

**GOVERNMENT OF KARNATAKA
DEPARTMENT OF AGRICULTURE**

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

**DISTRICT IRRIGATION PLAN
VIJAYAPURA DISTRICT**



2016

GOVERNMENT OF KARNATAKA

Sri. K.B. Sivakumar. IAS
Deputy Commissioner,
Vijayapura

Foreword

“Hon’ble President in his address to the Joint Session of Parliament of 16th 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.

Vijayapura is known for its historical background of Golgumbuj- a world heritage monument, constructed by King Adil Shahi in 1642 A.D. The district had nine taluks during 1956 re-organisation and presently have five taluks after a new district, Bagalkot was carved out of Vijayapura district. The district is rich in water resources due to river Krishna and also fertile deep black soils.

The geographical area of the district is 10.53 lakh ha of which the cultivable area is 9.69lakh ha. The present irrigated area is 3.09 lakh ha of which 1.36 lakh ha is canal irrigated. The major source of irrigation in Vijayapura district is the canal water from Upper Krishna Project, of Almatti reservoir.

The present planning will give impetus on utilizing water for expansion of irrigated area, establishment of new industries and creation of special economic zone, so that the district can be a 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 about 4.60 lakh ha by 2020 with a budgetary support of Rs.18058.45 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 additional income to the 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 express my deep sense of gratitude to Sri M.B.Patil, Hon'ble Minister for Water Resources Govt. of Karnataka and District Incharge Minister Vijayapur district, Shri Ramesh C. Jigajinagi Hon'ble Minister of State for Drinking Water and Sanitation, Government of India and Member of Parliament, Vijayapur constituency, Shri C.S. Nadaguoda, Hon'ble Special Representative in New Delhi and Member of Legislative Assembly, Muddebihal constituency, Shri Shivanand S.Patil, Hon'ble President of Karnataka Urban Water Supply and Drainage Board, Government of Karnataka, and Member of Legislative Assembly, Basavana Bagewadi constituency, Shri Makbul Bagavan, Hon'ble Parliamentary Secretary, Government of Karnataka and Member of Legislative Assembly Vijayapur city constituency, Shri Raju Algur, Hon'ble President of Karnataka Soaps and Detergents Limited, Government of Karnataka and Member of Legislative Assembly, Nagathan constituency, Shri Yashvantharayagouda Patil, Hon'ble Member of Legislative Assembly, Indi Constituency, Shri Ramesh Bhusnur, Hon'ble Member of Legislative Assembly, Sindagi Constituency, Shri A.S.Patil Nadahalli Hon'ble Member of Legislative Assembly, Devarahipparagi Constituency, Shri Basanagouda R.Patil (Yatnal) Hon'ble Member of Legislative Council Vijayapur, Shri Hanamant R.Nirane Hon'ble Member of Legislative Council, Vijayapur, Shri Arun Shahapur Hon'ble Member of Legislative Council, Vijayapur for providing valuable suggestions.

I also thank the President and members of PLUS TRUST, Bangalore 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 Vijayapura district.

Date: 26.12.2016

Sd/-
Deputy Commissioner
Vijayapura

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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 by 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) will be 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 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 & micro ,enterprises 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 distribution systematic.

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 samrankshan) 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 Vikas 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) 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 of 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 16th 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 ml 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 overreaching vision of Pradhan Mantri Krishi Sinchayee 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

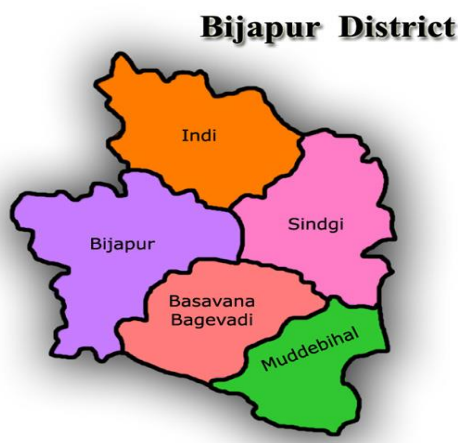
GENERAL INFORMATION OF THE DISTRICT.

1.1. District profile:

During reorganisation of erstwhile Mysore state (now called as Karnataka) in 1956, Vijayapura district was created by including nine taluks. Further, during 1997, six taluks of *Vijayapura* district were delineated to form Bagalkot district. Now, Vijayapura has five taluks - Vijayapura, Indi, Sindagi, Muddebihal and B.Bagevadi (Fig1.1). Vijayapura is located in Northern Karnataka surrounded in the North by Maharashtra state, South by Bagalkot, West by Belgaum and East by Gulbarga districts.

The present Vijayapura district is located between latitudes of 15° 50' to 17° 28' North and longitudes of 74° 54' to 76° 28' East at an average altitude of 458 M MSL., with a geographical area of 10.53 lakh ha (Table 1.1), accounting for 5.33 % of state's geographical area. Entire district is principally a plain region with no major tract under mountains. Vijayapura taluk is the biggest (2648 Sq. Km) and Muddebihal taluk is smallest (1494 Sq. Km) in terms of geographical area. Other taluks have a geographical area in the range of 1973-2215 Sq Km.

Fig 1.1 Taluks in Vijayapura district



Vijayapura district has a population of 21.8 lakh with a population density of 207 at district level. It has 960 females for every 1000 males. Vijayapura taluk has 1/3rd of Vijayapura district's population, while Indi, Sindagi and B.Bagewadi taluks have 16-19 % each of district's population. Muddebihal has least population (13%).

The district has 692 villages, 153 of them are located in Muddebihal taluk, which is the smallest in its geographical area. But, Vijayapura with highest geographical area has 131 villages. The district has 6 urban centres, with Muddebihal taluk having two of them. For easy administration, entire district is divided into 20 hoblies, 5 each in Vijayapura and B.Bagewadi taluks, 4 of them in Muddebihal and 3 hoblies each in Indi and Sindagi taluks.

Out of total 10.53 lakh ha geographical area in the district, Vijayapura taluk has highest geographical area (2.66 lakh ha), while Indi and Sindagi taluks are relatively smaller than Vijayapura with 2.22 and 2.18 lakh ha geographical area, respectively. Muddebihal taluk has only 1.50 lakh ha area.

Nearly 77 % of population live in rural areas, most of whom depend on agriculture for their livelihood. Vijayapura district has negligible forest area (1977 ha), while net cultivated area is 79 per cent (830084 ha) of geographical area, indicating that agriculture is the back bone of district's economy. The distribution of net cultivated area across the taluks is generally proportional to respective geographical area of taluks. Accordingly, Vijayapura has maximum net cultivated area (2.05 lakh ha), followed by Sindagi and Indi. Smallest net cultivated area is in Muddebihal taluk. Agricultural production potential of each taluk is certainly restricted and within these limitations.

The district has overall cropping intensity of 110% only, as the land used for double cropping is around 0.85 lakh ha, out of net cultivated area of 8.30 lakh ha. Gross cultivated area of the district works out to 9.15 lakh ha. The cropping intensity differed among the taluks, depending upon availability of irrigation and duration of the crop.

All five taluks of Vijayapura district are part of Northern Dry Zone of Karnataka. The zone has characteristics such as low annual unimodal rainfall, medium to deep black soil, mean maximum temperatures touching 40-42 ° C during summer and moderate 30-32 ° C during other months. Low temperatures can touch even 13-15 ° C for brief period during winter, otherwise winters are not severe. Most common crops in the district include jowar, bajra, wheat, gram, tur, other pulses, other small millets, groundnut, safflower, sunflower & other oilseeds, cotton, sugarcane and forage crops. Most important horticultural crops of the district are banana and grapes.

Vijayapura has unique characteristic soil features, viz., vertisols in northern part and southern part, Entisol in north and eastern sides and Aridisols in central part of the district. Vertisols and Aridisols are in almost of equal proportion, while Entisols are found in small but well spread throughout the district. All the soils of the district are neutral, but for a patch in north western corner of the district, while EC is normal throughout the district. But, entire district has low organic carbon status (<0.5%), indicating the poor capacity of its soils to supply desired level of nitrogen to the crops. Entire district is deficient in phosphorus (<5 ppm), but for small patches adjoining Bagalkot district while the whole district has sufficient capacity to supply potassium (>50ppm). But, most regions are deficient in sulphur (except northern and north eastern parts) and all the regions are deficient in zinc. However, there are no deficiencies of Boron in the district.

Vijayapura district has an average normal rainfall of 657.6 mm in 61 days. All the taluks have similar level of annual precipitation (677 mm in B. Bagewadi to 636 mm in Indi taluk). The rainfall is typically a unimodal with single September peak, not allowing the proper establishment of kharif crops. Rains during rabi season area fairly more assured than kharif season. Late rabi rains are also not assured and it may not be advisable to grow long duration rabi crops in soils other than vertisols, as they cannot hold the soil moisture for longer period. In recent years, the annual rainfall is in reducing trend. The rainfall recorded in 2015 indicated that annual rainfall is in the range of 358 - 451 mm (Mean:398 mm). However, the trend of unimodal September peak rainfall pattern has continued. The reduced total rainfall has drastically affected water shed areas as well as general performance of farm ponds, as low rainfall reduces the run off and there by collection of water in ponds.

