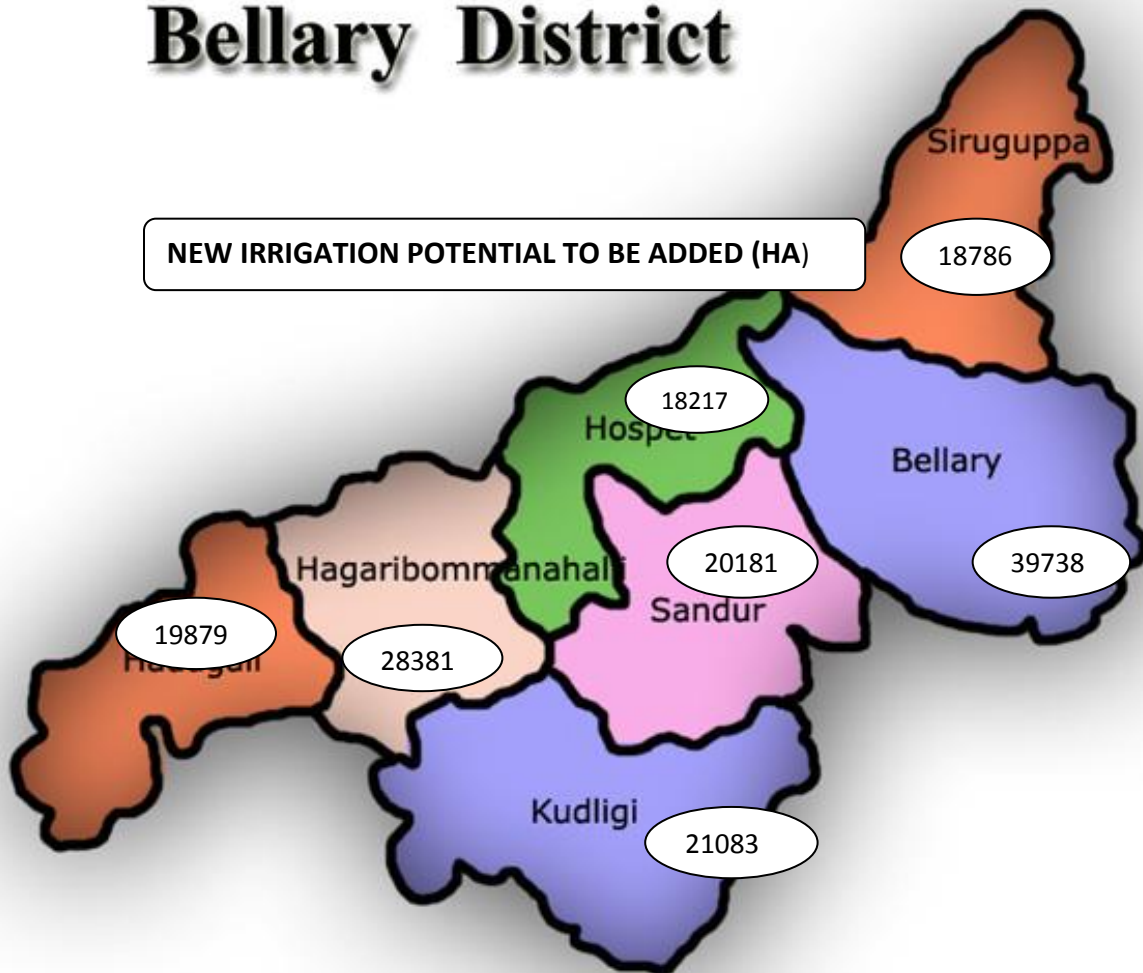
## 5.5 CONCLUSIONS

- Ballari district, being a part of typical dry ecosystem, has more than 50% of cultivated area dependent on monsoon rains. As frequent droughts are regular features of these lands, drought proofing by suitable measures is absolutely necessary to ensure minimum yield of crops in these regions
- Harvesting rain water infrastructures like farm ponds, check dams, tanks, barrages, bandharas etc is an essential feature of planning for these areas. Similarly, for over exploited groundwater regions recharging of ground water through bore well recharging, percolation tanks is also equally essential.
- Canal irrigation is the main source of irrigation for taluks like Hospet, Sirguppa and Ballari, New lift irrigation projects are also proposed for Ballari, Sirguppa, Hagari Bommanahallitaluks to expand existing irrigated area.
- The plan envisages creation of new irrigation potential of 166265 ha in the next five years, which is distributed in all taluks. However, major area is being added in Ballari taluk ( 39738 ha).
- A budgetary provision of Rs 2345,55 lakh is necessary to achieve this development, AIBP works accounts for Rs. 79997 lakh, Per drop more crop- minor irrigation activities adds up to Rs.20239 lakh. Major share of proposed budget is towards improvements proposed in Ballari taluk (Rs. 108592 lakh)
- Major share of proposed budgetary allocation in AIBP component goes towards modernisation and maintenance of existing canal net work in Tungabhadra Project which is more than 50 year old project, But, large share of provision under PDMC (micro irrigation and different supplementary water management activities) and PMKSY- water shed are aimed to create new infrastructures to harvest rain water for collection or to recharge ground water.
- In all the taluks of Ballari district, a provision for recharge of bore wells has been made to facilitate more efficient use of ground water and to extend the life of bore wells. This will facilitate recharge of 17814 bore wells with Rs. 7166 lakh.
- State Funded programme for irrigation, comprising of lift irrigation projects, are already being implemented in Ballari taluk and Hagari bommanahalli taluks.

- Sewage treatment plants along with establishment of UGD pipe laying is proposed in the taluks of Ballari, Hadagali and Kudligi taluks for a total allocation of Rs. 21400 lakh
- In nut shell, implementation of PMKSY is going to change the agrarian scenario in Ballari district improving the irrigation status to more than 75% of cultivated area. The implementation of DIP will also facilitate the repairs/ maintenance of existing net work, so that wastage of water is avoided. Due care is also taken to include the reuse of treated sewage water by establishment of STPs and strengthening underground drainage network.

**Fig: 5.19: Taluk wise irrigation Potential to be created**

## Bellary District



## APPENDICES

### 1: Village-wise Population of Ballari District

Sl. No	Village	Taluk	Total Population
1	Amarapura	Bellary	1,223
2	Asundi	Bellary	2,517
3	Badanahatti	Bellary	8,594
4	Banapura	Bellary	477
5	Basarakodu	Bellary	2,634
6	Belagal	Bellary	5,826
7	Bellary[R]	Bellary	696
8	Bennikallu	Bellary	5,355
9	Bevinahalli	Bellary	1,355
10	Bobbukunta	Bellary	1,011
11	Bommanahal	Bellary	1,247
12	Burrnayakanahalli	Bellary	789
13	Byalachinte	Bellary	957
14	Byluru	Bellary	5,105
15	Byradevanahalli	Bellary	3,927
16	Chaganur	Bellary	3,365
17	Chanahal	Bellary	4,069
18	Chellagurki	Bellary	2,232
19	Chitiginahalu	Bellary	687
20	Dammur	Bellary	4,187
21	Dammur Kaggal	Bellary	2,781
22	Dasara Nagenahalli	Bellary	2,018
23	Emmiganur	Bellary	13,868

24	Genikihal	Bellary	6,040
25	Godehal	Bellary	716
26	Gollanaganahalli	Bellary	1,171
27	Gotur	Bellary	1,859
28	Gudadur	Bellary	2,040
29	Guttiganur	Bellary	2,639
30	Halakundi	Bellary	4,620
31	Handihal	Bellary	3,104
32	Haraginadone	Bellary	2,573
33	Havinahal Veerapura	Bellary	3,874
34	Hirehadagali	Bellary	3,557
35	Honnahalli	Bellary	3,307
36	Ibrampura	Bellary	2,180
37	Jalibenchi	Bellary	2,139
38	Jalihal	Bellary	2,123
39	Janikunte	Bellary	1,854
40	Joladarasi	Bellary	1,079
41	Kakkabevinahalli	Bellary	2,410
42	Kallukamba	Bellary	3,038
43	Kallukutiganahalu	Bellary	1,389
44	Kammarchedu	Bellary	2,252
45	Kappagallu	Bellary	7,227
46	Karekal	Bellary	1,895
47	Karekal Veerapura	Bellary	2,549
48	Karichedu	Bellary	1,595
49	Karikeri	Bellary	1,342
50	Kolagallu	Bellary	11,585
51	Kolur	Bellary	5,872
52	Korlagundi	Bellary	6,906

53	Kotal Camp	Bellary	2,825
54	Kudathini	Bellary	18,215
55	Kuntanahal	Bellary	2,600
56	Kurugodu	Bellary	21,952
57	Kyadigeahal	Bellary	1,557
58	Lakshmipura	Bellary	1,874
59	Lingadevanahalli	Bellary	707
60	Mallapura	Bellary	71
61	Masudipura	Bellary	1,223
62	Meenahalli	Bellary	1,460
63	Mincheri	Bellary	3,786
64	Moka	Bellary	11,690
65	Mokagonahal	Bellary	2,349
66	Mustagatta	Bellary	2,979
67	Nelludi	Bellary	4,800
68	Orvai	Bellary	2,971
69	Paramadevanahalli	Bellary	2,623
70	Pattanasaragu	Bellary	1,905
71	Rayapura	Bellary	1,247
72	Rupanagudi	Bellary	4,595
73	Sanganakal	Bellary	9,184
74	Sanjeevarayanakote	Bellary	3,740
75	Shankarabanda	Bellary	3,488
76	Sidaragadda	Bellary	8,349
77	Siddammanahalli	Bellary	6,133
78	Sidiginamola	Bellary	3,018
79	Sindegeri	Bellary	5,252
80	Sindhavalam	Bellary	4,654
81	Singadevanahalli	Bellary	690

82	Sirivaram	Bellary	6,244
83	Somalapura	Bellary	3,658
84	Somasamudra	Bellary	7,958
85	Tambrahalli	Bellary	719
86	Tegginabudihal	Bellary	1,427
87	Thimmalapura	Bellary	2,191
88	Tolamamidi	Bellary	1,343
89	Vaddahatti	Bellary	4,397
90	Vannenur	Bellary	3,020
91	Veniveerapura	Bellary	2,326
92	Yalpi	Bellary	2,208
93	Yalpi Kaggalu	Bellary	2,749
94	Yarringaligi	Bellary	5,119
95	Yelubemchi	Bellary	4,050
96	Yerragudi	Bellary	4,656
97	Yettinabudihal	Bellary	4,627
	Bellary Municipal Corporation	Bellary	410,445

<b>Sl. No</b>	<b>Village</b>	<b>Taluk</b>	<b>Total Population</b>
1	Arlihalli	Hospet	901
2	Ayyanahalli	Hospet	1,157
3	Belugoduhall	Hospet	1,695
4	Bukkasagara	Hospet	4,547
5	Buvvanahalli	Hospet	1,668
6	Byalakundi	Hospet	1,074
7	Byluvadigeri	Hospet	2,884
8	Chikkajaiganur	Hospet	1,587
9	Chilakanahatti	Hospet	2,844
10	Danapura	Hospet	223
11	Danapuram	Hospet	7,256
12	Danayakanakere	Hospet	2,774
13	Devalapura	Hospet	5,538
14	Devasamudra	Hospet	6,940
15	Dharmasagara	Hospet	1,874
16	Gadiganur	Hospet	6,004
17	Garga	Hospet	2,258
18	Gollarahalli	Hospet	2,105
19	Gonahal	Hospet	17
20	Gonahal	Hospet	1,003
21	Gudioblapura	Hospet	2,085
22	Gundlavaddigeri	Hospet	891
23	Hampadevanahalli	Hospet	1,752
24	Hampi	Hospet	2,777
25	Haravanahalli	Hospet	1,191
26	Hirejaiganur	Hospet	486
27	Honnahalli	Hospet	1,743
28	Hosur	Hospet	4,392



29	Ingaligi	Hospet	3,105
30	Ittigi	Hospet	2,146
31	Jeeriganuru	Hospet	802
32	Jowku	Hospet	2,590
33	Kaddirampura	Hospet	1,339
34	Kakubal	Hospet	3,170
35	Kalghatta	Hospet	168
36	Kallahalli	Hospet	2,525
37	Kallirampura	Hospet	192
38	Kanvithimmalapura	Hospet	2,061
39	Kottiginahal	Hospet	474
40	Krishnapura	Hospet	54
41	Malapanagudi	Hospet	10,654
42	Mariyammanahalli	Hospet	15,940
43	Mariyammanahalli Thanda	Hospet	2,751
44	Mavinahalli	Hospet	1,073
45	Metri	Hospet	5,583
46	Muddapura No.10	Hospet	5,558
47	Muddapura No.2	Hospet	1,990
48	Nagalapura	Hospet	5,568
49	Nagenahalli	Hospet	4,608
50	Nandibanda	Hospet	1,488
51	Narasapura	Hospet	1,092
52	Papinayakanahalli	Hospet	6,957
53	Rajapura	Hospet	884
54	Ramasagara	Hospet	6,797
55	Sanapura	Hospet	3,470
56	Seetharama Tanda	Hospet	3,052
57	Singanathanahalli	Hospet	53