Table 1.1 : District Profile

1.	District Code	557
2.	Latitude and Longitude	Latitudes of 15 ⁰ 50' to 17 ⁰ 28' North and Longitudes of 74 ⁰ 54 to 76 ⁰ 28' East
3.	Total Number of block	5
4.	Total Number of Grama Panchayat	220
5.	Total No. Of Hoblies	20
6.	Total Number of Villages	692
7.	Total Population	2177331
8.	Total Male Population	1111022
9.	Total Female Population	1066309
10.	Total Rural Population	1675353
11.	Total Urban Population	501978
12.	Total Child population	318406
13.	Total SC Population	442773
14.	Total ST Population	39314
15.	Total livestock	1086871
16.	Total poultry	262890

1.2. Demography:

1.2.1: Population:

The total population of the Vijayapura district is 2177331 comprising 1111022 male and 1066309 female population (Table 1.2). Taluk wise details are detailed below:

Table 1.2 : Taluk-wise population of Vijayapura district

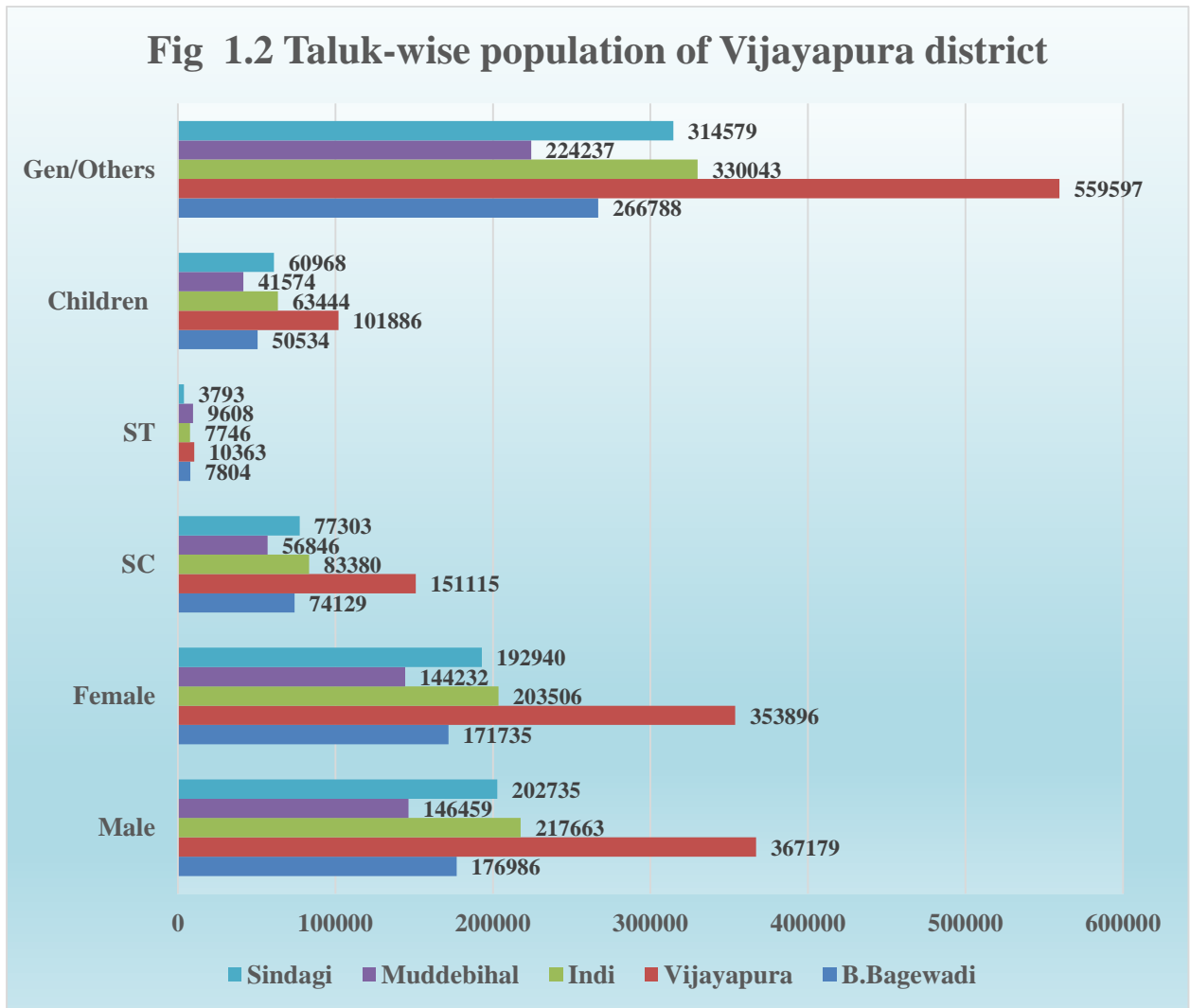
Sl. No.	Block/Taluk	Population			SC	ST	Children	Gen/ Others	Total
		Male	Female	Total					
1	B.Bagewadi	176986	171735	348721	74129	7804	50534	266788	348721
2	Vijayapura	367179	353896	721075	151115	10363	101886	559597	721075
3	Indi	217663	203506	421169	83380	7746	63444	330043	421169
4	Muddebihal	146459	144232	290691	56846	9608	41574	224237	290691
5	Sindagi	202735	192940	395675	77303	3793	60968	314579	395675
TOTAL		1111022	1066309	2177331	442773	39314	318406	1695244	2177331

Source: 2011 Census

In the Vijayapura district, Vijayapura taluk has the highest population of 721075 (33.12%), followed by Indi with 421169 (19.34 %), Sindagi with 395675 (18.17%) and B.Bagewadi with 348721 (16.06%). Muddebihal has the lowest population – 290691 (13.35%).

Scheduled caste population of the district is 442773 (20.34%). B, Bagewadi taluk has the highest percentage (21.26%) of scheduled caste population, followed by Vijayapura (20.96%), Indi (19.8%) and Muddebihal (19.56%). Sindagi taluk has the lowest percentage (19.54%) of scheduled caste population (Fig 1.2) in the district. The total scheduled tribe population of the district is 39314 accounting for 1.81% of the total population of the district. Muddebihal has the highest scheduled tribe population (3.31%), followed by B.Bagewadi (2.24%), Indi (1.84%) and Vijayapura (1.44%). Sindagi taluk has the lowest percentage of (0.96%) scheduled tribe population.

Fig 1.2 Taluk-wise population of Vijayapura district



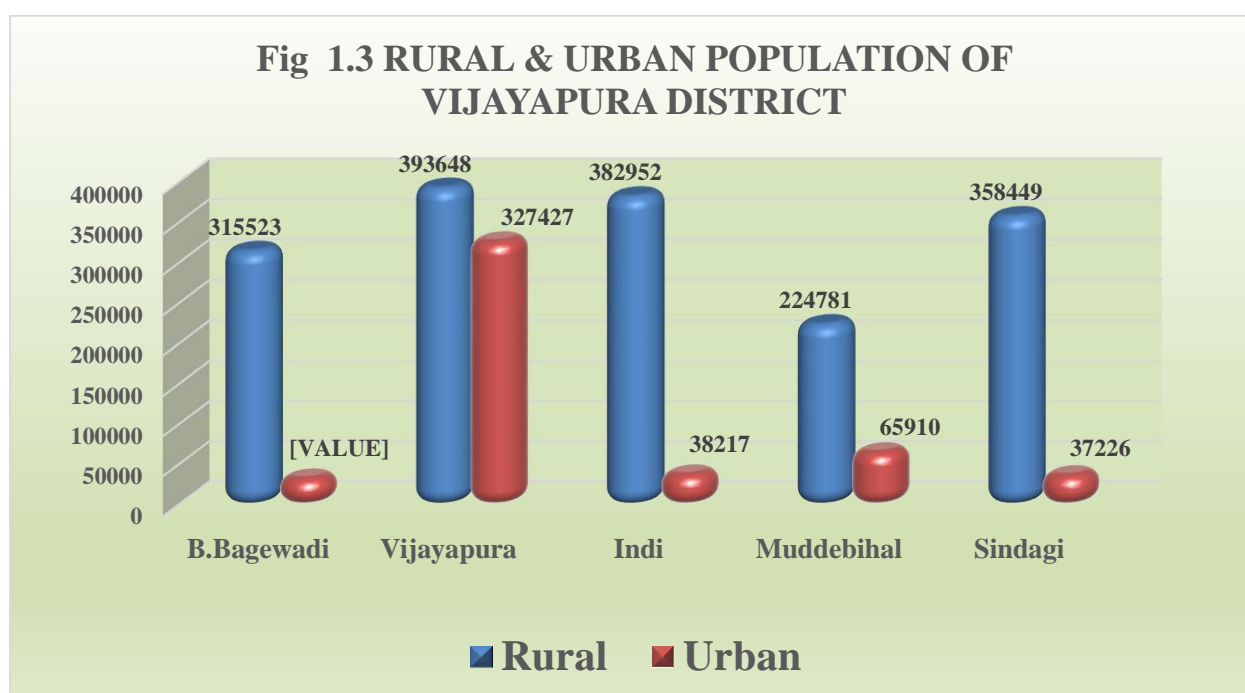
1.2.2 : Rural and Urban Population

In Vijayapura district, totally 1675353 (76.95%) population are residing in rural areas, whereas Urban population is 501978 (20.05%). Indi taluk has the highest percentage (90.93%) of rural population, followed by Sindagi (90.59%), B,Bagewadi (90.48%) and Muddebihal (77.33%). Vijayapura has the lowest percentage of (54.59%) of rural population. Taluk wise details are presented in Table 1.3 and Fig 1.3 :

Table 1.3 : Rural and Urban Population

Sl. No.	Block/Taluk	Population		
		Rural	Urban	Total
1	B.Bagewadi	315523	33198	348721
2	Vijayapura	393648	327427	721075
3	Indi	382952	38217	421169
4	Muddebihal	224781	65910	290691
5	Sindagi	358449	37226	395675
Total		1675353	501978	2177331

Source: 2011 Census



1.2.3. House Holds in Vijayapura district.

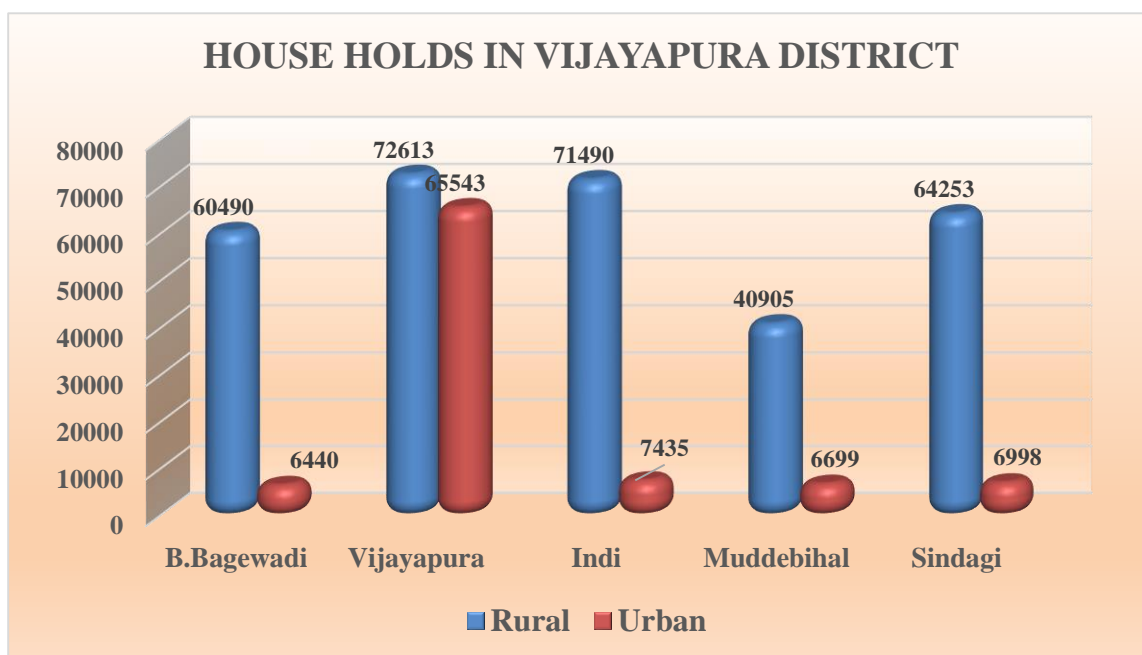
Vijayapura district has totally 402866 house holds. Total No. of Rural house holds is 309751 (76.89%) and the Urban house holds is 93115 (23.11%). Indi taluk has the highest percentage (90.57%) rural house holds, followed by B,Bagewadi (90.38%), Sindagi (90.18%) and Muddebihal (85.93%). Vijayapura taluk has the lowest percentage of house holds in rural areas (Table 1.4 and Fig 1.4)