58	Somalapuram	Hospet	859
59	Sugginahalli	Hospet	4,686
60	T.Basapura	Hospet	3,339
61	Telugubalu	Hospet	23
62	Thimmalapura	Hospet	3,582
63	Upparahalli	Hospet	2,157
64	Vadrahalli	Hospet	1,367
65	Venkatapura	Hospet	1,658
66	Venkatapura	Hospet	3,061
67	Vyasanakeri	Hospet	2,423
1	Hospet City Municipal Council	Karnataka	206,167
2	Kampli Town Municipal Council	Karnataka	39,307
3	Kamalapuram Town Panchayat	Karnataka	25,552

SL. No	Village	Taluk	Total Population
1	Adavi Sooravvanahalli	Kudligi	846
2	Alur	Kudligi	4,601
3	Amalapura	Kudligi	1,955
4	Ammanakeri	Kudligi	1,695
5	Appainahalli	Kudligi	3,015
6	Badaladuku	Kudligi	5,410
7	Banavikal	Kudligi	4,995
8	Bande Basapura Tanda	Kudligi	3,988
9	Belligatta	Kudligi	1,553
10	Bellikatti	Kudligi	2,089
11	Bevoor	Kudligi	938
12	Boppalapura	Kudligi	1,099
13	Byluthumbaraguddi	Kudligi	2,126
14	Chandrasekarapura	Kudligi	2,614
15	Chapparadahalli	Kudligi	2,268

16	Chikkajogi Tanda	Kudligi	2,653
17	Chiribi	Kudligi	3,878
18	Chitrathagundu	Kudligi	3,278
19	Chowdapura	Kudligi	4,388
20	Dhoopadahalli	Kudligi	3,548
21	Gajapura	Kudligi	1,610
22	Gandabommanahalli	Kudligi	3,176
23	Gudekota	Kudligi	6,436
24	Gundinahole	Kudligi	8
25	Gundumunugu	Kudligi	5,950
26	Halasagara	Kudligi	3,009
27	Harakabhavi	Kudligi	4,408
28	Haralu	Kudligi	2,599
29	Harudi	Kudligi	1,880
30	Hireheggadahal	Kudligi	3,717
31	Hirekumbalagunta	Kudligi	3,495
32	Hirevaddarahalli	Kudligi	1,613
33	Hosahalli	Kudligi	8,887
34	Hudem	Kudligi	7,286
35	Hulikere	Kudligi	3,202
36	Hulikunta	Kudligi	1,541
37	Hurlihalu	Kudligi	4,616
38	Hyalya	Kudligi	1,852
39	Jermali	Kudligi	3,161
40	Joladakudligi	Kudligi	2,440
41	Jummobanahalli	Kudligi	3,160
42	K.Basapura Tanda	Kudligi	2,450
43	K.Iyyanahalli	Kudligi	2,537
44	Kadekolla	Kudligi	4,405
45	Kakkuppi	Kudligi	2,894
46	Kalapura	Kudligi	3,830
47	Kallahalli	Kudligi	2,317
48	Kandagal	Kudligi	2,465

49	Kannanayakanakatte	Kudligi	1,090
50	Kasapura	Kudligi	632
51	Kenchamallanahalli	Kudligi	3,990
52	Kodihalli	Kudligi	1,807
53	Kombihalli	Kudligi	741
54	Kudureduvu	Kudligi	1,167
55	Kumathi	Kudligi	2,175
56	Kuppinakeri	Kudligi	2,725
57	Kyasanakere	Kudligi	1,897
58	Lokikere	Kudligi	1,978
59	M.B.Iyyanahalli	Kudligi	3,269
60	Mahadevarapura	Kudligi	1,464
61	Makanaduku	Kudligi	5,008
62	Mangapura	Kudligi	1,934
63	Meenakeri	Kudligi	1,718
64	Moraba	Kudligi	5,177
65	Motikal Tanda	Kudligi	3,407
66	Nagalapura	Kudligi	2,142
67	Nagarakatti	Kudligi	2,383
68	Nagenahalli	Kudligi	843
69	Narasimhagiri	Kudligi	720
70	Nimbalageri	Kudligi	5,062
71	Palayyanakota	Kudligi	1,090
72	Poojarahalli	Kudligi	3,319
73	Ramadurg	Kudligi	2,358
74	Rampura	Kudligi	3,255
75	Ranganathanahalli	Kudligi	719
76	S. Imadapura	Kudligi	2,049
77	Sidegallu	Kudligi	1,368
78	Sirinayakanahalli	Kudligi	187
79	Sivapura	Kudligi	5,043
80	Solladahalli	Kudligi	6,269
81	Srikantapura Thanda	Kudligi	1,038

82	Sunkadakal	Kudligi	1,530
83	Thimmalapura	Kudligi	1,494
84	Thippehalli	Kudligi	2,389
85	Thoolahalli	Kudligi	4,709
86	Ujjini	Kudligi	8,766
87	Uradihalli	Kudligi	1,677
88	Yekkgundi	Kudligi	1,938
89	Yerralinganahalli	Kudligi	3,524
1	<u>Kudligi Town Panchayat</u>	Karnataka	26,680
2	<u>Kotturu Town Panchayat</u>	Karnataka	26,289

<b>SL. No</b>	<b>Village</b>	<b>Taluk</b>	<b>Total Population</b>
1	Agasanur	Siruguppa	2,698
2	Akkatangirahal	Siruguppa	703
3	Alabanur	Siruguppa	555
4	Araliganur	Siruguppa	2,482
5	B.M.Sugur	Siruguppa	1,162
6	Bagawady	Siruguppa	4,230
7	Balakundi	Siruguppa	4,222
8	Bandrahal	Siruguppa	2,436
9	Basarahalli	Siruguppa	477
10	Beerahalli	Siruguppa	1,414
11	Bhyragamadinne	Siruguppa	1,213
12	Bhyrapura	Siruguppa	2,780
13	Boggur	Siruguppa	1,445
14	Bommalapura	Siruguppa	1,083
15	Buduguppa	Siruguppa	2,949
16	Chanakanur	Siruguppa	1,373
17	Chikka Bellary	Siruguppa	2,150

18	Darur	Siruguppa	3,772
19	Dasanur	Siruguppa	6,519
20	Dasapura	Siruguppa	1,475
21	Devalapura	Siruguppa	1,866
22	Gajiginahal	Siruguppa	769
23	Gosabalu	Siruguppa	2,337
24	Gubbihal	Siruguppa	215
25	Gundiganur	Siruguppa	710
26	Hagalur	Siruguppa	3,155
27	Hagalur Hosahalli	Siruguppa	4,063
28	Halekota	Siruguppa	6,723
29	Halekota	Siruguppa	65
30	Halumuravani	Siruguppa	4
31	Hatcholli	Siruguppa	4,753
32	Havinahal	Siruguppa	3,232
33	Herakal	Siruguppa	1,857
34	Hirehal	Siruguppa	1,179
35	Honnarahalli	Siruguppa	1,070
36	Ibrampura	Siruguppa	2,133
37	Ittigihal	Siruguppa	615
38	Kallukuttiganahal	Siruguppa	404
39	Karchiganur	Siruguppa	1,112
40	Karur	Siruguppa	7,059
41	Kenchagarabelagal	Siruguppa	5,151
42	Kenchanagudda	Siruguppa	5,453
43	Kesarakoni	Siruguppa	232
44	Konchigeri	Siruguppa	3,424
45	Kotehal	Siruguppa	1,060
46	Kotehalsugur	Siruguppa	2,406

47	Kottalachinta	Siruguppa	1,349
48	Kududahal	Siruguppa	1,756
49	Kuriganur	Siruguppa	1,417
50	Kuruvalli	Siruguppa	2,405
51	Malapura	Siruguppa	539
52	Manjinahal	Siruguppa	21
53	Manur	Siruguppa	2,430
54	Manursugur	Siruguppa	4,660
55	Matur	Siruguppa	708
56	Mitte Sugur	Siruguppa	619
57	Mota Sugur	Siruguppa	1,037
58	Motra Dinne	Siruguppa	34
59	Muddatanur	Siruguppa	3,663
60	Mudenu	Siruguppa	1,849
61	Mylapura	Siruguppa	833
62	Nadanga	Siruguppa	2,169
63	Nadivi	Siruguppa	3,277
64	Nagalapura	Siruguppa	2,154
65	Nagarahal	Siruguppa	1,479
66	Nittur	Siruguppa	1,672
67	Poppanahal	Siruguppa	1,731
68	Raravi	Siruguppa	6,046
69	Ravihal	Siruguppa	2,581
70	Saliganur	Siruguppa	547
71	Sanavasapura	Siruguppa	4,526
72	Seedaragadda	Siruguppa	1,522
73	Siddaramapura	Siruguppa	473
74	Sirigeri	Siruguppa	12,273
75	T.Rampura	Siruguppa	814

76	Talur	Siruguppa	5,161
77	Tasalla Kudlur	Siruguppa	1,695
78	Tondehal	Siruguppa	833
79	Udegolam	Siruguppa	1,523
80	Ulur	Siruguppa	2,260
81	Uppara Hosahalli	Siruguppa	3,228
82	Uttanur	Siruguppa	3,655
83	Vattumuruvani	Siruguppa	922
84	Venkatapur	Siruguppa	342
1	Siruguppa Town Municipal Council	Siruguppa	52,492
2	Tekkalakote Town Panchayat	Siruguppa	26,224

<b>Sl. No.</b>	<b>Village</b>	<b>Taluk</b>	<b>Population</b>
1	<u>55 Mallapura</u>	Sandur	473
2	<u>Agrahara</u>	Sandur	3,930
3	<u>Ankammanahal</u>	Sandur	2,462
4	<u>Antapur</u>	Sandur	3,225
5	<u>Avinamadugu</u>	Sandur	447
6	<u>Bandri</u>	Sandur	7,106
7	<u>Bannihatti</u>	Sandur	2,016
8	<u>Bhujanganagar</u>	Sandur	5,535
9	<u>Bommagatta</u>	Sandur	3,946
10	<u>Chikkakeriyaginahalli</u>	Sandur	2,271
11	<u>Chikkantapur</u>	Sandur	1,449
12	<u>Chornur</u>	Sandur	7,421
13	<u>Daroji</u>	Sandur	10,993
14	<u>Deogiri</u>	Sandur	3,606
15	<u>Devarabudenahalli</u>	Sandur	647



16	<u>Devaramallapur</u>	Sandur	2,609
17	<u>Dowlatur</u>	Sandur	2,764
18	<u>Emmihatti</u>	Sandur	110
19	<u>Gangalapur</u>	Sandur	812
20	<u>Genatikatte</u>	Sandur	1,085
21	<u>Gollalingammanahalli</u>	Sandur	1,969
22	<u>Gowripur</u>	Sandur	29
23	<u>Gowripur</u>	Sandur	532
24	<u>Gundlahalli</u>	Sandur	1,955
25	<u>Hirekeriyaginahalli</u>	Sandur	4,003
26	<u>Hulikunta 73</u>	Sandur	1,650
27	<u>Jaisingapur</u>	Sandur	2,714
28	<u>Jiginahalli</u>	Sandur	1,417
29	<u>Jodibommiahnahalli</u>	Sandur	40
30	<u>Joga</u>	Sandur	1,642
31	<u>Kalingeri</u>	Sandur	2,679
32	<u>Kanakapur .B.C.</u>	Sandur	1,796
33	<u>Karthikeshwar</u>	Sandur	1,589
34	<u>Kodalu</u>	Sandur	2,056
35	<u>Krishnanagar</u>	Sandur	7,027
36	<u>Lakkalahalli</u>	Sandur	1,590
37	<u>Lingadahalli</u>	Sandur	1,467
38	<u>Malapur</u>	Sandur	1,155
39	<u>Mallapura 72</u>	Sandur	2,456
40	<u>Marutala</u>	Sandur	205
41	<u>Metriki</u>	Sandur	1,427
42	<u>Mothalakunta</u>	Sandur	1,190
43	<u>Muraripur</u>	Sandur	1,410
44	<u>Nagalapur</u>	Sandur	1,932
45	<u>Narasingapur</u>	Sandur	2,291
46	<u>Narayanapur</u>	Sandur	1,008
47	<u>Nidugurthi</u>	Sandur	3,278
48	<u>Rajapur</u>	Sandur	2,696

49	<u>Ramasagar</u>	Sandur	552
50	<u>Ramgad</u>	Sandur	271
51	<u>Rampur</u>	Sandur	506
52	<u>Ranjitpur</u>	Sandur	1,375
53	<u>Sankarapur</u>	Sandur	37
54	<u>Seliieppanahalli</u>	Sandur	2,397
55	<u>Shro.Basapur</u>	Sandur	1,978
56	<u>Shro.Gangalapur</u>	Sandur	736
57	<u>Shro.Oblapur</u>	Sandur	798
58	<u>Siddapur</u>	Sandur	1,468
59	<u>Somalapur</u>	Sandur	863
60	Sovenahalli	<u>Sandur</u>	3,577
61	Suseelnagar	<u>Sandur</u>	4,977
62	Swamy Halli	<u>Sandur</u>	1,486
63	Talur	<u>Sandur</u>	4,694
64	Taranagar	<u>Sandur</u>	6,722
65	Thimlapur	<u>Sandur</u>	519
66	Thippanamaradi	<u>Sandur</u>	757
67	Thumati	<u>Sandur</u>	1,425
68	Tonisigeri	<u>Sandur</u>	1,286
69	Toranagal	<u>Sandur</u>	10,453
70	Ubbalagundi	<u>Sandur</u>	1,713
71	Vittalapur	<u>Sandur</u>	2,875
72	Vittalnagar	<u>Sandur</u>	1,109
73	Yerabanahalli	<u>Sandur</u>	628
74	Yeradammanahalli	<u>Sandur</u>	1,466
75	Yerriahanahalli	<u>Sandur</u>	3,472
76	Yeswanthanagar	<u>Sandur</u>	6,847
1	Sandur Town Municipal Council	<u>Sandur</u>	37,431
2	Kurekappa Census Town	<u>Sandur</u>	22,560
3	Vaddu Census Town	<u>Sandur</u>	12,453
4	Donimalai Township Census Town	<u>Sandur</u>	6,672

<b>Sl. No</b>	<b>Village</b>	<b>Taluk</b>	<b>Total Population</b>
1	Advimallanakeri	Hadagalli	1,861
2	Angoor	Hadagalli	2,265
3	Ayyanahalli	Hadagalli	2,171
4	Beerabbi	Hadagalli	2,124
5	Budanur	Hadagalli	1,895
6	Byalhunsi	Hadagalli	1,139
7	Dasanahalli	Hadagalli	2,088
8	Dasarahalli	Hadagalli	2,271
9	Devagondanahalli	Hadagalli	2,080
10	<u>Dombrahalli</u>	Hadagalli	1,146
11	<u>Hagaranur</u>	Hadagalli	2,000
12	<u>Hakandi</u>	Hadagalli	3,157
13	<u>Halathimalapura</u>	Hadagalli	1,393
14	<u>Harivi</u>	Hadagalli	2,922
15	<u>Harivi Basapura</u>	Hadagalli	638
16	<u>Hirabannimatti</u>	Hadagalli	2,660
17	<u>Hirehadagalli</u>	Hadagalli	8,254
18	<u>Hirekolachi</u>	Hadagalli	3,360
19	<u>Hiremallinakeri</u>	Hadagalli	4,238
20	<u>Holagundi</u>	Hadagalli	6,911
21	<u>Holalu</u>	Hadagalli	9,823
22	<u>Hugulura</u>	Hadagalli	1,516
23	<u>Hyarada</u>	Hadagalli	4,126
24	<u>Ittigi</u>	Hadagalli	7,636
25	<u>Kalvi West</u>	Hadagalli	6,626
26	<u>Katebennuru</u>	Hadagalli	4,799
27	<u>Koilaragatti</u>	Hadagalli	1,813
28	<u>Komaranahalli</u>	Hadagalli	3,727
29	<u>Kombli</u>	Hadagalli	3,268
30	<u>Kotanakal</u>	Hadagalli	1,252
31	<u>Kotihal</u>	Hadagalli	204
32	<u>Kuravathi</u>	Hadagalli	4,294

33	<u>Magala</u>	Hadagalli	5,755
34	<u>Mahajanadahalli</u>	Hadagalli	4,313
35	<u>Makarabbi</u>	Hadagalli	1,827
36	<u>Manihalli</u>	Hadagalli	136
37	<u>Mannera Masalavada</u>	Hadagalli	2,638
38	<u>Mudenur</u>	Hadagalli	1,821
39	<u>Musuvinakallahalli</u>	Hadagalli	2,964
40	<u>Mylar</u>	Hadagalli	4,110
41	<u>Nagathi Basapura</u>	Hadagalli	4,038
42	<u>Nandihalli</u>	Hadagalli	2,259
43	<u>Nowli</u>	Hadagalli	2,956
44	<u>Rangapura</u>	Hadagalli	12
45	<u>Shivalinganahalli</u>	Hadagalli	1,482
46	<u>Sogi</u>	Hadagalli	5,239
47	<u>Sovinahalli</u>	Hadagalli	3,987
48	<u>Thamalapura</u>	Hadagalli	2,862
49	<u>Thimalapura</u>	Hadagalli	2,315
50	<u>Thippapura</u>	Hadagalli	1,417
51	<u>Thumbinakeri</u>	Hadagalli	1,521
52	<u>Uppanayakanahalli</u>	Hadagalli	1,113
53	<u>Uttangi</u>	Hadagalli	5,666
54	<u>Varakanhalli</u>	Hadagalli	2,942
55	<u>Veerapura</u>	Hadagalli	1,018
56	<u>Vyasamallapura</u>	Hadagalli	1,204
1	<u>Hoovina Hadagalli Town Municipal Council</u>	Karnataka	27,967

SL. No	Village	Taluk	Population
1	Adivikyadigihalli	Hagaribommanahalli	583
2	Alabur	Hagaribommanahalli	3,462
3	Ambli	Hagaribommanahalli	2,201
4	Anekal	Hagaribommanahalli	2,687

5	Ankasamudra	Hagaribommanahalli	1,682
6	Bachigondanahalli	Hagaribommanahalli	7,144
7	Bannigola	Hagaribommanahalli	2,279
8	Bannikal	Hagaribommanahalli	3,843
9	Basarakodu	Hagaribommanahalli	4,025
10	Bennikal	Hagaribommanahalli	3,141
11	Byasigaderi	Hagaribommanahalli	4,532
12	Chintrapalli	Hagaribommanahalli	25,819
13	Dasmapura	Hagaribommanahalli	3,806
14	Enigi	Hagaribommanahalli	2,043
15	G.Kodihalli	Hagaribommanahalli	1,931
16	Gaddikeri	Hagaribommanahalli	2,608
17	Guledahalu	Hagaribommanahalli	3,772
18	Hagaribommanahalli	Hagaribommanahalli	8,998
19	Halagapura	Hagaribommanahalli	4,304
20	Hampapatna	Hagaribommanahalli	3,699
21	Hampasagara	Hagaribommanahalli	6,289
22	Hansi	Hagaribommanahalli	3,728
23	Hanumagondanahalli	Hagaribommanahalli	1,288
24	Haregondanahalli	Hagaribommanahalli	1,853
25	Hiresobati	Hagaribommanahalli	4,263
26	Hosakeri	Hagaribommanahalli	2,664
27	Kachinabandi	Hagaribommanahalli	1,353
28	Kadlabalu	Hagaribommanahalli	7,907
29	Kallahalli	Hagaribommanahalli	3,006
30	Kannehalli	Hagaribommanahalli	1,340
31	Kithanur	Hagaribommanahalli	2,228
32	Kogali	Hagaribommanahalli	3,308
33	Kogali-Samatu Kodihalli	Hagaribommanahalli	408

34	Kudithinamoggi	Hagaribommanahalli	1,721
35	Madur	Hagaribommanahalli	2,518
36	Malvi	Hagaribommanahalli	3,949
37	Marabbihal	Hagaribommanahalli	4,564
38	Moregeri	Hagaribommanahalli	5,294
39	Muthukur	Hagaribommanahalli	1,772
40	Narayanadevarakeri	Hagaribommanahalli	3,073
41	Nellukudri	Hagaribommanahalli	3,576
42	Pinjara Heggadal	Hagaribommanahalli	2,809
43	Rameswara Bandi	Hagaribommanahalli	1,393
44	Seeganahalli	Hagaribommanahalli	2,278
45	Sonna	Hagaribommanahalli	3,837
46	Sree Rama Nagar	Hagaribommanahalli	2,508
47	Thambrahalli	Hagaribommanahalli	4,798
48	Ulavathi	Hagaribommanahalli	3,101
49	Upparagatta	Hagaribommanahalli	1,399
50	Varadapura	Hagaribommanahalli	2,860
51	Varalihalli	Hagaribommanahalli	2,653
52	Vyasapura	Hagaribommanahalli	610
53	Yenagi Basapura	Hagaribommanahalli	1,331

### 2.1: Crop wise, season wise irrigation status in Ballari district

Sl. No	Name of the Block	Crop Type	Kharif(Area in Ha)			Rabi(Area in ha)			Summer(Area in ha)			Total (Area in ha)		
			Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total
1	Ballari	Rice	27305	0	27305	0		0	10000	0.0	10000	37305	0	37305
2	Ballari	Jowar	21	84	106	6170	6353	12523	25	0.0	25	25	6437	12654
3	Ballari	Ragi	0	0	0	0		0	0	0.0	0	0	0	0
4	Ballari	Maize	137	36	173	25		25	50	0.0	50	50	36	248
5	Ballari	Bajra	43	263	306	0		0	20	0.0	20	20	263	326
6	Ballari	Wheat	0	0	0	0		0	0	0.0	0	0	0	0
7	Ballari	Minor Millets	0	235	235	0		0	20	0.0	20	20	235	255
8	Ballari	Tur	35	94	129	0		0	0	0.0	0	0	94	129
9	Ballari	Bengalgram	0	0	0	4579	28575	33154	0	0.0	0	0	28575	33154
10	Ballari	Horsegram	0	0	0	0		0	0	0.0	0	0	0	0
11	Ballari	Blackgram	1	1	1	45	10	55	47	0.0	47	47	11	103
12	Ballari	Greengram	1	3	4	0		0	0	0.0	0	0	3	4
13	Ballari	Cowpea & others	0	58	58	97	5	102	20	0.0	20	20	63	180
14	Ballari	Avare	0	0	0	0		0	0	0.0	0	0	0	0
15	Ballari	Mothbean (Madake)	0	0	0	0		0	0	0.0	0	0	0	0
16	Ballari	Groundnut	17	130	148	0	0	0	30	0.0	30	30	130	178
17	Ballari	Sesamum	0	0	0	0	0	0	0	0.0	0	0	0	0
18	Ballari	Sunflower	148	292	439	1002	2135	3137	20	0.0	20	20	2427	3596
19	Ballari	Castor	0	3	3	0	0	0	0	0.0	0	0	3	3
20	Ballari	Niger	0	0	0	0	0	0	0	0.0	0	0	0	0
21	Ballari	Mustard	0	0	0	0	0	0	0	0.0	0	0	0	0

22	Ballari	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0
23	Ballari	Safflower	0	0	0	0	45	45	0	0.0	0	0	45	45
24	Ballari	Linseed	0	0	0	0		0	0	0.0	0	0	0	0
25	Ballari	Cotton	2354	18545	20899	0	0	0	0	0.0	0	0	18545	20899
26	Ballari	Sugarcane	554	0	554	0	0	0	0	0.0	0	0	0	554
27	Ballari	Tobacco	0	0	0	0	0	0	0	0.0	0	0	0	0
					0			0		0.0	0		0	0
1	Huvina Hadagali	Rice	4270	0	4270	0	0	0	2750	0.0	2750	2750	0	7020
2	Huvina Hadagali	Jowar	1208	4083	5290	141	1806	1947	100	0.0	100	100	5889	7337
3	Huvina Hadagali	Ragi	0	325	325	0	0	0	0	0.0	0	0	325	325
4	Huvina Hadagali	Maize	6571	26852	33423	1250	514	1764	50	0.0	50	50	27366	35237
5	Huvina Hadagali	Bajra	158	3118	3276	0	0	0	0	0.0	0	0	3118	3276
6	Huvina Hadagali	Wheat	0	0	0	97	26	123	0	0.0	0	0	26	123
7	Huvina Hadagali	Minor Millets	8	251	259	0	0	0	0	0.0	0	0	251	259
8	Huvina Hadagali	Tur	84	2646	2729	0		0	0	0.0	0	0	2646	2729
9	Huvina Hadagali	Bengalgram	0	0	0	646	18108	18754	0	0.0	0	0	18108	18754
10	Huvina Hadagali	Horsegram	0	0	0	0	450	450	0	0.0	0	0	450	450
11	Huvina Hadagali	Blackgram	0	0	0	0	0	0	0	0.0	0	0	0	0
12	Huvina Hadagali	Greengram	5	209	214	0	0	0	0	0.0	0	0	209	214
13	Huvina	Cowpea &	1	17	18	0	65	65	1400	0.0	1400	1400	82	1483