Table.1.4 : Details of households in Vijayapura district

Sl. No.	Taluk	Rural	Urban	Total
1.	B.Bagewadi	60490	6440	66930
2.	Vijayapura	72613	65543	138156
3.	Indi	71490	7435	78925
4.	Muddebihal	40905	6699	47604
5.	Sindagi	64253	6998	71251
TOTAL		309751	93115	402866

Source: 2011 Census

Fig: 1.4:House holds in Vijayapura district



1.3. Biomass and Livestock:

Domestication of animals along with agriculture is an important activity of rural population. This activity is providing additional employment and also supplements to the income of the farming community. The district has 403619 (29.90%) large animals comprising cows, other milch and draft animals, 683252 (50.62%) Small animals and 262890 (19.48%) poultry in the district.

Table. 1.5: Large animal population

In Numbers

Taluk	Large animals				Total live stock & poultry
	Indigenous Cow	Hybrids Cow	Indigenous Buffalo	Hybrid Buffalo	
B.Bagewadi	41237	270	19311	3527	243200
Vijayapura	55410	457	33446	6641	349541
Indi	65272	264	39507	7656	311330
Muddebihal	37767	113	15563	1270	212818
Sindagi	52383	99	19672	3754	232872
Total	252069	1203	127499	22848	1349761

Source: District at a Glance

Indi taluk has the highest number 112699 (27.92%) of large animals (Cows and buffaloes), followed by Vijayapura with 95954 (23.77%), Sindagi with 75908 (18.81%) and B.Bagewadi with 64345 (15.94%). Lowest number 54713 (13.56%) of large animal population is in Muddebihal taluk (Table 1.5 and Fig 1.5).

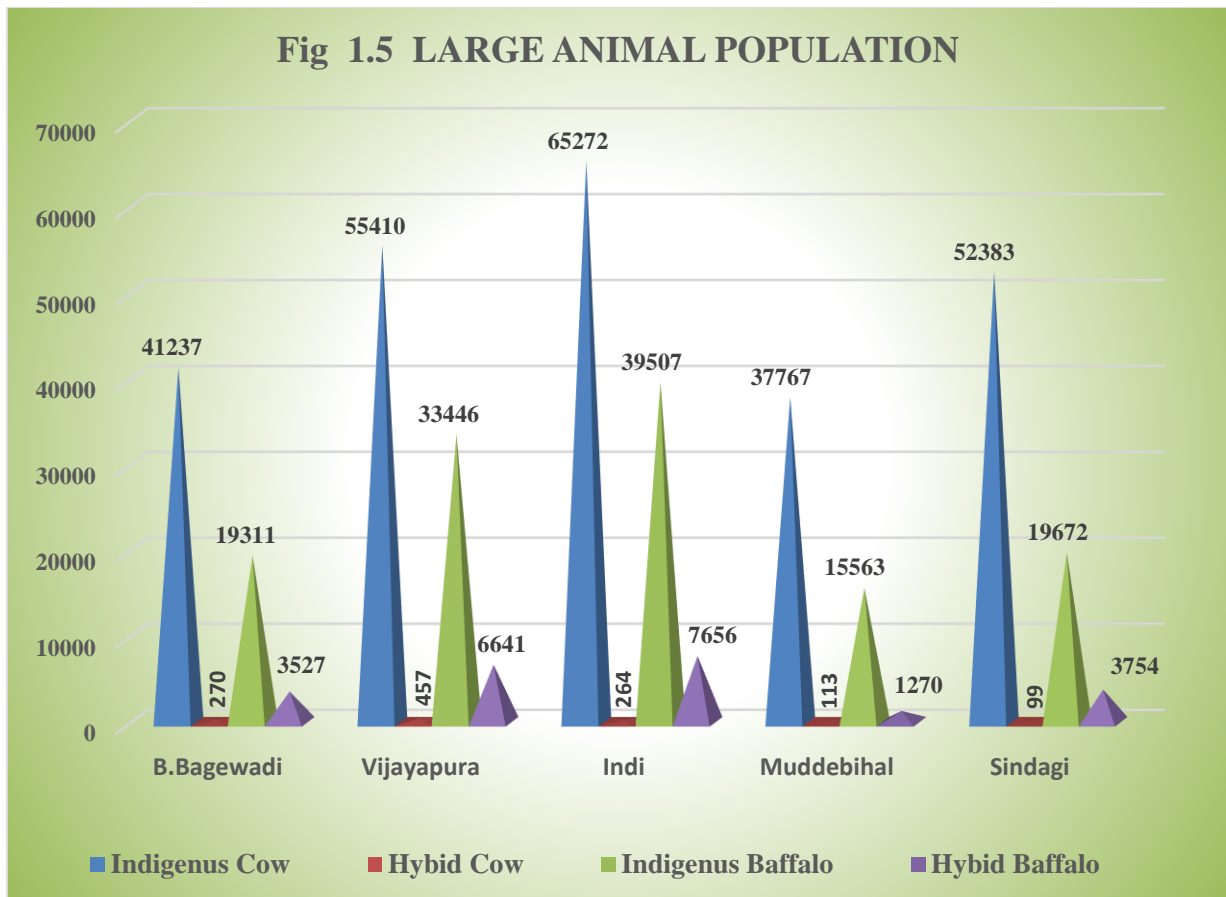


Table :1.6 : Small animals in Vijayapura district.

In Numbers

Taluk	Poultry	Pigs	Goats	Sheep
B.Bagewadi	41814	3273	66118	67650
Vijayapura	56749	2346	92304	102188
Indi	71816	5676	87662	33477
Muddebihal	41366	1176	45058	70505
Sindagi	51145	10617	70341	24861
Total	262890	23088	361483	298681

Source: District at a Glance

Fig: 1.6: Small animals in Vijayapura district

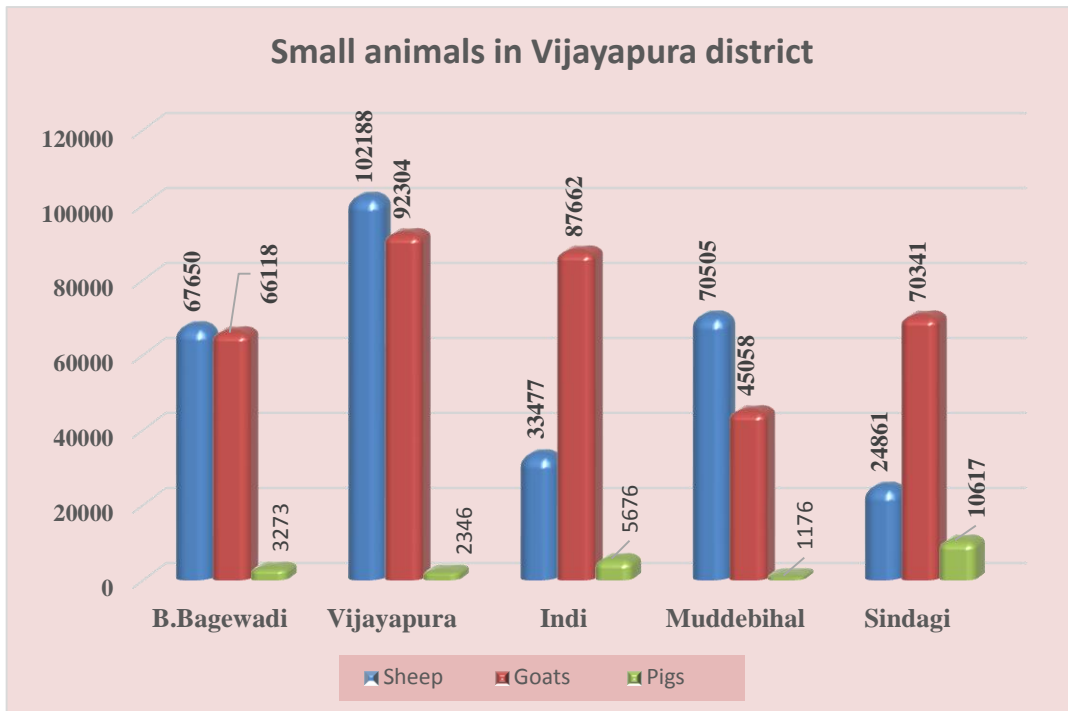
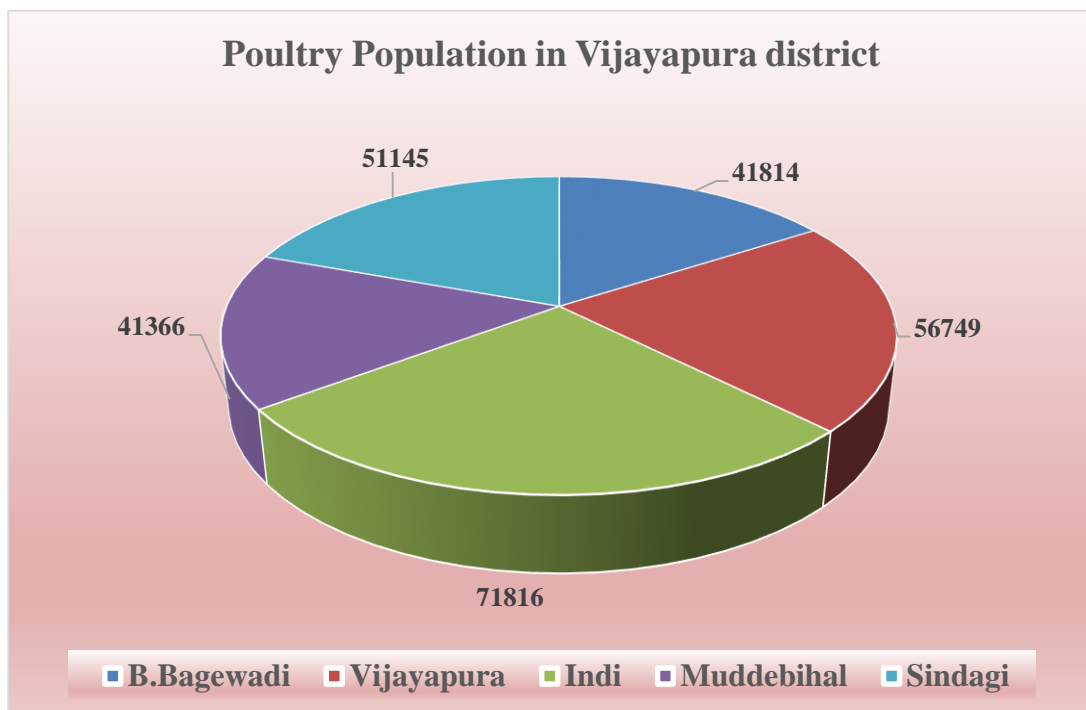


Fig 1.7 : Poultry population in Vijayapura district



Vijayapura taluk has the highest number of small animals viz., pigs, goat and sheep 196838 (28.80%), followed by B.Bagewadi with 137041 (20.06%), Indi with 126815 (18.56%) and Muddebihal with 116739 (17.09%). Lowest small animal population (Table 1.6 and Fig 1.6 and Fig 1.7) is observed in Sindagi taluk with 105819 (15.49%). In case of poultry, highest population is in Indi taluk which has 71816 (27.32%), followed by Vijayapura with 56749 (21.58%), Sindagi with 51145 (19.45%) and B.Bagewadi with 41814 (15.91%). Lowest poultry population is in Muddebihal (15.74%)

1.4 Agro-Ecology, Climate, Hydrology and Topography:

1.4.1 Agro-ecology

All five taluks of Vijayapura district are part of Northern Dry Zone of Karnataka. The zone has characteristics such as low annual unimodal rainfall, medium to deep black soil.

1.4.2 : Climate

Vijayapura district receives an average normal rainfall of 657.6 mm in 61 days (Table 1.7). The rainfall is typically unimodal with single September peak, not allowing the proper establishment of kharif crops. Rains during rabi season are fairly more assured than kharif season. Late rabi rains are also not assured and it may not be advisable to grow long duration rabi crops in soils other than vertisols, as they can hold the soil moisture for longer period. In recent years, the annual rainfall is in reducing trend. The reduced total rainfall has drastically affected water shed areas as well as general performance of farm ponds, as low rainfall reduces the run off and thereby collection of water in ponds.

Table 1.7 : Taluk wise Rainfall status of Vijayapura district.

Sl. No.	Block/ Taluk	Agro Ecological Zone Type	Type of Terrain	Block Area (ha)	Normal Annual Rainfall (mm)	No. of Rainy Days
1	B.Bagewadi	Zone-3, Northern Dry Zone	Plain	197865	677	90
2	Vijayapura		Plain	265769	675	68
3	Indi		Plain	222492	636	68
4	Muddebihal		Plain	149744	645	43
5	Sindagi		Plain	217601	655	36
District total/Mean				1053471	657.6	61

Source: KSNDMC

Mean maximum temperatures in the district during summer is around 38.54° C, while minimum mean temperature is 23.54° C, while during winter, the mean maximum temperature is 37.92° C and mean minimum temperature is 14.8° C and during Rainy season, the mean maximum temperature is 37.56° C and mean minimum temperature is 22.3° C

1.4.3 Hydrology

The major part of the district is occupied by the basaltic flows of Deccan traps, which constitutes the main rock formation in the north and central part of the district. These basaltic flows belong to the sequence of Middle Deccan Traps of Upper Cretaceous to Lower Eocene Age. The formations of Granites and Gneisses of Peninsular Gneissic Complex and Bhima Series cover a small portion in south and south-eastern part of the district. The Granites and Gneisses of Peninsular Gneissic Complex cover south and south-eastern part of Muddebihal taluk, which forms the oldest formations in the district. The granitic rocks are pink in colour, coarse grained with well-developed joints and are intruded by pegmatites, quartz veins and basic dolerite dykes. The depth of weathering in the district varies from 1.00 to 15.0 m. The Lower Bhima Series comprises of flaggy

limestone and shales, orthoquartzites and sandstones overlying crystalline rocks, which are separated by Basal Conglomerates. The exposures of these formations are found in the east and north-eastern parts of Muddebihal taluk of Vijayapura district.

The depth of water level is highly variable. Shallow water level conditions are commonly observed in valley areas, topographic lows and flat terrain, whereas, the deeper water table conditions noticed near water divides and the topographic highs. The ground water flow is towards the Krishna River in the south, towards Don River in the middle of the area and towards north and northeast in the Bhima River. The depth of water levels under unconfined conditions mainly dependent on the thickness of the weathered zone, permeability, topographic set up, the nature of aquifer material are the functions of recharge and discharge components in space and time. The groundwater table is deepest just prior to the onset of the predominant monsoon and reaches a peak a little before the cessation of monsoon. There after the groundwater table shows a declining trend with recession limb having two significant segments.

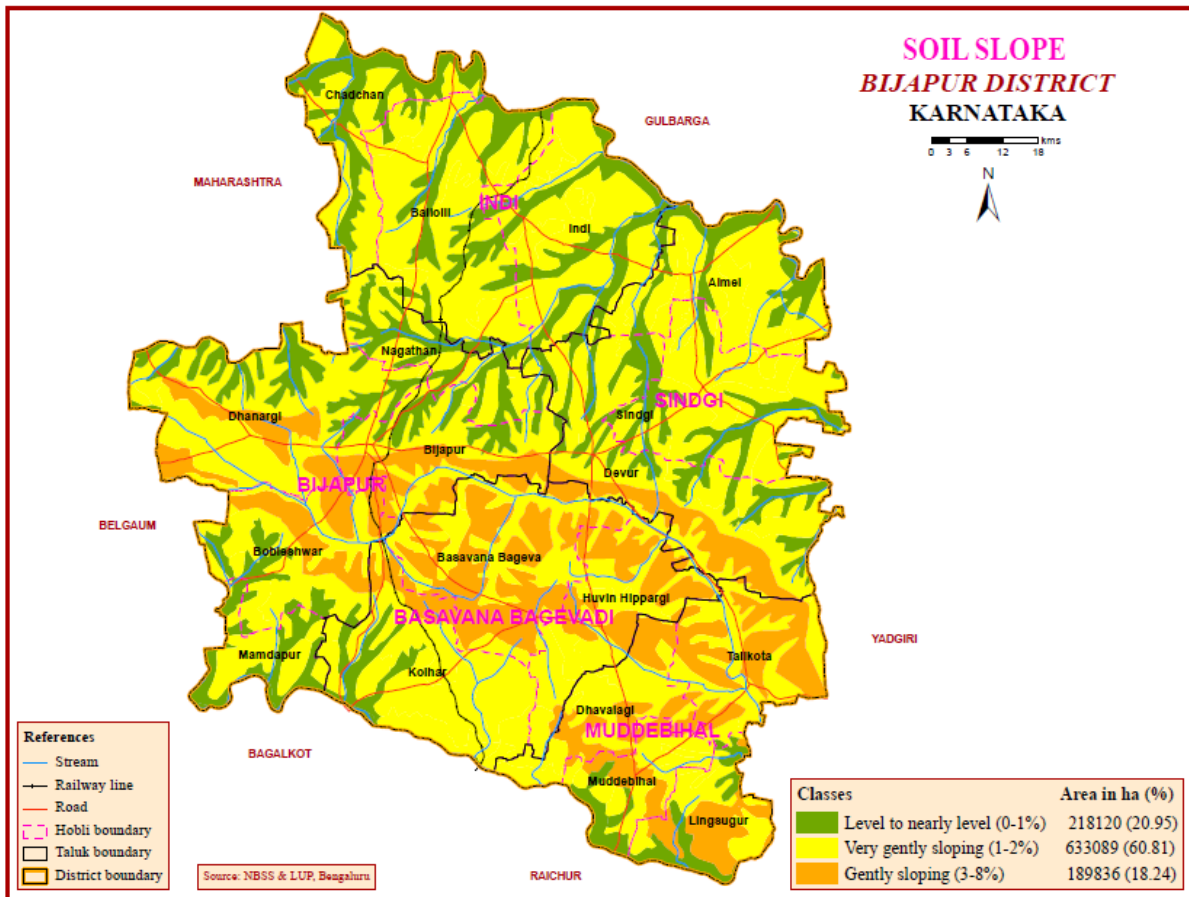
The depth of water levels during the pre-monsoon period varies from 1.75 (Almatti) to 24.15 mbgl (Vijayapura). The deepest is recorded at Vijayapura (Fig.4) because of elevated area. The depth of water level < 5.00 mbgl covers an area of about 10% and is recorded at Almatti, Hullur and Almel. About 70% of the area of the district falls 5.00-to 10.00 mbgl category. And the rest of the areas, where the depth to water levels of more than 10.0 m are observed at Honwad, Tikota, Jigjiwangi, Rugi, Indi, Tangadi and at Jumnal. The depth to water levels during post monsoon period varies from 0.75 at Almatti to 18.87 mbgl at Vijayapura. Depth to water level of < 5.0 mbgl is observed in 30% of the area and is observed at Kannur, Alipur, Aliabad and Shivanagi. About 10% of the area recorded depth to water levels > 10.00 mbgl. And the rest of the area has the depth

to water levels of 5.00 to 10.00 mbgl. Water level changes occur due to seasonal variations in rainfall, seepage from canals and return flow from applied irrigation, which affect the recharge and discharge components of the groundwater regime. As a consequence of change in seasonal distribution of rainfall, the water levels record a rise after the rain, indicating the building up of the storage in the groundwater reservoirs. During the non-monsoon period, the exploitation and evaporation deplete this. The water levels, in general, show regression from December to May months. Water table fluctuation varies from 1.0 m at Almatti to 6.91 m at Bijjargi. The principal factors that control water level fluctuation are recharge to groundwater, withdrawal and specific yield of aquifer. 15% of the area recorded water level fluctuation of < 2m, 65% of area show 2 – 4 m fluctuation and rest of the area has the fluctuation of >4.00 m.