	Hadagali	others												
14	Huvina Hadagali	Avare	0	0	0	0	0	0	0	0.0	0	0	0	0
15	Huvina Hadagali	Mothbean (Madake)	0	14	14	0	0	0	0	0.0	0	0	14	14
16	Huvina Hadagali	Groundnut	172	2829	3001	276	0	276	1850	0.0	1850	1850	2829	5127
17	Huvina Hadagali	Sesamum	0	4	4	0	0	0	0	0.0	0	0	4	4
18	Huvina Hadagali	Sunflower	463	4374	4837	575	825	1400	630	0.0	630	630	5199	6867
19	Huvina Hadagali	Castor	1	6	7	0	0	0	0	0.0	0	0	6	7
20	Huvina Hadagali	Niger	0	0	0	0	0	0	0	0.0	0	0	0	0
21	Huvina Hadagali	Mustard	0	0	0	0	0	0	0	0.0	0	0	0	0
22	Huvina Hadagali	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0
23	Huvina Hadagali	Safflower	0	0	0	0	0	0	0	0.0	0	0	0	0
24	Huvina Hadagali	Linseed	0	0	0	0	0	0	0	0.0	0	0	0	0
25	Huvina Hadagali	Cotton	507	2058	2565	0	0	0	0	0.0	0	0	2058	2565
26	Huvina Hadagali	Sugarcane	2111	0	2111	0	0	0	300	0.0	300	300	0	2411
27	Huvina Hadagali	Tobacco	0	12	12	0	0	0	0	0.0	0	0	12	12
					0			0		0.0	0		0	0
1	H.B.Halli	Rice	1606		1606	0	0	0	2750	0.0	2750	2750	0	4356
2	H.B.Halli	Jowar	500	1967	2467	0	157	157	0	0.0	0	0	2124	2624
3	H.B.Halli	Ragi	0	33	33	0	0	0	0	0.0	0	0	33	33

4	H.B.Halli	Maize	7601	14268	21869	892	0	892	379	0.0	379	379	14268	23140
5	H.B.Halli	Bajra	72	7825	7896	0	0	0	0	0.0	0	0	7825	7896
6	H.B.Halli	Wheat	0	0	0	50	0	50	0	0.0	0	0	0	50
7	H.B.Halli	Minor Millets	0	148	148	0	0	0	0	0.0	0	0	148	148
8	H.B.Halli	Tur	10	1118	1128	0		0	0	0.0	0	0	1118	1128
9	H.B.Halli	Bengalgram	0	0	0	714	5897	6611	0	0.0	0	0	5897	6611
10	H.B.Halli	Horsegram	0	579	579	0	714	714	125	0.0	125	125	1293	1418
11	H.B.Halli	Blackgram	0	0	0	0		0	0	0.0	0	0	0	0
12	H.B.Halli	Greengram	0	124	124	0		0	0	0.0	0	0	124	124
13	H.B.Halli	Cowpea & others	17	126	143	945	20	965	725	0.0	725	725	146	1833
14	H.B.Halli	Avare	0	1	1	0		0	0	0.0	0	0	1	1
15	H.B.Halli	Mothbean (Madake)	0	4	4	0		0	0	0.0	0	0	4	4
16	H.B.Halli	Groundnut	418	4636	5054	1632	0	1632	2838	0.0	2838	2838	4636	9524
17	H.B.Halli	Sesamum	0	36	36	0	0	0	0	0.0	0	0	36	36
18	H.B.Halli	Sunflower	396	3184	3579	2936	935	3871	0	0.0	0	0	4119	7450
19	H.B.Halli	Castor	0	11	11	0	0	0	0	0.0	0	0	11	11
20	H.B.Halli	Niger	0	4	4	0	0	0	0	0.0	0	0	4	4
21	H.B.Halli	Mustard	0	0	0	0	0	0	0	0.0	0	0	0	0
22	H.B.Halli	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0
23	H.B.Halli	Safflower	0	0	0	0	0	0	0	0.0	0	0	0	0
24	H.B.Halli	Linseed	0	0	0	0	0	0	0	0.0	0	0	0	0
25	H.B.Halli	Cotton	1315	143	1457	0	135	135	0	0.0	0	0	278	1592
26	H.B.Halli	Sugarcane	1156	0	1156	5		5	1550	0.0	1550	1550	0	2711
27	H.B.Halli	Tobacco	0		0	0		0	0	0.0	0	0	0	0
					0			0		0.0	0		0	0

1	Hospet	Rice	12986	0	12986	0	0	0	8183	0.0	8183	8183	0	21169
2	Hospet	Jowar	619	835	1454	125	95	220	0	0.0	0	0	930	1674
3	Hospet	Ragi	0	0	0	0	0	0	0	0.0	0	0	0	0
4	Hospet	Maize	4293	4712	9005	730	0	730	125	0.0	125	125	4712	9860
5	Hospet	Bajra	226	758	984	10	0	10	0	0.0	0	0	758	994
6	Hospet	Wheat	0	0	0	0	0	0	0	0.0	0	0	0	0
7	Hospet	Minor Millets	0	245	245	0	0	0	0	0.0	0	0	245	245
8	Hospet	Tur	211	300	512	0		0	0	0.0	0	0	300	512
9	Hospet	Bengalgram	0	0	0	300	300	600	0	0.0	0	0	300	600
10	Hospet	Horsegram	0	18	18	0	250	250	0	0.0	0	0	268	268
11	Hospet	Blackgram	2	3	4	15	0	15	0	0.0	0	0	3	19
12	Hospet	Greengram	1	7	8	0	0	0	0	0.0	0	0	7	8
13	Hospet	Cowpea & others	0	5	5	475	0	475	332	0.0	332	332	5	812
14	Hospet	Avare	0	0	0	0	0	0	0	0.0	0	0	0	0
15	Hospet	Mothbean (Madake)	0	3	3	0	0	0	0	0.0	0	0	3	3
16	Hospet	Groundnut	102	166	268	240	0	240	531	0.0	531	531	166	1039
17	Hospet	Sesamum	0	4	4	0	0	0	0	0.0	0	0	4	4
18	Hospet	Sunflower	494	499	993	25	0	25	0	0.0	0	0	499	1018
19	Hospet	Castor	1	15	16	0	0	0	0	0.0	0	0	15	16
20	Hospet	Niger	0	2	2	15	5	20	0	0.0	0	0	7	22
21	Hospet	Mustard	0	3	3	0	0	0	0	0.0	0	0	3	3
22	Hospet	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0
23	Hospet	Safflower	0	0	0	0	5	5	0	0.0	0	0	5	5
24	Hospet	Linseed	0	0	0	0	0	0	0	0.0	0	0	0	0
25	Hospet	Cotton	2273	1084	3357	0	0	0	0	0.0	0	0	1084	3357

26	Hospet	Sugarcane	4297	0	4297	3600	0	3600	1356	0.0	1356	1356	0	9253
27	Hospet	Tobacco	0	0	0	0	0	0	0	0.0	0	0	0	0
					0			0		0.0	0		0	0
1	Kudligi	Rice	265	0	265	0		0	45	0.0	45	45	0	310
2	Kudligi	Jowar	2168	3775	5943	0	450	450	20	0.0	20	20	4225	6413
3	Kudligi	Ragi	0	2276	2276	0	250	250	0	0.0	0	0	2526	2526
4	Kudligi	Maize	4490	16953	21443	200	175	375	140	0.0	140	140	17128	21958
5	Kudligi	Bajra	17	2580	2597	5	5	10	0	0.0	0	0	2585	2607
6	Kudligi	Wheat	0	0	0	125	25	150	0	0.0	0	0	25	150
7	Kudligi	Minor Millets	0	443	443	75	85	160	0	0.0	0	0	528	603
8	Kudligi	Tur	188	2070	2258	0	0	0	0	0.0	0	0	2070	2258
9	Kudligi	Bengalgram	0	0	0	0	4000	4000	0	0.0	0	0	4000	4000
10	Kudligi	Horsegram	0	213	213	0	105	105	0	0.0	0	0	318	318
11	Kudligi	Blackgram	0	0	0	0	0	0	0	0.0	0	0	0	0
12	Kudligi	Greengram	5	360	365	0	0	0	0	0.0	0	0	360	365
13	Kudligi	Cowpea & others	0	133	133	0	10	10	135	0.0	135	135	143	278
14	Kudligi	Avare	1	1	2	0	0	0	0	0.0	0	0	1	2
15	Kudligi	Mothbean (Madake)	0	28	28	0	0	0	0	0.0	0	0	28	28
16	Kudligi	Groundnut	342	40916	41258	0	0	0	4175	0.0	4175	4175	40916	45433
17	Kudligi	Sesamum	2	253	256	0	0	0	0	0.0	0	0	253	256
18	Kudligi	Sunflower	452	2792	3243	455	1725	2180	595	0.0	595	595	4517	6018
19	Kudligi	Castor	0	55	55	0	0	0	0	0.0	0	0	55	55
20	Kudligi	Niger	0	105	105	0	0	0	0	0.0	0	0	105	105
21	Kudligi	Mustard	0	0	0	0	0	0	0	0.0	0	0	0	0
22	Kudligi	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0

23	Kudligi	Safflower	0	0	0	0	0	0	0	0.0	0	0	0	0
24	Kudligi	Linseed	0	0	0	0	0	0	0	0.0	0	0	0	0
25	Kudligi	Cotton	1207	2042	3248	0	130	130	0	0.0	0	0	2172	3378
26	Kudligi	Sugarcane	3	0	3	0		0	55	0.0	55	55	0	58
27	Kudligi	Tobacco	0	0	0	25	40	65	0	0.0	0	0	40	65
					0			0		0.0	0		0	0
1	Sandur	Rice	890	155	1045	0	0	0	1120	0.0	1120	1120	155	2165
2	Sandur	Jowar	918	1293	2211	0	0	0	0	0.0	0	0	1293	2211
3	Sandur	Ragi	2	528	530	0	0	0	0	0.0	0	0	528	530
4	Sandur	Maize	1723	13537	15261	852	0	852	0	0.0	0	0	13537	16113
5	Sandur	Bajra	17	2599	2616	0	0	0	10	0.0	10	10	2599	2626
6	Sandur	Wheat	0	0	0	0	0	0	0	0.0	0	0	0	0
7	Sandur	Minor Millets	0	764	764	0	0	0	0	0.0	0	0	764	764
8	Sandur	Tur	17	577	594	0	0	0	0	0.0	0	0	577	594
9	Sandur	Bengalgram	0	0	0	73	0	73	0	0.0	0	0	0	73
10	Sandur	Horsegram	0	48	48	6	0	6	0	0.0	0	0	48	54
11	Sandur	Blackgram	0	0	0	0	0	0	0	0.0	0	0	0	0
12	Sandur	Greengram	0	12	12	0	0	0	0	0.0	0	0	12	12
13	Sandur	Cowpea & others	0	33	33	2	0	2	67	0.0	67	67	33	102
14	Sandur	Avare	0	0	0	0	0	0	0	0.0	0	0	0	0
15	Sandur	Mothbean (Madake)	0	0	0	0	0	0	0	0.0	0	0	0	0
16	Sandur	Groundnut	3	942	945	165	0	165	226	0.0	226	226	942	1336
17	Sandur	Sesamum	0	55	55	0	0	0	0	0.0	0	0	55	55
18	Sandur	Sunflower	30	411	441	4	0	4	20	0.0	20	20	411	465
19	Sandur	Castor	0	42	42	0	0	0	0	0.0	0	0	42	42