1.4.4 : 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 Indi and Sindagi taluks are mainly very gently sloping and in valleys they are level to nearly level (Fig 1.8). Northern and southern parts of Vijayapura taluk, valleys with level to nearly level sloping lands are observed. The lands of Vijayapura, Basavana Bagevadi and Muddebihal taluks are mainly very gently sloping to gently sloping. The lands of the district that are very gently sloping cover an area of 633089 ha (60.81%) followed by level to nearly level lands which are spread over an area of 218120 ha (20.95 %) and gently sloping lands occur over an area of 189836 ha (18.24%).

Fig 1.8: Soil slope in Vijayapura district



Source: NBSS & LUP

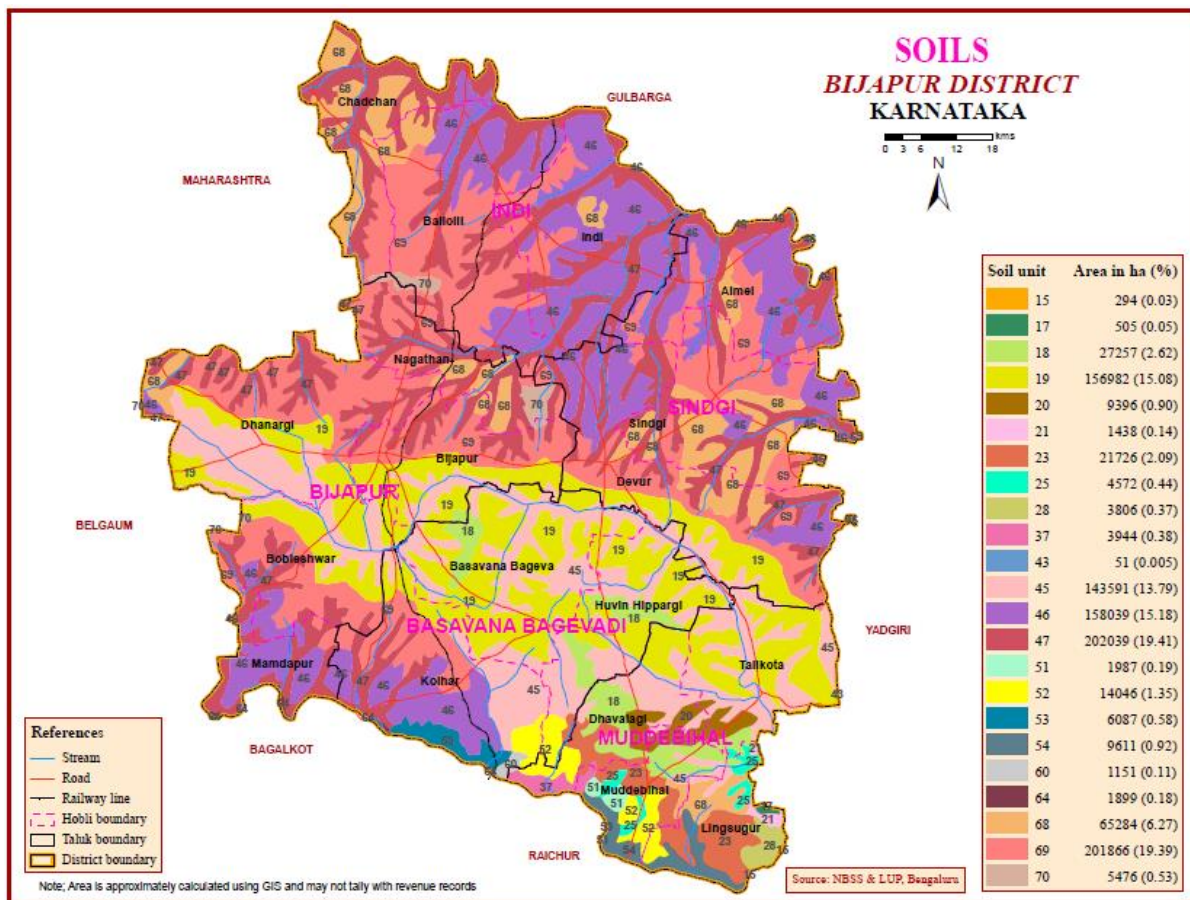
1.5 : Soil Profile:

The soils of the district are mainly of the soil order Vertisols, Inceptisols, Alfisols, Entisols and Aridisols. The area under Vertisols is 422820 ha (40.6 %), Inceptisols – 240978 ha (23.1%), Entisols 237532 ha (22.8%), Aridisols – 137880 ha (13.2 %) and over a small area of 1837 ha (0.02%) in Muddebihal taluk (Table 1.8 and Fig 1.9). Soils of the soil orders Vertisols and Aridisols occur mainly in Indi, Sindagi, Vijayapura and Basavana Bagevadi taluks, Inceptisols and Entisols mainly occur in Indi, Vijayapura and Sindagi taluks, while soils of the soil order Alfisols occur in Muddebihal taluk.

Table 1.8 : Soils of Vijayapura district

Sl. No.	Soil	Area (Ha)	% area	Characteristics
1	Vertisols	422820	40.6	Moderately deep to deep, moderately well drained to well drained, gravelly clay to calcareous cracking clay, on gently sloping interfluves and summits of mesas and at places on undulating interfluves with moderate erosion and in patches slight salinity.
2	Inceptisols	240978	23.1	Shallow to moderately shallow and at places moderately deep, well drained to somewhat excessively drained, gravelly clay and at places loamy. Occurring on gently sloping interfluves. At places gravelly in the sub-surface
3	Entisols	237532	22.8	very shallow to moderately shallow and at places very deep, well drained, clayey soils on undulating interfluves with very low AWC and with moderate erosion
4	Aridisols	137880	13.2	Shallow to moderately shallow and at places moderately deep, well drained, gravelly clay to calcareous clayey soils, gravelly in the sub-surface, on undulating interfluves and on summits of mesas, side slopes of plateaus with moderate erosion and very low AWC.
5	Alfisols	1837	0.2	very deep at places shallow, loamy to clayey, on undulating interfluves, well drained with very low AWC, with slight to moderate erosion.
Total		1041046	100	

Fig.1.9: Soils of Vijayapura district



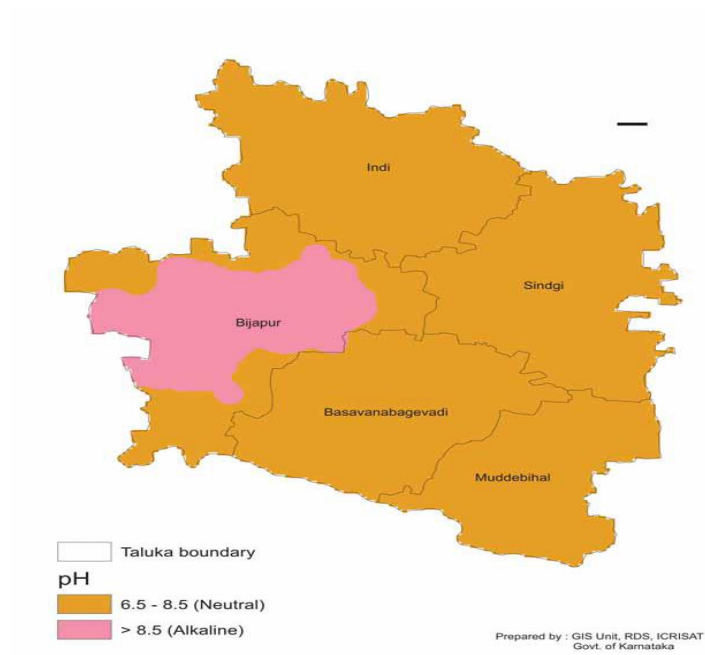
Source: NBSS & LUP

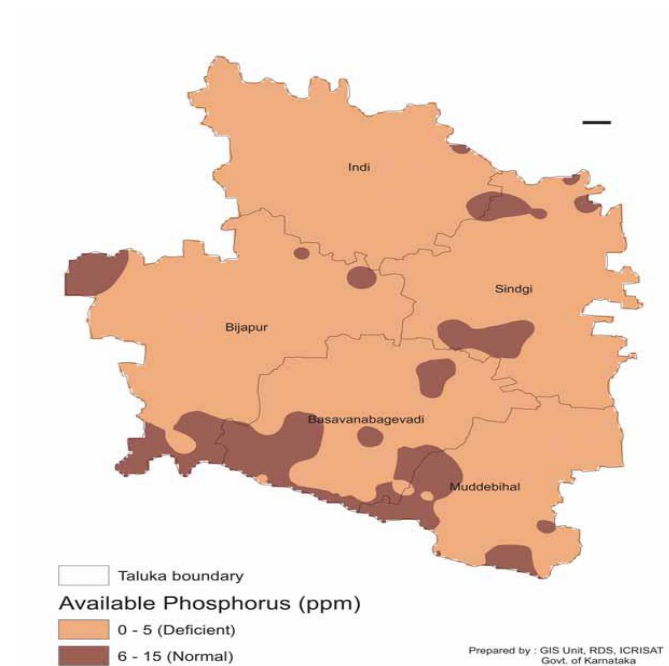
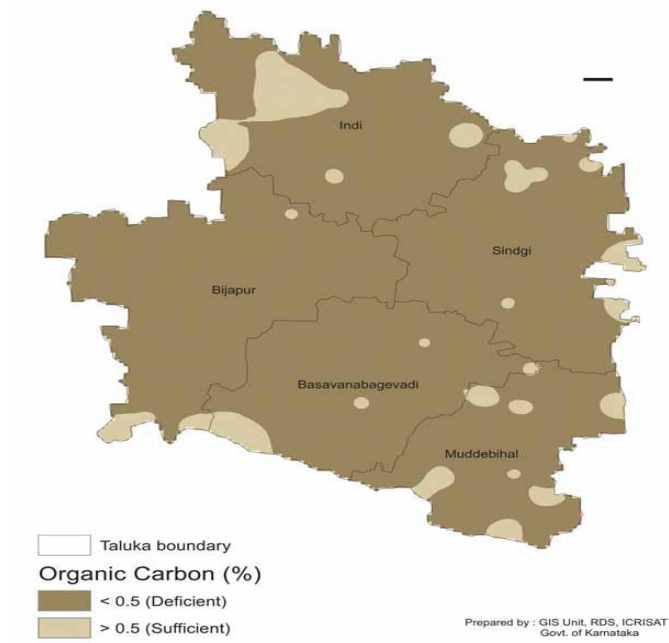
Fertility status of soils

All the soils of the district are neutral, but for a patch in north western corner of the district, while EC is normal throughout the district (Fig1.10). But, entire district has low organic carbon status (<0.5%), indicating the poor capacity of its soils to supply desired level of nitrogen to the crops. Entire district is deficient in phosphorus (<5 ppm), but for small patches adjoining Bagalkot district, the whole district has sufficient capacity to supply potassium (>50ppm). But, most regions are deficient in sulphur (except northern and north eastern parts) and all the regions are deficient in zinc. However, there are no deficiencies of Boron in the district.

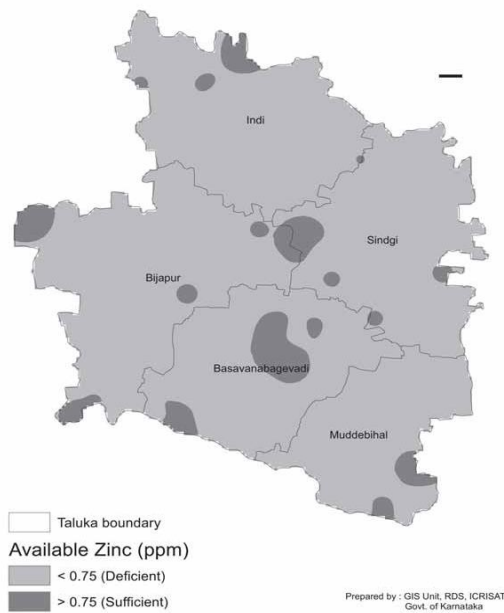
Almost entire district has normal EC values, hence, having no concern about salinity. Except for small patches in north western parts of Indi taluk and negligible patches in other taluks, all the soils in the district have low organic carbon status- indicating the major concern about the success of crops. Similarly, soils of the whole district are deficient in phosphorus, except southern parts of the district and small patches in Sindagi and Vijayapura taluks.

Fig 1.10 : Soil fertility map of Vijayapura district





All the soils of the district have adequate levels of potassium and there is no concern about the K status in Vijayapura soils. Major parts of Vijayapura, Basavana Bagewadi and Muddebihal taluks are deficient in sulphur (<10ppm), while, majority of soils in Indi and Sindagi are not experiencing sulphur deficiency. The whole district is deficient in zinc (<0.75 ppm), except for some small patches in B. Bagewadi taluks.



1.6 Soil Erosion, Land Capability Classes and Runoff Status:

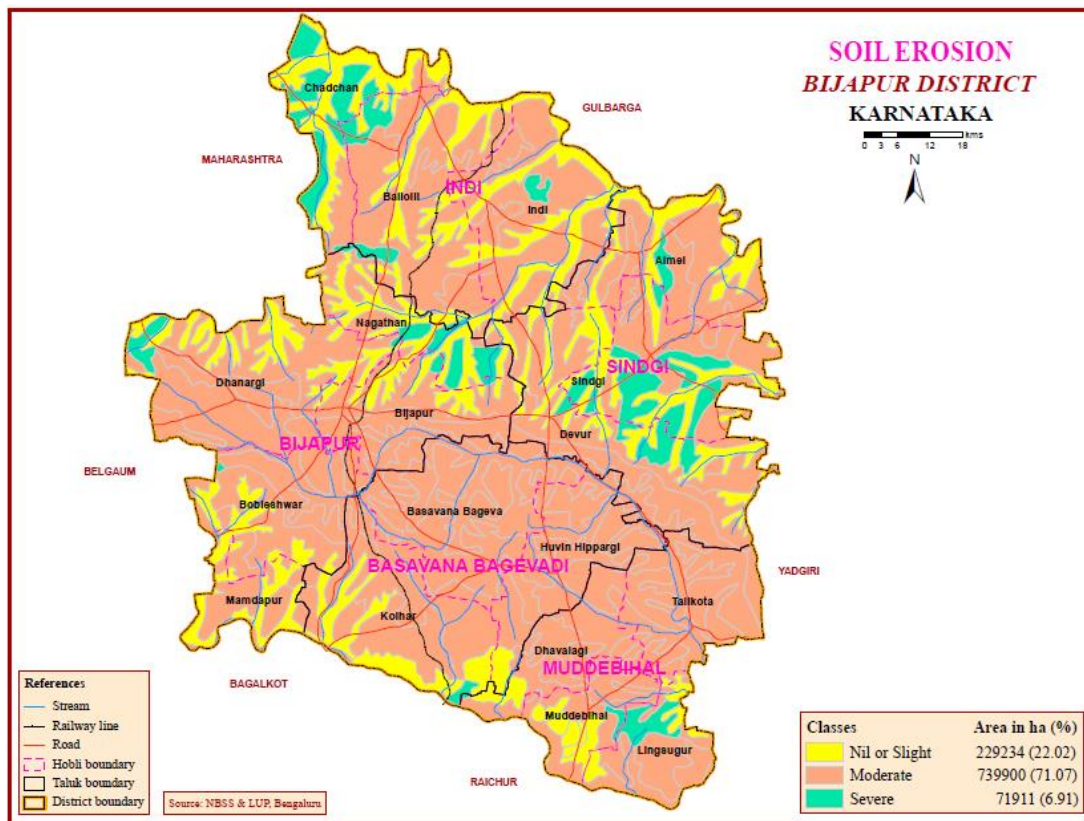
Soil erosion, which occurs at varying rates, is a wide spread threat to sustainable resource management. Major causes of soil erosion were cultivation without proper soil and water conservation measures in area not

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 land. 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 top soil. 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 Vijayapura district are mainly moderately eroded in an area of 739900 ha. (71.07 %) occurring in all the 5 taluks of the district (Fig 1.11). Soils with none or slight erosion account for 229234 ha. (22.02 %) of the district and are observed mainly in Indi, Sindagi, Vijayapura and Basavana Bagevadi taluks and in small area in Muddebihal taluk. Whereas, severely eroded soils occur in an area of 71911 ha. (6.91 %) occurring mainly in Indi and Sindagi taluks and at place in Vijayapura and Muddebihal taluks. Surface runoff is high in nearly 77.98 % 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.

Fig.1.11:Soil erosion in Vijayapura district



Source: NBSS & LUP

The lands in Vijayapura district are generally good cultivable lands and spread over an area of 431117 ha (41.42 %) and have problems of erosion and soil fertility. They mainly occur in all the 5 taluks of the district. An area of 335369 ha. (32.21 %) are classified as moderately good cultivable lands occurring in all the taluks and have problems of erosion and soil fertility in certain patches (Fig 1.11). Only 202039 ha. (19.99 %) are good cultivable lands occurring mainly in valleys in Indi, Sindagi and Vijayapura taluks and in a small area in Basavana Bagevadi and Muddebihal taluks. These soils have problems of poor soil fertility.

Fig 1.12: Land capability classes of soils of Vijayapura district

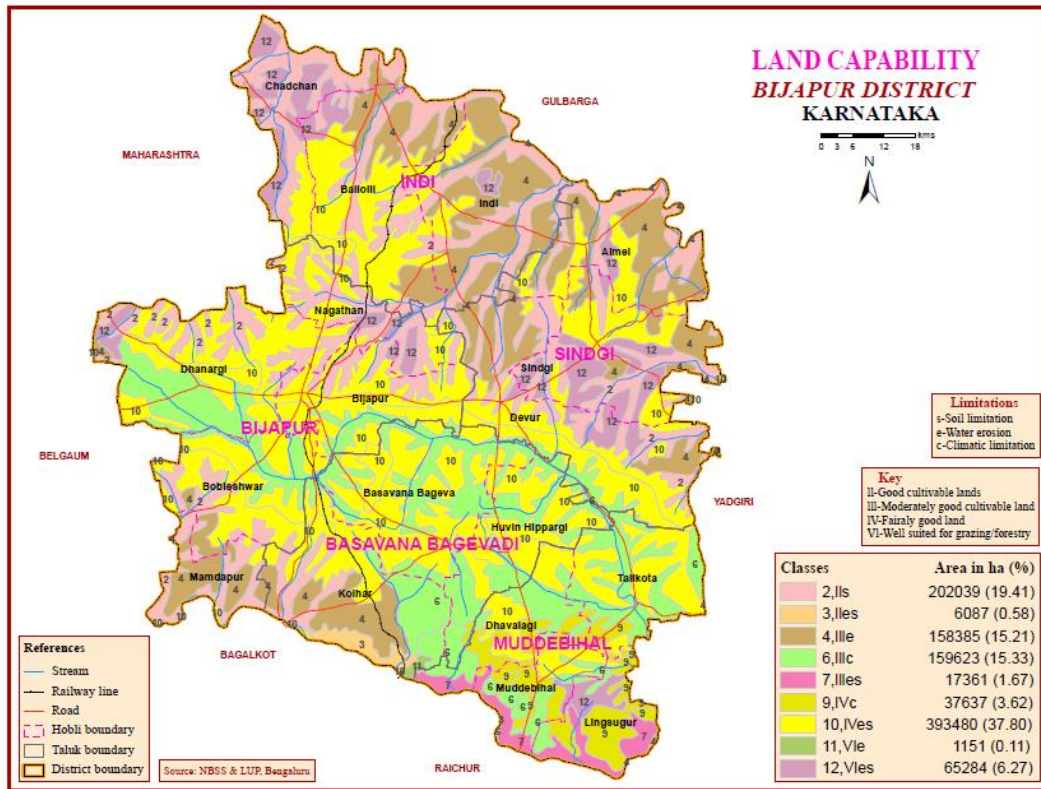
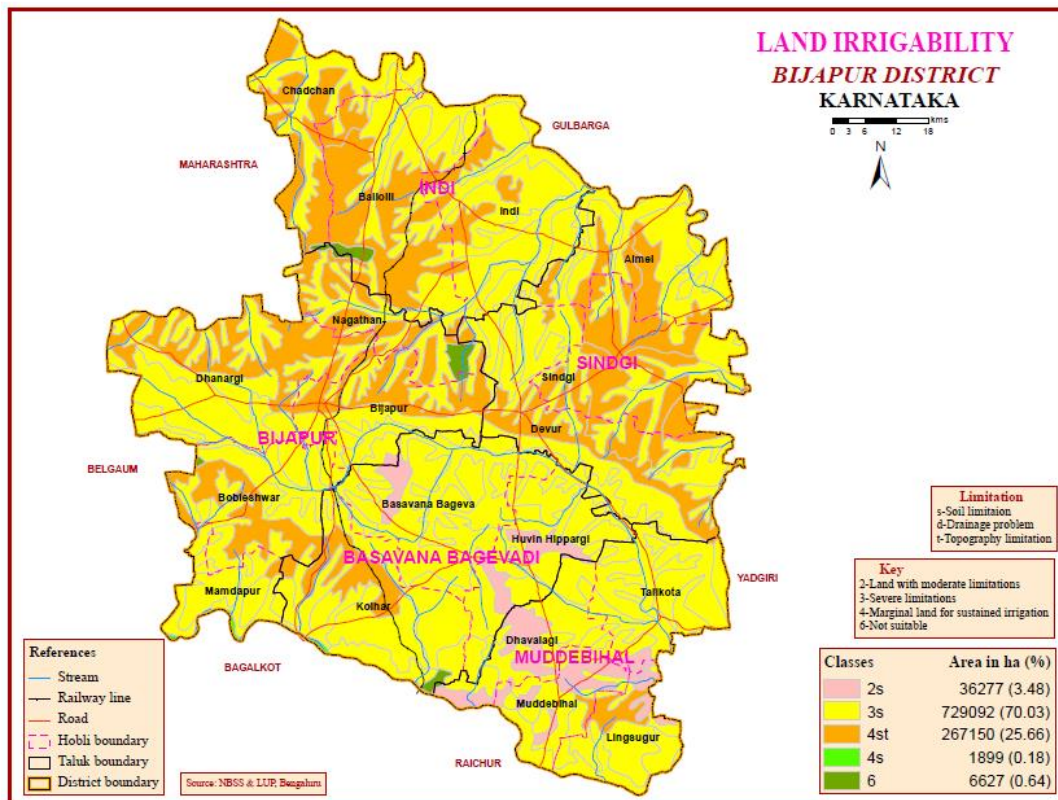