20	Sandur	Niger	0	43	43	0	0	0	0	0.0	0	0	43	43
21	Sandur	Mustard	0	0	0	0	0	0	0	0.0	0	0	0	0
22	Sandur	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0
23	Sandur	Safflower	0	0	0	0	0	0	0	0.0	0	0	0	0
24	Sandur	Linseed	0	0	0	0	0	0	0	0.0	0	0	0	0
25	Sandur	Cotton	1509	4201	5710	0	0	0	0	0.0	0	0	4201	5710
26	Sandur	Sugarcane	4	0	4	0	0	0	10	0.0	10	10	0	14
27	Sandur	Tobacco	0	0	0	0	0	0	0	0.0	0	0	0	0
					0			0		0.0	0		0	0
1	Siruguppa	Rice	27305	0	27305	0	0	0	17010	0.0	17010	17010	0	44315
2	Siruguppa	Jowar	21	84	106	275	1650	1925	75	0.0	75	75	1734	2106
3	Siruguppa	Ragi	0	0	0	0	0	0	0	0.0	0	0	0	0
4	Siruguppa	Maize	137	36	173	35	0	35	0	0.0	0	0	36	208
5	Siruguppa	Bajra	43	263	306	10	0	10	0	0.0	0	0	263	316
6	Siruguppa	Wheat	0	0	0	10	0	10	0	0.0	0	0	0	10
7	Siruguppa	Minor Millets	0	235	235	0	0	0	80	0.0	80	80	235	315
8	Siruguppa	Tur	35	94	129	0		0	0	0.0	0	0	94	129
9	Siruguppa	Bengalgram	0	0	0	250	9845	10095	0	0.0	0	0	9845	10095
10	Siruguppa	Horsegram	0	0	0	0	0	0	0	0.0	0	0	0	0
11	Siruguppa	Blackgram	1	1	1	10	0	10	2	0.0	2	2	1	13
12	Siruguppa	Greengram	1	3	4	0	0	0	1	0.0	1	1	3	5
13	Siruguppa	Cowpea & others	0	58	58	25	0	25	1	0.0	1	1	58	84
14	Siruguppa	Avare	0	0	0	0	0	0	0	0.0	0	0	0	0
15	Siruguppa	Mothbean (Madake)	0	0	0	0	0	0	0	0.0	0	0	0	0
16	Siruguppa	Groundnut	17	130	148	0	0	0	0	0.0	0	0	130	148

17	Siruguppa	Sesamum	0	0	0	0	0	0	0	0.0	0	0	0	0
18	Siruguppa	Sunflower	148	292	439	157	1452	1609	30	0.0	30	30	1744	2078
19	Siruguppa	Castor	0	3	3	0	0	0	0	0.0	0	0	3	3
20	Siruguppa	Niger	0	0	0	0	0	0	0	0.0	0	0	0	0
21	Siruguppa	Mustard	0	0	0	0	0	0	0	0.0	0	0	0	0
22	Siruguppa	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0
23	Siruguppa	Safflower	0	0	0	0	18	18	0	0.0	0	0	18	18
24	Siruguppa	Linseed	0	0	0	0	0	0	0	0.0	0	0	0	0
25	Siruguppa	Cotton	2354	18545	20899	0	0	0	0	0.0	0	0	18545	20899
26	Siruguppa	Sugarcane	554	0	554	0	0	0	380	0.0	380	380	0	934
27	Siruguppa	Tobacco	0	0	0	0	0	0	0	0.0	0	0	0	0

## 2.2: Production and productivity of major crops in Ballari district

Sl No	Name of the Block	Crop Type	Kharif(Area in Ha)			Rabi(Area in ha)			Summer(Area in ha)			Total (Area in ha)			Rainfed		Irrigated		Total	
			Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Production (qty/yr)	Productivity or Yield(Kgs/ha)	Production (qty/yr)	Productivity (Kgs/ha)	Production (qty/yr)	Productivity or Yield(Kgs/ha)
1	Ballari	Rice	27305	0	27305	0	0	0	10000	0.0	10000	37305	0	37305	0	0.00	143043	3647.50	143043	3647.50
2	Ballari	Jowar	21	84	106	6170	6353	12523	25	0.0	25	25	6437	12654	4193	341.67	21745	3325.00	25938	1833.33
3	Ballari	Ragi	0	0	0	0	0	0	0	0.0	0	0	0	0	0.00	0	0.00	0	0.00	
4	Ballari	Maize	137	36	173	25	0	25	50	0.0	50	50	36	248	45	444.44	966	3983.33	1011	2213.89
5	Ballari	Bajra	43	263	306	0	0	0	20	0.0	20	20	263	326	174	227.78	153	1516.67	327	872.22
6	Ballari	Wheat	0	0	0	0	0	0	0	0.0	0	0	0	0	0.00	0	0.00	0	0.00	
7	Ballari	Minor Millet	0	235	235	0	0	0	20	0.0	20	20	235	255	180	253.33	0	0.00	180	180.0
<b>Total Cereals</b>			<b>27506</b>	<b>618</b>	<b>28124</b>	<b>6195</b>	<b>6353</b>	<b>12548</b>	<b>10115</b>	<b>0</b>	<b>10115</b>	<b>37420</b>	<b>6971</b>	<b>50787</b>	<b>4591</b>	<b>316.81</b>	<b>165909</b>	<b>3118.13</b>	<b>170500</b>	<b>1717.47</b>
8	Ballari	Tur	35	94	129	0	0	0	0	0.0	0	0	94	129	35	127.78	27	258.89	62	193.33
9	Ballari	Bengalgram	0	0	0	4579	28575	33154	0	0.0	0	0	28575	33154	15716	183.33	5724	416.67	21440	300.00
10	Ballari	Horsegram	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
11	Ballari	Blackgram	1	1	1	45	10	55	47	0.0	47	47	11	103	0	0.00	52	366.67	52	366.67
12	Ballari	Greengram	1	3	4	0	0	0	0	0.0	0	0	3	4	1	44.44	0	72.22	1	44.44
13	Ballari	Cowpea & others	0	58	58	97	5	102	20	0.0	20	20	63	180	0	0.00	23	383.33	23	383.33
14	Ballari	Avare	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
15	Ballari	Mothbean (Madake)	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
<b>Total Pulses</b>			<b>36</b>	<b>155</b>	<b>192</b>	<b>4721</b>	<b>28590</b>	<b>33311</b>	<b>67</b>	<b>0</b>	<b>67</b>	<b>67</b>	<b>28745</b>	<b>33570</b>	<b>15752</b>		<b>5825</b>		<b>21578</b>	
16	Ballari	Groundnut	17	130	14	0	0	0	30	0.0	30	30	130	17	72	194.44	76	1016.67	148	605.56



					8									8						
17	Ballari	Sesamum	0	0	0	0	0	0	0	0.0	0	0	0	0	0	70.22	0	0.00	0	70.22
18	Ballari	Sunflower	14 8	292	43 9	100 2	213 5	31 37	20	0.0	20	20	242 7	35 96	808	200.00	1417	1091.67	2226	645.83
19	Ballari	Castor	0	3	3	0	0	0	0	0.0	0	0	3	3	1	55.56	0	216.67	1	136.11
20	Ballari	Niger	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
21	Ballari	Mustard	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
22	Ballari	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
23	Ballari	Safflower	0	0	0	0	45	45	0	0.0	0	0	45	45	18	133.33	0	0.00	18	133.33
24	Ballari	Linseed	0	0	0	0		0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
	<b>Total Oilseeds</b>		<b>165</b>	<b>425</b>	<b>59 0</b>	<b>100 2</b>	<b>218 0</b>	<b>31 82</b>	<b>50</b>	<b>0</b>	<b>50</b>	<b>50</b>	<b>260 5</b>	<b>38 22</b>						0.00
25	Ballari	Cotton	23 54	185 45	20 89 9	0	0	0	0	0.0	0	0	185 45	20 89 9	17100	158.33	9595	700.00	26695	429.17
26	Ballari	Sugarcane	55 4	0	55 4	0	0	0	0	0.0	0	0	0	55 4	0	0.00	41867	25.56	41867	25.56
27	Ballari	Tobacco	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
					0			0		0.0	0		0	0	0	0.00	0	0.00	0	0.00
1	Huvina Hadagali	Rice	42 70	0	42 70	0	0	0	275 0	0.0	27 50	275 0	0	70 20	0	0.00	26987	2605.56	26987	2605.56
2	Huvina Hadagali	Jowar	12 08	408 3	52 90	141	180 6	19 47	100	0.0	10 0	100	588 9	73 37	4183	433.33	4559	3214.44	8741	1823.89
3	Huvina Hadagali	Ragi	0	325	32 5	0	0	0	0	0.0	0	0	325	32 5	210	211.11	0	0.00	210	211.11
4	Huvina Hadagali	Maize	65 71	268 52	33 42 3	125 0	514	17 64	50	0.0	50	50	273 66	35 23 7	52149	638.89	39462	4502.78	91610	2570.83
5	Huvina Hadagali	Bajra	15 8	311 8	32 76	0	0	0	0	0.0	0	0	311 8	32 76	4185	444.44	270	555.56	4454	500.00
6	Huvina Hadagali	Wheat	0	0	0	97	26	12 3	0	0.0	0	0	26	12 3	9	116.67	97	333.33	106	225.00
7	Huvina Hadagali	Minor Millets	8	251	25 9	0	0	0	0	0.0	0	0	251	25 9	94	127.78	4	166.67	98	147.22
																				0.00
8	Huvina Hadagali	Tur	84	264 6	27 29	0		0	0	0.0	0	0	264 6	27 29	1172	150.00	63	250.00	1234	200.00
9	Huvina Hadagali	Bengalgram	0	0	0	646	181 08	18 75 4	0	0.0	0	0	181 08	18 75 4	9054	166.67	808	416.67	9862	291.67
10	Huvina Hadagali	Horsegram	0	0	0	0	450	45 0	0	0.0	0	0	450	45 0	225	337.11	0	77.78	225	337.11

11	Huvina Hadagali	Blackgram	0	0	0	0	0	0	0	0.0	0	0	0	0	0	44.44	0	77.78	0	44.44
12	Huvina Hadagali	Greengram	5	209	214	0	0	0	0	0.0	0	0	209	214	79	125.56	4	244.44	83	185.00
13	Huvina Hadagali	Cowpea & others	1	17	18	0	65	65	1400	0.0	1400	1400	82	1483	28	186.11	1471	588.89	1498	387.50
14	Huvina Hadagali	Avare	0	0	0	0	0	0	0	0.0	0	0	0	0	0	144.44	0	0.00	0	144.44
15	Huvina Hadagali	Mothbean (Madake)	0	14	14	0	0	0	0	0.0	0	0	14	14	0	44.44	0	0.00	0	44.44
																				0.00
16	Huvina Hadagali	Groundnut	172	2829	3001	276	0	276	1850	0.0	1850	1850	2829	5127	1544	200.00	3577	1147.22	5121	673.61
17	Huvina Hadagali	Sesamum	0	4	4	0	0	0	0	0.0	0	0	4	4	1	83.33	0	55.56	1	69.44
18	Huvina Hadagali	Sunflower	463	4374	4837	575	825	1400	630	0.0	630	630	5199	6867	2538	308.33	1827	1097.22	4365	702.78
19	Huvina Hadagali	Castor	1	6	7	0	0	0	0	0.0	0	0	6	7	2	127.78	1	222.22	2	175.00
20	Huvina Hadagali	Niger	0	0	0	0	0	0	0	0.0	0	0	0	0	0	44.44	0	77.78	0	61.11
21	Huvina Hadagali	Mustard	0	0	0	0	0	0	0	0.0	0	0	0	0	0	44.44	0	0.00	0	44.44
22	Huvina Hadagali	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0	0	77.78	0	0.00	0	77.78
23	Huvina Hadagali	Safflower	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
24	Huvina Hadagali	Linseed	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
																				0.00
25	Huvina Hadagali	Cotton	507	2058	2565	0	0	0	0	0.0	0	0	2058	2565	1332	166.67	2034	694.44	3366	430.56
26	Huvina Hadagali	Sugarcane	2111	0	2111	0	0	0	300	0.0	300	300	0	2411	0	0.00	190965	51.11	0	51.11
27	Huvina Hadagali	Tobacco	0	12	12	0	0	0	0	0.0	0	0	12	12	0	0.00	0	0.00	0	0.00
					0			0		0.0	0		0	0	0	0.00	0	0.00	0	0.00
1	H.B.Halli	Rice	1606		1606	0	0	0	2750	0.0	2750	2750	0	4356	0	0.00	17134	2584.44	17134	2584.44
2	H.B.Halli	Jowar	500	1967	2467	0	157	157	0	0.0	0	0	2124	2624	1456	375.00	1528	2027.78	2984	1201.39
3	H.B.Halli	Ragi	0	33	33	0	0	0	0	0.0	0	0	33	33	25	166.67	0	0.00	25	166.67
4	H.B.Halli	Maize	7601	14268	21869	892	0	892	379	0.0	379	379	14268	23140	25257	594.44	35949	4143.56	61206	2369.00
5	H.B.Halli	Bajra	72	7825	7896	0	0	0	0	0.0	0	0	7825	7896	9117	388.89	144	716.22	9261	552.56

6	H.B.Halli	Wheat	0	0	0	50	0	50	0	0.0	0	0	0	50	0	83.33	49	325.00	49	204.17
7	H.B.Halli	Minor Millets	0	148	148	0	0	0	0	0.0	0	0	148	148	38	88.89	0	0.00	38	88.89
																				0.00
8	H.B.Halli	Tur	10	1118	1128	0	0	0	0	0.0	0	0	1118	1128	419	125.00	7	227.78	426	176.39
9	H.B.Halli	Bengalgram	0	0	0	714	5897	6611	0	0.0	0	0	5897	6611	2211	125.00	750	350.00	2961	237.50
10	H.B.Halli	Horsegram	0	579	579	0	714	714	125	0.0	125	125	1293	1418	507	272.33	81	216.67	588	244.50
11	H.B.Halli	Blackgram	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
12	H.B.Halli	Greengram	0	124	124	0	0	0	0	0.0	0	0	124	124	42	109.11	0	0.00	42	109.11
13	H.B.Halli	Cowpea & others	17	126	143	945	20	965	725	0.0	725	725	146	1833	38	172.22	1897	1000.00	1935	586.11
14	H.B.Halli	Avare	0	1	1	0	0	0	0	0.0	0	0	1	1	0	0.00	0	0.00	0	0.00
15	H.B.Halli	Mothbean (Madake)	0	4	4	0	0	0	0	0.0	0	0	4	4	1	88.89	0	0.00	1	88.89
																				0.00
16	H.B.Halli	Groundnut	418	4636	5054	1632	0	1632	2838	0.0	2838	2838	4636	9524	2381	172.22	5631	1039.44	8012	605.83
17	H.B.Halli	Sesamum	0	36	36	0	0	0	0	0.0	0	0	36	36	4	27.78	0	0.00	4	27.78
18	H.B.Halli	Sunflower	396	3184	3579	2936	935	3871	0	0.0	0	0	4119	7450	1793	258.33	3518	716.67	5311	487.50
19	H.B.Halli	Castor	0	11	11	0	0	0	0	0.0	0	0	11	11	0	41.67	0	0.00	0	41.67
20	H.B.Halli	Niger	0	4	4	0	0	0	0	0.0	0	0	4	4	1	44.44	0	0.00	1	44.44
21	H.B.Halli	Mustard	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
22	H.B.Halli	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
23	H.B.Halli	Safflower	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
24	H.B.Halli	Linseed	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
																				0.00
25	H.B.Halli	Cotton	1315	143	1457	0	135	135	0	0.0	0	0	278	1592	175	194.44	4658	627.78	4833	411.11
26	H.B.Halli	Sugarcane	1156	0	1156	5	5	1550	0	0.0	1550	1550	0	2711	0	0.00	86700	25.00	86700	25.00
27	H.B.Halli	Tobacco	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
					0					0.0	0		0	0	0	0.00	0	0.00	0	0.00
1	Hospet	Rice	1298	0	1298	0	0	0	8183	0.0	8183	8183	0	2116	0	0.00	77881	2391.67	77881	2391.65

			6		6								9							
2	Hospet	Jowar	61 9	835	14 54	125	95	22 0	0	0.0	0	0	930	16 74	681	419.44	2555	2311.11	3236	1365.28
3	Hospet	Ragi	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
4	Hospet	Maize	42 93	471 2	90 05	730	0	73 0	125	0.0	12 5	125	471 2	98 60	7526	527.78	26279	4558.33	33804	2543.06
5	Hospet	Bajra	22 6	758	98 4	10	0	10	0	0.0	0	0	758	99 4	948	416.67	566	1155.00	1514	785.83
6	Hospet	Wheat	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	250.00	0	250.00
7	Hospet	Minor Millets	0	245	24 5	0	0	0	0	0.0	0	0	245	24 5	122	166.67	0	0.00	122	166.67
																				0.00
8	Hospet	Tur	21 1	300	51 2	0		0	0	0.0	0	0	300	51 2	116	127.78	159	250.00	274	188.89
9	Hospet	Bengalgram	0	0	0	300	300	60 0	0	0.0	0	0	300	60 0	135	150.00	375	0.00	510	150.00
10	Hospet	Horsegram	0	18	18	0	250	25 0	0	0.0	0	0	268	26 8	79	141.67	0	0.00	79	141.67
11	Hospet	Blackgram	2	3	4	15	0	15	0	0.0	0	0	3	19	1	41.67	11	300.00	12	170.83
12	Hospet	Greengram	1	7	8	0	0	0	0	0.0	0	0	7	8	2	88.89	0	241.67	2	165.28
13	Hospet	Cowpea & others	0	5	5	475	0	47 5	332	0.0	33 2	332	5	81 2	1	88.89	923	909.89	924	499.39
14	Hospet	Avare	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
15	Hospet	Mothbean (Madake)	0	3	3	0	0	0	0	0.0	0	0	3	3	1	33.33	0	0.00	1	33.33
																				0.00
16	Hospet	Groundnut	10 2	166	26 8	240	0	24 0	531	0.0	53 1	531	166	10 39	60	133.33	1434	1600.00	1495	866.67
17	Hospet	Sesamum	0	4	4	0	0	0	0	0.0	0	0	4	4	0	0.00	0	0.00	0	0.00
18	Hospet	Sunflower	49 4	499	99 3	25	0	25	0	0.0	0	0	499	10 18	268	183.33	648	825.00	916	504.17
19	Hospet	Castor	1	15	16	0	0	0	0	0.0	0	0	15	16	0	0.00	0	0.00	0	0.00
20	Hospet	Niger	0	2	2	15	5	20	0	0.0	0	0	7	22	2	158.33	4	83.33	5	120.83
21	Hospet	Mustard	0	3	3	0	0	0	0	0.0	0	0	3	3	0	0.00	0	0.00	0	0.00
22	Hospet	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
23	Hospet	Safflower	0	0	0	0	5	5	0	0.0	0	0	5	5	2	133.33	0	0.00	2	133.33
24	Hospet	Linseed	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
																				0.00

25	Hospet	Cotton	22 73	108 4	33 57	0	0	0	0	0.0	0	0	108 4	33 57	1023	161.11	13933	1039.44	14956	600.28
26	Hospet	Sugarcane	42 97	0	42 97	360 0	0	36 00	135 6	0.0	13 56	135 6	0	92 53	0	0.00	761753	81.67	761753	81.67
27	Hospet	Tobacco	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
					0			0		0.0	0		0	0	0	0.00	0	0.00	0	0.00
1	Kudligi	Rice	26 5	0	26 5	0		0	45	0.0	45	45	0	31 0	0	0.00	1146	2541.67	1146	2541.67
2	Kudligi	Jowar	21 68	377 5	59 43	0	450	45 0	20	0.0	20	20	422 5	64 13	2901	444.44	7170	2191.67	10071	1318.06
3	Kudligi	Ragi	0	227 6	22 76	0	250	25 0	0	0.0	0	0	252 6	25 26	1445	211.11	0	0.00	1445	105.56
4	Kudligi	Maize	44 90	169 53	21 44 3	200	175	37 5	140	0.0	14 0	140	171 28	21 95 8	25518	1000.00	25566	4458.33	51084	2729.17
5	Kudligi	Bajra	17	258 0	25 97	5	5	10	0	0.0	0	0	258 5	26 07	3228	633.33	18	516.67	3246	575.00
6	Kudligi	Wheat	0	0	0	125	25	15 0	0	0.0	0	0	25	15 0	9	116.67	122	325.00	131	220.83
7	Kudligi	Minor Millets	0	443	44 3	75	85	16 0	0	0.0	0	0	528	60 3	207	277.78	56	250.00	263	263.89
																				0.00
8	Kudligi	Tur	18 8	207 0	22 58	0	0	0	0	0.0	0	0	207 0	22 58	705	113.89	151	268.33	856	191.11
9	Kudligi	Bengalgram	0	0	0	0	400 0	40 00	0	0.0	0	0	400 0	40 00	2000	166.67	0	0.00	2000	83.33
10	Kudligi	Horsegram	0	213	21 3	0	105	10 5	0	0.0	0	0	318	31 8	107	216.11	0	0.00	107	216.11
11	Kudligi	Blackgram	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
12	Kudligi	Greengram	5	360	36 5	0	0	0	0	0.0	0	0	360	36 5	119	110.67	0	0.00	119	110.67
13	Kudligi	Cowpea & others	0	133	13 3	0	10	10	135	0.0	13 5	135	143	27 8	5	166.67	149	366.67	154	266.67
14	Kudligi	Avare	1	1	2	0	0	0	0	0.0	0	0	1	2	0	0.00	0	0.00	0	0.00
15	Kudligi	Mothbean (Madake)	0	28	28	0	0	0	0	0.0	0	0	28	28	7	72.22	0	0.00	7	72.22
																				0.00
16	Kudligi	Groundnut	34 2	409 16	41 25 8	0	0	0	417 5	0.0	41 75	417 5	409 16	45 43 3	16300	133.33	8236	1116.67	24536	625.00
17	Kudligi	Sesamum	2	253	25 6	0	0	0	0	0.0	0	0	253	25 6	0	0.00	1	55.56	1	55.56
18	Kudligi	Sunflower	45 2	279 2	32 43	455	172 5	21 80	595	0.0	59 5	595	451 7	60 18	2611	350.00	1698	1141.67	4309	745.83
19	Kudligi	Castor	0	55	55	0	0	0	0	0.0	0	0	55	55	16	94.44	0	0.00	16	47.22

20	Kudligi	Niger	0	105	105	0	0	0	0	0.0	0	0	105	105	28	88.89	0	0.00	28	44.44
21	Kudligi	Mustard	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
22	Kudligi	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
23	Kudligi	Safflower	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
24	Kudligi	Linseed	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
																				0.00
25	Kudligi	Cotton	1207	2042	3248	0	130	130	0	0.0	0	0	2172	3378	2194	325.00	4197	638.89	6391	481.94
26	Kudligi	Sugarcane	3	0	3	0		0	55	0.0	55	55	0	58	0	0.00	160	6.67	0	6.67
27	Kudligi	Tobacco	0	0	0	25	40	65	0	0.0	0	0	40	65	0	0.00	5	0.00	0	0.00
					0			0		0.0	0		0	0	0	0.00	0	0.00	0	0.00
1	Sandur	Rice	890	155	1045	0	0	0	1120	0.0	1120	1120	155	2165	243	525.56	8304	2795.00	8547	1660.28
2	Sandur	Jowar	918	1293	2211	0	0	0	0	0.0	0	0	1293	2211	828	205.56	3093	1127.78	3921	666.667
3	Sandur	Ragi	2	528	530	0	0	0	0	0.0	0	0	528	530	224	147.78	0	0.00	224	147.78
4	Sandur	Maize	1723	13537	15261	852	0	852	0	0.0	0	0	13537	16113	22702	561.11	14816	3700.00	37518	2130.56
5	Sandur	Bajra	17	2599	2616	0	0	0	10	0.0	10	10	2599	2626	3249	416.67	0	0.00	3249	416.67
6	Sandur	Wheat	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0
7	Sandur	Minor Millets	0	764	764	0	0	0	0	0.0	0	0	764	764	127	83.33	0	0.00	127	83.33
8	Sandur	Tur	17	577	594	0	0	0	0	0.0	0	0	577	594	217	125.56	13	250.00	230	187.778
9	Sandur	Bengalgram	0	0	0	73	0	73	0	0.0	0	0	0	73	0	0.00	91	0.00	91	0
10	Sandur	Horsegram	0	48	48	6	0	6	0	0.0	0	0	48	54	3	44.44	0	0.00	3	44.44
11	Sandur	Blackgram	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0
12	Sandur	Greengram	0	12	12	0	0	0	0	0.0	0	0	12	12	0	0.00	0	0.00	0	0
13	Sandur	Cowpea & others	0	33	33	2	0	2	67	0.0	67	67	33	102	0	0.00	76	700.00	76	350
14	Sandur	Avare	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0
15	Sandur	Mothbean (Madake)	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0