Fig 1.13: Irrigability classes in Vijayapuradistrict



1.7. Land Use pattern:

The total geographical area of the district is 1053471 ha. Vijayapura taluk has the highest geographical area of 265769 ha (25.23%), followed by Indi with 222492 ha (21.12%), Sindagi with 217601 ha (20.66%) and B. Bagewadi with 197865 ha (18.78%). Muddebihal taluk is the smallest with a geographical area of 149744 ha (14.21%). The gross cropped area of the district is 914880 ha and the net cropped area is 830084 ha (78.80%) of the geographical area of the district. Area sown more than once is 84796 ha and the cropping intensity works out to 110 % (Table 1.9).

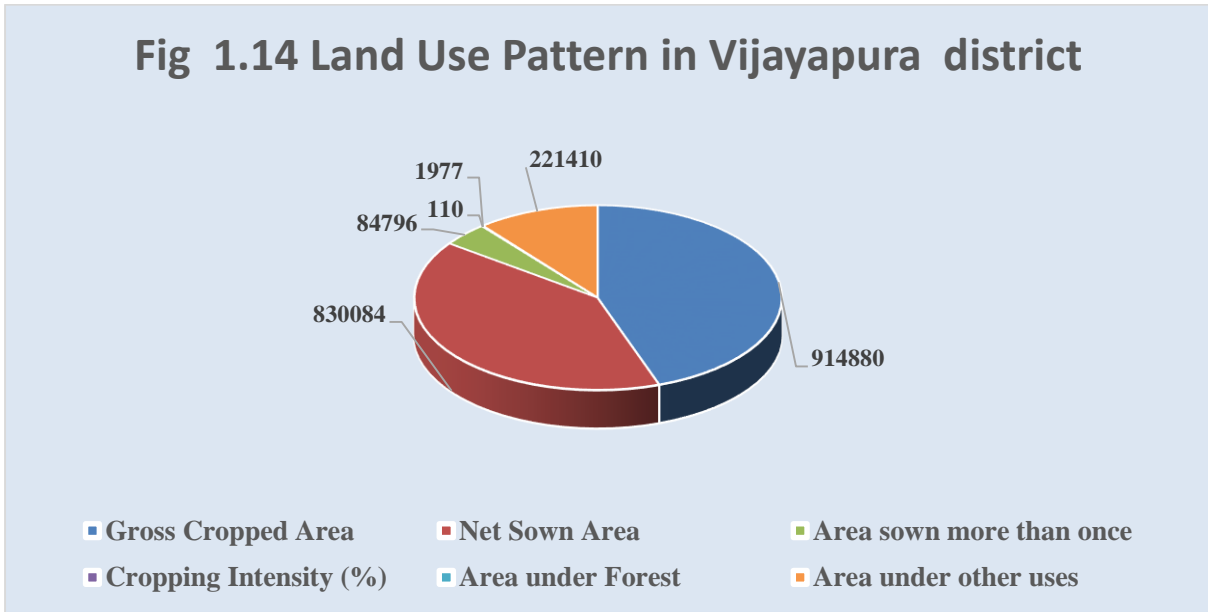
Table 1.9 : Land Use Pattern in Vijayapura district

Sl. No.	Name of the Block	Number of the Villages covered	Total Geographical Area (Ha)	Area under Agriculture				Area under Forest	Area under other uses
				Gross Cropped Area	Net Sown Area	Area sown more than once	Cropping Intensity (%)		
1	B.Bagewadi	125	197865	171975	156977	14998	110	1143	39745
2	Vijayapura	131	265769	215810	204645	11165	105	834	60290
3	Indi	133	222492	187599	169444	18155	111	0	53048
4	Muddebihal	153	149744	117300	107182	10118	109	0	42562
5	Sindagi	150	217601	222196	191836	30360	116	0	25765
	Total	692	1053471	914880	830084	84796	110	1977	221410

Source: District at a Glance

The Net sown area percentage is highest (24.41%) in Vijayapura taluk, followed by Sindagi (23.11%), Indi (20.41%) and B. Bagewadi (18.91%). Net sown percentage area is lowest (12.91%) in Muddebihal taluk.

Fig 1.14



CHAPTER II

DISTRICT WATER PROFILE

2.1. Area Wise, Crop Wise irrigation status:

Totally, field crops are cultivated on a gross area of 958804 ha in Vijayapur district. Under irrigated condition, various crops are cultivated in an area of 354472 (37%) and under rain fed condition on a gross area of 604332 ha (63%) as at the end of 2014-15. Annexure 4 appended to this report narrates the season wise and taluk wise cropping pattern in the district. During kharif season, cropped area covered is 273082 ha (28.5%), comprising 121371 ha (44.4%) under irrigated and 151711 ha (55.6%) under rainfed condition. During rabi season, field crops are cultivated in an area of 666419 (69.5%), comprising 158803 ha (23.8%) under irrigated and 507616 ha (76.2%) under rainfed condition. During summer season, field crops are cultivated under irrigated condition on an area of 19303 ha (2.0%).

2.2. Production and productivity of major crops:

Taluk wise, season wise, crop wise area sown, production, and productivity of various crops under rainfed and irrigated condition are furnished at Annexure 5. In general, under irrigated condition all the crops have recorded higher yields than under rainfed condition. In the district, totally 8182101 qtls (2014-15) of various agricultural crops production is recorded comprising 47.7% (3900938 qtls) under rainfed and 52.3% (4281163 qtls) under irrigated condition. Among the taluks, Vijayapura accounts for highest production 2132959 qtls (26.1%), followed by Sindagi with 1975255 qtls (24.1%), Indi with 1767509 qtls (21.6%) and B. Bagewadi with 1532452 qtls (18.7%). Lowest production of 773926 qtls (9.5%) is observed in Muddebihal taluk.

In case of cereals, highest yield ranging from 4686 Kg/ha to 2775 Kg/ha is observed in maize crop, in case of pulses highest yield ranging from 610 Kg/ha to 882 Kg/ha is observed in redgram and in case of oilseeds, highest yields are observed in groundnut ranging from 799 Kg/ha to 417 Kg/ha.

2.3. Irrigation based classification:

Five taluks have no major rivers and the district is well known for erratic unpredictable low rainfall. Despite this, the district has advantage of canal irrigation from Almatti dam.

The irrigation based classification is presented in Annexure 6. The net irrigated area of the district is 309816 ha. The major source of irrigation in Vijayapura district will be the canal water from Upper Krishna Project, Almatti. It is irrigating 60 % of the presently irrigated area. Bore wells irrigate around 25% and open wells irrigate around 10% of net irrigated area. Other sources of irrigation like Lift and tanks contribute a smaller area of around 5%.

Table 2.1: Irrigation based classification (2014-15)

Sl.No.	Block	Irrigated (Area in ha)		Rainfed (Area in ha)
		Gross Irrigated Area	Net Irrigated Area*	Un-Irrigated or Totally Rainfed
1	B.Bagewadi	49513	42109	122462
2	Vijayapur	67508	58708	148302
3	Indi	98025	86386	89574
4	Muddebihal	26361	23222	90939
5	Sindagi	113065	99391	109131
	Total	354472	309816	560408

Source: JDA, Bijapur

CHAPTER III

WATER AVAILABILITY

3.1. Status of Water availability:

Vijayapura district was well known for a typical drought prone agriculture for many decades. The un-predictable rabi dominated rainfall was not supporting the main kharif season crops. The crop production activity was in serious jeopardy, resulting into chronic problems of rural poverty and poor livelihood situations. To address the problems of crop production by utilizing the rain water more efficiently, dryland agriculture research centre was established in Vijayapura in 1940s. The farmers of Vijayapura district were practicing agriculture with these constraints for many generations. The dryland agriculture practices popularized in 1980s and 1990s, helped many farmers to achieve improvement in crop production.

The major leap in crop production occurred after construction of Upper Krishna Dam, Almatti. At present, Vijayapura district has got surface water resource to the tune of 2.529 BCM through canals (including lift irrigation from canals) and 0.05 BCM through minor irrigation tanks and 0.546 BCM through ground water totalling to 3.125 BCM. These surface and ground water resources have changed the water availability status to agriculture in a great way and improved the crop productivity.