16	Sandur	Groundnut	3	942	945	165	0	165	226	0.0	226	226	942	1336	522	166.22	601	1438.33	1123	802.278
17	Sandur	Sesamum	0	55	55	0	0	0	0	0.0	0	0	55	55	15	88.89	0	0.00	15	88.89
18	Sandur	Sunflower	30	411	441	4	0	4	20	0.0	20	20	411	465	288	233.33	60	1116.67	348	675
19	Sandur	Castor	0	42	42	0	0	0	0	0.0	0	0	42	42	12	94.44	0	0.00	12	94.44
20	Sandur	Niger	0	43	43	0	0	0	0	0.0	0	0	43	43	0	0.00	0	0.00	0	0.00
21	Sandur	Mustard	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
22	Sandur	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
23	Sandur	Safflower	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
24	Sandur	Linseed	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
25	Sandur	Cotton	1509	4201	5710	0	0	0	0	0.0	0	0	4201	5710	3009	122.22	5785	658.33	8794	390.278
26	Sandur	Sugarcane	4	0	4	0	0	0	10	0.0	10	10	0	14	0	0.00	0	0.00	0	0.00
27	Sandur	Tobacco	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
					0			0		0.0	0		0	0	0	0.00	0	0.00	0	0.00
1	Siruguppa	Rice	27305	0	27305	0	0	0	17010	0.0	17010	17010	0	44315	0	0.00	138610	1898.33	138610	1898.33
2	Siruguppa	Jowar	21	84	106	275	1650	1925	75	0.0	75	75	1734	2106	971	308.33	1200	3158.33	2171	1733.33
3	Siruguppa	Ragi	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0
4	Siruguppa	Maize	137	36	173	35	0	35	0	0.0	0	0	36	208	45	444.44	820	2650.00	865	1547.22
5	Siruguppa	Bajra	43	263	306	10	0	10	0	0.0	0	0	263	316	174	227.78	117	916.67	291	572.222
6	Siruguppa	Wheat	0	0	0	10	0	10	0	0.0	0	0	0	10	0	88.33	10	333.33	10	210.833
7	Siruguppa	Minor Millets	0	235	235	0	0	0	80	0.0	80	80	235	315	180	253.33	0	0.00	180	126.667
8	Siruguppa	Tur	35	94	129	0		0	0	0.0	0	0	94	129	35	127.78	27	258.89	62	193.333
9	Siruguppa	Bengalgram	0	0	0	250	9845	10095	0	0.0	0	0	9845	10095	4923	166.67	313	416.67	5235	291.667
10	Siruguppa	Horsegram	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0

11	Siruguppa	Blackgram	1	1	1	10	0	10	2	0.0	2	2	1	13	0	0.00	7	516.67	7	516.67
12	Siruguppa	Greengram	1	3	4	0	0	0	1	0.0	1	1	3	5	1	44.44	1	405.56	2	225
13	Siruguppa	Cowpea & others	0	58	58	25	0	25	1	0.0	1	1	58	84	0	0.00	26	683.33	26	683.33
14	Siruguppa	Avare	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
15	Siruguppa	Mothbean (Madake)	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
16	Siruguppa	Groundnut	17	130	148	0	0	0	0	0.0	0	0	130	148	72	194.44	22	1008.33	94	601.389
17	Siruguppa	Sesamum	0	0	0	0	0	0	0	0.0	0	0	0	0	0	70.22	0	0.00	0	70.22
18	Siruguppa	Sunflower	148	292	439	157	1452	1609	30	0.0	30	30	1744	2078	569	200.00	340	1025.00	910	612.5
19	Siruguppa	Castor	0	3	3	0	0	0	0	0.0	0	0	3	3	1	55.56	0	216.67	1	136.111
20	Siruguppa	Niger	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
21	Siruguppa	Mustard	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
22	Siruguppa	Soyabean	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
23	Siruguppa	Safflower	0	0	0	0	18	18	0	0.0	0	0	18	18	0	0.00	0	0.00	0	0.00
24	Siruguppa	Linseed	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0.00	0	0.00
25	Siruguppa	Cotton	2354	18545	20899	0	0	0	0	0.0	0	0	18545	20899	17100	158.33	9595	700.00	26695	429.17
26	Siruguppa	Sugarcane	554	0	554	0	0	0	380	0.0	380	380	0	934	0	0.00	70367	50.56	70367	50.56
27	Siruguppa	Tobacco	0	0	0	0	0	0	0	0.0	0	0	0	0	0	0.00	0	0	0	0.00



**5.1: STATEMENT SHOWING THE PROPOSALS SUBMITTED FOR APPROVAL UNDER PMKSY TO DIP**

Sl. No	Dist	Taluk	Name of the work	Estimated cost	Potential planned in Ha	Remarks
<b><u>AIBP WORKS</u></b>						
1	Ballari	Kudligi	Construction of check dam near Rayapura (site-2) village	58.00	50.00	TAC cleared
2	Ballari	Kudligi	Construction of check dam near Govindagiri (Site-2) village	50.00	50.00	TAC cleared
3	Ballari	Kudligi	Construction of check dam near K.Ayyanahalli (Site-2) village	100.00	52.00	TAC cleared
4	Ballari	Kudligi	Construction of check dam near Haralu (Site-2) village	110.00	52.00	TAC cleared
5	Ballari	Kudligi	Construction of check dam near Halsagara bornhatti (site-2) village	60.00	50.00	TAC cleared
6	Ballari	Kudligi	Construction of pickup near Virupapura village	50.00	50.00	TAC cleared
7	Ballari	Kudligi	Construction of check dam near Dupadahalli site-2 village	95.00	52.00	TAC cleared
			<b>Total</b>	<b>523.00</b>	<b>356.00</b>	
1	Ballari	Sandur	Construction of check dam near Gollalingamanahalli (site-2) village	75.00	52.00	TAC cleared

2	Ballari	Sandur	Construction of check dam near Mothalakunta (site-2) village	55.00	50.00	TAC cleared
3	Ballari	Sandur	Construction of check dam near Ankammanal (site-2)	56.00	50.00	TAC cleared
4	Ballari	Sandur	Construction of check dam near Hirekereyaginahalli (site-2) village	52.00	50.00	TAC cleared
5	Ballari	Sandur	Construction of check dam near Chorapura (site-2) village	52.00	52.00	TAC cleared
6	Ballari	Sandur	Construction of check dam near Genathikatte (site-2) village	50.00	52.00	TAC cleared
7	Ballari	Sandur	Construction of check dam near Muttajanahalli (site-2) village	55.00	50.00	TAC cleared
8	Ballari	Sandur	Construction of check dam near Yerranahalli (site-2) village	55.00	52.00	TAC cleared
9	Ballari	Sandur	Construction of check dam near Hosur (site-2) village	58.00	50.00	TAC cleared
			<b>Total</b>	<b>508.00</b>	<b>458.00</b>	
1	Ballari	H.B.Halli	Construction of check dam near Bannikallu village	86.00	74.09	TAC cleared
2	Ballari	H.B.Halli	Construction of check dam near Dashmapura village	55.00	48.58	TAC cleared
3	Ballari	H.B.Halli	Construction of check dam near Honnahalli village	60.00	48.58	TAC cleared
4	Ballari	H.B.Halli	Construction of check dam near Hanumagondanahalli	65.00	49.39	TAC cleared

			village			
5	Ballari	H.B.Halli	Construction of check dam near Moragere (site-3) village	66.00	48.58	TAC cleared
6	Ballari	H.B.Halli	Improvements to LIS Ankasamudra village	100.00	317.00	TAC cleared
7	Ballari	H.B.Halli	Construction of check dam near Sangameshwar village	80.00	69.64	TAC cleared
8	Ballari	H.B.Halli	Construction of percolation tank near Madur village	200.00	56.68	TAC cleared
9	Ballari	H.B.Halli	Construction of check dam near Magimavinahalli village	58.00	48.58	TAC cleared
10	Ballari	H.B.Halli	Construction of check dam near Yadramanahalli village	55.00	42.91	TAC cleared
			<b>Total</b>	<b>825.00</b>	<b>804.03</b>	
1	Ballari	Huvinhadagali	Construction of check dam near Kattebennur (site-2) Village	56.00	48.58	TAC cleared
2	Ballari	Huvinhadagali	Construction of check dam near Mahajanadahalli village	60.00	44.53	TAC cleared
3	Ballari	Huvinhadagali	Construction of Bridge cum check dam near Kattemma Temple at Mahajandhalli village	60.00	69.64	TAC cleared
4	Ballari	Huvinhadagali	Construction of check dam near Ittigi village	58.00	79.35	TAC cleared
5	Ballari	Huvinhadagali	Construction of check dam near Upanayakanahalli village	58.00	46.56	TAC cleared

6	Ballari	Huvinhadagali	Construction of check dam near Govindapura Thanda village	50.00	43.22	TAC cleared
7	Ballari	Huvinhadagali	Construction of check dam near Adavimallanakere thanda (site-2) village	50.00	42.51	TAC cleared
8	Ballari	Huvinhadagali	Construction of check dam near Manyaramasalavada (site-2) village	58.00	60.73	TAC cleared
9	Ballari	Huvinhadagali	Construction of check dam near Kumarnahalli thanda (site-2) village	50.00	48.58	TAC cleared
10	Ballari	Huvinhadagali	Construction of check dam near Sogi (site-2) village	56.00	46.56	TAC cleared
			<b>Total</b>	<b>556.00</b>	<b>530.26</b>	
			<b>AIBP Total</b>	<b>2,412.00</b>	<b>2,148.29</b>	
<b><u>Fresh works proposals</u></b>						
<b>Check Dams</b>						
1	Ballari	Ballari	Construction of Checkdam near Burranayakanahalli village in Ballari Tq, Ballari district. (Site-1)	60.00	48	
2	Ballari	Ballari	Construction of Checkdam near Burranayakanahalli village in Ballari Tq, Ballari district. (Site-2)	58.00	46	
3	Ballari	Ballari	Construction of Checkdam near Kuntanal village in Ballari Tq, Ballari district. (Site-1)	55.00	45	

4	Ballari	Ballari	Construction of Checkdam near Kuntanal village in Ballari Tq, Ballari district. (Site-2)	55.00	45	
5	Ballari	Ballari	Construction of Checkdam near Babbukunta village in Ballari Tq, Ballari district. (Site-1)	58.00	48	
6	Ballari	Ballari	Construction of Checkdam near Babbukunta village in Ballari Tq, Ballari district. (Site-2)	58.00	50	
7	Ballari	Ballari	Construction of Checkdam near Sidiginamola village in Ballari Tq, Ballari district.	60.00	55	
8	Ballari	Ballari	Construction of Checkdam near K.Veerapura village in Ballari Tq, Ballari district. (Site-1)	55.00	45	
9	Ballari	Ballari	Construction of check dam near Yalpi Kaggal (site-2) village in Ballari tq, Ballari dist.	65.00	50	
			<b>Total</b>	<b>524.00</b>	<b>432</b>	
<b>LIS</b>						
1	Ballari	Ballari	Rejuvination of LIS near Emmiganur village in Ballari tq, Ballari dist.	70.00	250	
2	Ballari	Ballari	Construction of LIS near Siddammanahalli village in Ballari tq, Ballari dist.	440.00	130	
3	Ballari	Ballari	Construction of LIS near Yerragudi Village (site-1) in Ballari tq, Ballari dist.	75.00	60	
4	Ballari	Ballari	Construction of LIS near Yerragudi Village (site-2) in Ballari tq, Ballari dist.	75.00	60	

5	Ballari	Ballari	Construction of LIS near Yerragudi Village (site-3) in Ballari tq, Ballari dist.	75.00	60	
			<b>Total</b>	<b>735.00</b>	<b>560</b>	
<b>Check Dams</b>						
1	Ballari	Siruguppa	Construction of Bridge cum Barrage near Mudenur village in Siruguppa tq, Ballari district	1800.00	500	
			<b>Total</b>	<b>1,800.00</b>	<b>500</b>	
<b>LIS</b>						
1	Ballari	Siruguppa	Improvements to LIS near Kolor Village in Siruguppa tq, Ballari district	90.00	250	
2	Ballari	Siruguppa	Rejuvenation of LIS near K Belagal village in Siruguppa tq, Ballari dist.	50.00	100	
3	Ballari	Siruguppa	Improvements to LIS near Udegolam (4 & 5) Siruguppa tq, Ballari district	60.00	100	
4	Ballari	Siruguppa	Providing to LIS near Karur Village in Siruguppa tq, Ballari district	80.00	100	
5	Ballari	Siruguppa	Providing to LIS near Mudenur Village in Siruguppa tq, Ballari district	125.00	100	
6	Ballari	Siruguppa	Providing Express feeder line facility to to LIS Udegolam village in Siruguppa tq, Ballari district	100.00	200	
7	Ballari	Siruguppa	Providing Express feeder line facility to to LISTalur-2 village in Siruguppa tq, Ballari district	100.00	200	
			<b>Total</b>	<b>605.00</b>	<b>1,050.00</b>	

<b>Check Dams</b>						
1	Ballari	Hosapete	Construction of Checkdam near Kakubalu village in Hosapete Tq, Ballari district. (Site-2)	60.00	48	
2	Ballari	Hosapete	Construction of Checkdam near Kamalapura village in Hosapete Tq, Ballari district.	55.00	48	
3	Ballari	Hosapete	Construction of Checkdam near Byluvaddigere village in Hosapete Tq, Ballari district.	55.00	48	
4	Ballari	Hosapete	Construction of Checkdam near Rajapura (site-2) village in Hosapete Tq, Ballari district.	55.00	48	
5	Ballari	Hosapete	Construction of Checkdam near P.K.Halli village in Hosapete Tq, Ballari district.	54.00	48	
6	Ballari	Hosapete	Construction of Checkdam near Dharmasagara (site-2) village in Hosapete Tq, Ballari district.	55.00	45	
7	Ballari	Hosapete	Construction of Checkdam near Mariyammanahalli (site-2) village in Hosapete Tq, Ballari district.	80.00	60	
8	Ballari	Hosapete	Construction of Checkdam near Nagalapura village in Hosapete Tq, Ballari district.	55.00	45	
9	Ballari	Hosapete	Construction of Checkdam near Bylakundi village in Hosapete Tq, Ballari district.	55.00	45	
			<b>Total</b>	<b>524.00</b>	<b>435</b>	
<b>LIS</b>						

1	Ballari	Hosapete	Rejuvination of LIS near Hirejayaganur village in Hosapete tq, Ballari dist.	50.00	85	
2	Ballari	Hosapete	Rejuvination of LIS near Jawuku village in Hosapete tq, Ballari dist.	50.00	45	
			<b>Total</b>	<b>100.00</b>	<b>130</b>	
<b>Check Dams</b>						
1	Ballari	Kudligi	Construction of Checkdam near K Rayapura village in Kudligi Tq, Ballari district.	60.00	50	
2	Ballari	Kudligi	Construction of Checkdam near Govindagiri thanda village in Kudligi Tq, Ballari district.	50.00	40	
3	Ballari	Kudligi	Construction of Checkdam near Haralu village in Kudligi Tq, Ballari district.	150.00	60	
4	Ballari	Kudligi	Construction of Checkdam near Doopadahalli village in Kudligi Tq, Ballari district.	150.00	60	
5	Ballari	Kudligi	Construction of Checkdam near Hulikunta village in Kudligi Tq, Ballari district.	55.00	42	
			<b>Total</b>	<b>465.00</b>	<b>252</b>	
<b>LIS-NIL</b>						
<b>Check Dams</b>						
1	Ballari	Sandur	Construction of Checkdam near Ankammanahal village in Sandur Tq, Ballari district.	58.00	45	
2	Ballari	Sandur	Construction of Checkdam near Hosur village in Sandur Tq,	60.00	45	



			Ballari district.			
3	Ballari	Sandur	Construction of Checkdam near Anthapura village in Sandur Tq, Ballari district.	58.00	50	
4	Ballari	Sandur	Construction of Checkdam near Nagalapura village in Sandur Tq, Ballari district.	55.00	45	
5	Ballari	Sandur	Construction of Checkdam near Nidugurthi village in Sandur Tq, Ballari district.	56.00	45	
6	Ballari	Sandur	Construction of Checkdam near Gollalingammanahalli village in Sandur Tq, Ballari district.	100.00	60	
			<b>Total</b>	<b>387.00</b>	<b>290</b>	
<b>LIS- NIL</b>						
<b>Check Dams</b>						
1	Ballari	H.B.Halli	Construction of check dam to Hagri hala near Hagarikegagihalli village in H.B.Halli taluk, Ballari Dist.	200.00	100	
2	Ballari	H.B.Halli	Construction of check dam near Bannikallu village in H.B.Halli taluk, Ballari Dist.	90.00	75	
3	Ballari	H.B.Halli	Construction of check dam near Dashmapura village in H.B.Halli taluk, Ballari Dist.	55.00	50	
4	Ballari	H.B.Halli	Construction of check dam near Dibbadahalli village in H.B.Halli taluk, Ballari Dist.	68.00	58	

5	Ballari	H.B.Halli	Construction of check dam near Honnahalli village in H.B.Halli taluk, Ballari Dist.	55.00	50	
6	Ballari	H.B.Halli	Construction of check dam near Hanumagondanahalli village in H.B.Halli taluk, Ballari Dist.	58.00	50	
7	Ballari	H.B.Halli	Construction of check dam near Moragere village in H.B.Halli taluk, Ballari Dist.	65.00	50	
8	Ballari	H.B.Halli	Construction of new canals of LIS Ankasamudra village in H.B.Halli taluk, Ballari Dist.	90.00	317	
9	Ballari	H.B.Halli	Construction of check dam near Sangameshwar village in H.B.Halli taluk, Ballari Dist.	80.00	70	
10	Ballari	H.B.Halli	Construction of percolation tank near Madur village in H.B.Halli taluk, Ballari Dist.	200.00	58	
11	Ballari	H.B.Halli	Construction of check dam near Magimavinahalli village in H.B.Halli taluk, Ballari Dist.	60.00	50	
12	Ballari	H.B.Halli	Construction of check dam near Yadramanahalli village in H.B.Halli taluk, Ballari Dist.	50.00	45	
			<b>Total</b>	<b>1,071.00</b>	<b>973</b>	
<b>LIS</b>						
1	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Hampasagar-3 Lift Irrigation Scheme in H.B.Halli taluk, Ballari Dist.	100.00	50	

2	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Enigi Lift Irrigation Scheme in H.B.Halli taluk, Ballari Dist.	100.00	50	
3	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Basarakodu Lift Irrigation Scheme in H.B.Halli taluk, Ballari Dist.	55.00	45	
4	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Basarakodu Thanda Lift Irrigation Scheme in H.B.Halli taluk, Ballari Dist.	150.00	65	
5	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Bannigola Lift Irrigation Scheme in H.B.Halli taluk, Ballari Dist.	58.00	45	
6	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Thambrahalli Lift Irrigation Scheme in H.B.Halli taluk, Ballari Dist.	150.00	60	
7	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Thambrahalli (North) Lift Irrigation Scheme in H.B.Halli taluk, Ballari Dist.	100.00	60	
8	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Muthkur Lift Irrigation Scheme in H.B.Halli	100.00	50	

			taluk, Ballari Dist.			
9	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Ramasawarabandi Lift Irrigation Scheme in H.B.Halli taluk, Ballari Dist.	100.00	55	
10	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Hagarikedagihalli Lift Irrigation Scheme in H.B.Halli taluk, Ballari Dist.	100.00	60	
11	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Anandadevanahalli Lift Irrigation Scheme in H.B.Halli taluk, Ballari Dist.	60.00	45	
12	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Ankasamudra Lift Irrigation Scheme in H.B.Halli taluk, Ballari Dist.	60.00	55	
13	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Nakarala Thanda Lift Irrigation Scheme in H.B.Halli taluk, Ballari Dist.	60.00	50	
14	Ballari	H.B.Halli	Improvements to Irrigation canals and other improvement works for Ladakanabhavi Lift Irrigation Scheme in H.B.Halli taluk, Ballari Dist.	65.00	55	
			<b>Total</b>	<b>1,258.00</b>	<b>745</b>	

<b>Check Dams</b>						
1	Ballari	Hadagali	Construction of checkdam hala near Mudalapura thanda in Hadagali taluk, Ballari Dist.	55.00	45	
2	Ballari	Hadagali	Construction of checkdam across hala near Thumbinakere Thanda in Hadagali taluk, Ballari Dist.	58.00	45	
3	Ballari	Hadagali	Construction of checkdam cum bridge to Hala near Mahajenadahalli Katemma temple in Hadagali taluk, Ballari Dist.	55.00	45	
4	Ballari	Hadagali	Construction of checkdam cum across hala near Honuru village in Hadagali taluk, Ballari Dist.	50.00	40	
5	Ballari	Hadagali	Construction of checkdam cum across hala near Hampasagar Reshme faram village in Hadagali taluk, Ballari Dist.	50.00	42	
6	Ballari	Hadagali	Construction of checkdam cum across hala near Hakkandi village in Hadagali taluk, Ballari Dist.	55.00	45	
7	Ballari	Hadagali	Construction of checkdam cum to hala near Uttangi village in Hadagali taluk, Ballari Dist.	58.00	45	
8	Ballari	Hadagali	Construction of checkdam cum to hala near JSS village in Hadagali taluk, Ballari Dist.	55.00	45	
9	Ballari	Hadagali	Construction of checkdam cum to hala near Bannikalu village in Hadagali taluk, Ballari Dist.	65.00	50	

10	Ballari	Hadagali	Construction of checkdam cum to hala near Kondenahalli village in Hadagali taluk, Ballari Dist.	65.00	50	
11	Ballari	Hadagali	Construction of checkdam cum to hala near Gaddikere village in Hadagali taluk, Ballari Dist.	65.00	48	
12	Ballari	Hadagali	Construction of checkdam cum to hala near Salamurahalli village in Hadagali taluk, Ballari Dist.	58.00	45	
			<b>Total</b>	<b>689.00</b>	<b>545</b>	
<b>LIS</b>						
1	Ballari	Hadagali	Improvements to Irrigation canals, Express Feeder line and other improvement works for Mylara 1st stage Lift Irrigation Scheme in Hadagali taluk, Ballari Dist.	200.00	100	
2	Ballari	Hadagali	Improvements to Irrigation canals, Express Feeder line and other improvement works for Mylara 2nd stage Lift Irrigation Scheme in Hadagali taluk, Ballari Dist.	225.00	150	
3	Ballari	Hadagali	Improvements to Irrigation canals, Express Feeder line and other improvement works for Chikkabanimatti Lift Irrigation Scheme in Hadagali taluk, Ballari Dist.	100.00	50	

4	Ballari	Hadagali	Improvements to Irrigation canals, Express Feeder line and other improvement works for Ankli Lift Irrigation Scheme in Hadagali taluk, Ballari Dist.	175.00	60	
5	Ballari	Hadagali	Improvements to Irrigation canals, Express Feeder line and other improvement works for Kotihal Lift Irrigation Scheme in Hadagali taluk, Ballari Dist.	150.00	60	
6	Ballari	Hadagali	Improvements to Irrigation canals, Express Feeder line and other improvement works for Haravi Lift Irrigation Scheme in Hadagali taluk, Ballari Dist.	150.00	50	
7	Ballari	Hadagali	Improvements to Irrigation canals, Express Feeder line and other improvement works for Haravi Basapura Lift Irrigation Scheme in Hadagali taluk,	150.00	55	
8	Ballari	Hadagali	Improvements to Irrigation canals, Express Feeder line and other improvement works for Makrabbi Lift Irrigation Scheme in Hadagali taluk, Ballari Dist.	150.00	55	
			<b>Total</b>	<b>1,300.00</b>	<b>580</b>	
			<b>Fresh works Total</b>	<b>9,458.00</b>	<b>6,492</b>	
<b>RRR works- NIL</b>						
			<b>Grand Total</b>	<b>11,870.00</b>	<b>8,640.29</b>	

Executive Engineer, M.I. Division, Ballari

**5.2: Abstract of Financial Requirement for completion of Projects under PMKSY-Ballari District**

S.No	Activity	Command Area /Irrigation Potential(Ha)	Water BCM	Component	Period of Implementation(5/7 yrs)	Financial requirement in Rs..Crores		
						Estimated cost (in Rs.) in Crores	Central Share	State Share
1	Tungabhadra Project: RBHLC	63309	0.461	AIBP	2/3 Years	293.92	176.352	117.568
	RBLLC	34350			2/3 Years	26.21	15.726	10.484
	VNC (Siruguppa & Deshnur Canal & Anekuts)	2484	2/3 Years		13.00	7.8	5.2	
	Lift Irrigation/ diversion							
	<b>Ongoing Project</b>							
2	Karur Lift Irrigation	1270	0.014		1/2 Years	1.40	0.84	0.56
	<b>New Project</b>							
3	Name of the scheme- Y.Kaggal Lift Irrigation Scheme	2688.38	0.018	Estimate submitted for approval	76.03	45.618	30.412	
4	Name of the scheme- Kenchanna gudda Lift Irrigation Scheme	810.00	0.048	Water allocation is under scrutiny	13.60	8.16	5.44	
				<b>Total</b>		<b>424.16</b>	<b>254.496</b>	<b>169.664</b>



### 5.3: Strategic Action Plan for Irrigation in District under PMKSY-Ballari District

S.No	Name of the Blocks/Sub Districts	Concerned Ministry/Department	Component	Activity	Command Area /Irrigation Potential(Ha)	Period of Implementation (5/7 yrs)	Estimated cost(in Rs.) in Crores
1	Ballari & Siruguppa		AIBP	Tungabhadra Project: RBHLC	63309	2/3 Years	293.92
				RBLLC	34350	2/3 Years	26.21
				VNC (Siruguppa & Deshnur Canal & Anekuts)	2484	2/3 Years	13.00
	Lift Irrigation/diversion <b>Ongoing Project</b>						
2	Siruguppa			Karur Lift Irrigation	513.96	1/2 Years	1.40
3	<b>New Project</b> Ballari	State Irrigation Department		Name of the scheme- Y.Kaggal Lift Irrigation Scheme	2688.38	Estimate submitted for approval	76.03
4				Name of the scheme- Kenchanna gudda Lift Irrigation Scheme	1620.00	Water allocation is under scrutiny	13.60
			<b>Total</b>				<b>424.16</b>

**Executive Engineer**

**KNNL, No.6 Canal Division, Ballari.**