Out of the total surface resources, major contribution is from Lift Irrigation Schemes (Mulwad lift irrigation east canal, Mulwad lift irrigation west canal, Chimmaligi lift irrigation scheme and Mulwad lift irrigation scheme), which provides 2.369 BCM. The contribution of lift irrigation to the district's resources to the tune of 2.369 BCM, has also improved the irrigation status of Indi, B. Bagewadi, Muddebihal, Sindagi and Vijayapura taluks. The major irrigation canal – Almatti left bank canal (ALBC) provides water to the tune of 0.16 BCM,

irrigating crops in B. Bagewadi and Muddebihal taluks. The minor irrigation tanks (152) have a meagre contribution of 0.05 BCM irrigating limited area (Table 3.1). The scope of using the treated effluents is limited by the availability of sewers (under-ground drains), which is presently not covering all the urban establishments. Thus, total water available from major, lift irrigation and minor irrigation tanks is 2.579 BCM.

Due to limited availability of canals, taluks like B. Bagevadi, Vijayapura and Muddebihal have relied on open wells and bore wells for irrigated agriculture. As compared to other parts of the State, the open wells are still successfully used covering 69,565 ha under irrigation. Similarly, bore wells are in large numbers in B. Bagevadi and Vijayapura taluks than other taluks.

Table 3.1: Status of Water Availability

Sl. No.	Sources	Total, BCM
1	Surface Irrigation	
i	Canal (Major & Medium Irrigation)	
	Almatti left bank canal (ALBC) (B. Bagewadi, Muddebihal taluks)	0.16
ii	Minor Irrigation tanks	0.050
iii	Lift Irrigation/Division	
a.	Mulwad Lift Irrigation East canal (B. Bagewadi taluk)	0.239
b.	Mulwad Lift Irrigation West Canal (B. Bagewadi, Vijayapura taluks)	
c.	Chimmaligi Lift Irrigation Scheme (B. Bagewadi, Muddebihal, Sindagi Vijayapura, Indi taluks)	0.589
d	Mulwad Lift Irrigation Scheme – 3 rd stage (B. Bagewadi, Muddebihal, Sindagi, Vijayapura and Indi taluks)	1.541
Total of Lift Irrigation Scheme (iii a to iiic)		2.369
iv	Various Water Bodies including Rain Water Harvesting	--
v	Treated Effluent Received from STP	--
vi	Untreated Effluent	--
vii	Perennial sources of water	--
Total surface water		2.579
2	Ground Water	
i	Open Well	
ii	Deep Tube Well	
iii	Medium Tube Well	
iv	Shallow Tube Wells	0.546
Total of ground water		0.546
Grand Total		3.125

3.2 Status of Ground water availability:

The overall availability of net annual ground water in Vijayapura district is to the tune of 0.54661 BCM which is mainly distributed in Indi taluk (0.14657 BCM), Vijayapura taluk (0.13936 BCM) and Sindagi taluk (0.10695 BCM). The total annual ground water recharge is seriously restricted in Muddebihal taluk (0.0632 BCM), although 45% of the geographical area is either in safe (12%) or semi-critical zones (33%) as far as ground water development is concerned.

The overall ground water development is encouraging in Vijayapura district with level of over exploitation ranging from 15 % in Vijayapura taluk to 59 % in Sindagi taluk. The scope of utilizing the ground water by further exploration is available in all the taluks. However, the safe area for ground exploration ranges from 33 to 36 % in Vijayapura, Indi and Sindagi taluks, indicating the potentiality to go in for more bore wells in these taluks. In Muddebihal and Sindagi taluks, the over exploited regions are ranging from 55 to 60 %, which warrants the limited exploitation (Table 3.2).

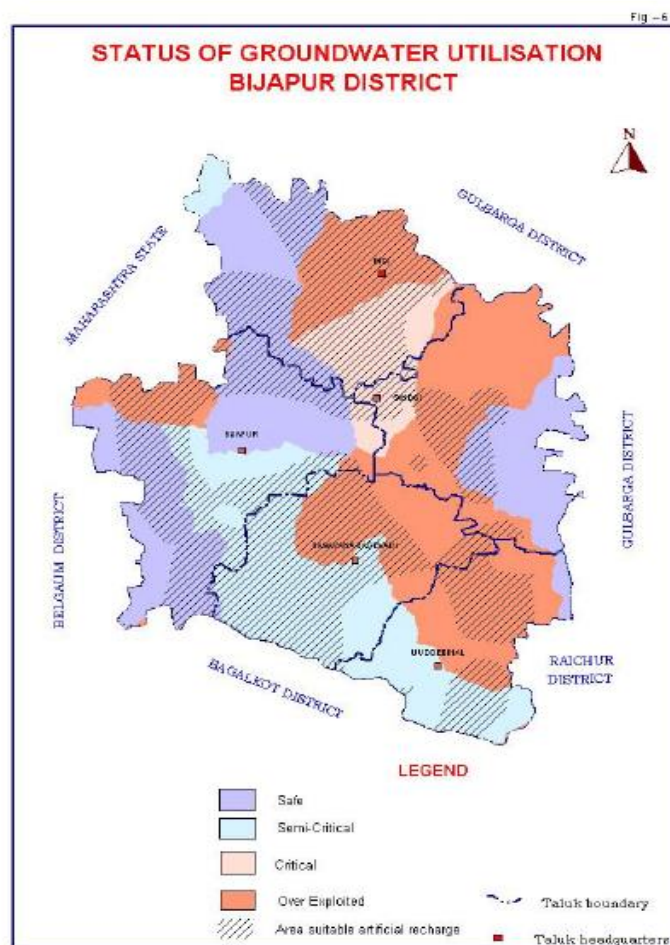
Besides exploring the deep aquifers, there is an excellent scope to harness the shallow ground water by open wells in Indi, Sindagi and Vijayapura taluks. Due to large area of the district covered by heavy clay soils, the infiltration of the rain water is restricted and the natural recharge of shallow ground water is limited. Despite this, the scope of using the shallow ground water in the form of open wells is brighter in canal irrigated areas of Indi and Sindagi taluks (Table 3.2, Fig. 3.1).

Table 3.2: Status of Underground Water Availability

Taluks	Net annual underground water availability, BCM	Total annual ground water recharge, BCM	Gross ground water for irrigation draft, BCM	Categorisation of taluks as (% area basis)			
				Safe	Semi-critical	Critical	OE
B. Bagewadi	0.09318	0.09795	0.05808	1	55	--	44
Vijayapura	0.13936	0.14501	0.05637	33	22	30	15
Indi	0.14658	0.15427	0.10163	36	4	29	31
Muddebihal	0.06054	0.06325	0.03094	12	33	--	55
Sindagi	0.10695	0.11257	0.06327	33	--	8	59
Total	0.54661	0.57304	0.31028				

Source: CGWB report

Fig. 3.1: Status of underground water in Vijayapura district



3.3. Status of Command area:

The command area in Vijayapura district is divided as i) Indi Branch canal, ii) Nagathan Branch canal, iii) Korwar Branch canal, iv) Four Lift Irrigation Schemes viz., Indi Lift canal, Mulwad Lift canal, Chimmalagi Lift canal and Herkal Lift canal. Out of them, Indi Branch canal, Indi Lift canal are already completed and irrigating 138329 ha. Nagathan Branch and Korwar Branch canal, which are expected to irrigate 48303 ha, are in the final stages of completion. Out of lift irrigation canals, Mulwad Lift irrigation canal is in final stages of completion and expected to irrigate 227966 ha in Basavana Bagevadi, Sindagi, Muddebihal and Indi taluks. Indi Lift irrigation canal is expected to create irrigation facility to 29073 ha. Similarly, Herkal Lift irrigation and Chimmalagi Lift irrigation canal, when completed, will irrigate 96315 ha. in Basavana Bagevadi, Muddebihal, Sindagi and Indi taluks (Table 3.3).

Table 3.3: Status of Command area in Vijayapura district

Sl. No.	Canal Name/lift canal	Name of the Taluka	Information of Canal Command		
			Total Irrigated Command Area	Developed Area/Notified Area	Undeveloped Area
1	Indi Branch Canal (0.00 172.00 km.)	Sindagi	47,160.00	47,196.87	0.00
		Indi	53,269.00	48,748.68	4520.32
IBC Total			100,429.00	95,945.55	4520.32
2	Indi lift canal (0.00 to 97.30 km)	Sindagi	37,900.00	37,900.00	0.00
ILC Total			37,900.00	37,900.00	0.00
3	Indi lift canal (97.30 to 147.00 km)	Sindagi & Indi	29,073.00	Work under progress	
4	Nagathan Branch Canal (0.00 to 99.70)	Sindagi	18,968.00	Work under progress	
		Indi	5,450.00		
		Vijayapura	4985.00		
5	Korwar Branch Canal (0.0 to 45.60 km)	Sindagi	18,900.00		
CLIS Total			48,303.00	0.00	0.00
6	Chimmalagi Lift canal	Sindagi	87,067		
7	Mulwad Lift canal	Indi	2,27,966		
8	Herkal Lift Canal	Muddebihal & B.Bagevadi	9248		
Total of Sl.No. 6 to 8			3,24,281		
Grand Total			5,10,913		

In the final analysis, Vijayapura district will have 61.5 % of net cultivated area under irrigation from canals only, after completion of above named projects. From the present structures of completed and structures nearing completion, a total of 510913 ha. is expected to be irrigated by canals or lift from canals. It includes the canal irrigated area of 118173 ha which is already getting water.

3.4. Existing type of irrigation:

The major source of irrigation in Vijayapura district will be the canal water from Upper Krishna Project, Almatti. It is presently irrigating 118173 ha contributing 38 % of the presently irrigated area (309811 ha). Bore wells irrigate around 1.05 lakh ha and open wells irrigate around 69565 ha. Other sources of irrigation like Lift and tanks contribute a smaller area of around 16866 ha.

The major part of irrigation water from UKP, Almatti, is reaching Sindagi and Indi taluks through the canal network (approximately 199802 ha). Other taluks benefited by the canal from UKP are Muddebihal and B. Bagevadi. When all the pending canal works are completed, the area covered by canals may reach 510913 ha.

Out of the area covered by bore wells (105207 ha), Vijayapura has largest area (30355 ha) and lowest in Sindagi (25560 ha). In other taluks like B. Bagevadi and Indi, bore well area ranges from 20811 to 21378 ha. The open wells are still functioning successfully in all the taluks of Vijayapura district irrigating 69565 ha. The major open well irrigated area lies in Vijayapura, Sindagi and Indi taluks (Table 3.4).

Table 3.4: Existing type of Irrigation (area irrigated, ha)

Taluk	Canal	Lift	Open wells	Borewell	Tanks	Others	Total
B. Bagevadi	118173	0	9615	21378		913	309811
Vijayapura		0	16783	30355	631	1054	
Indi		1989	18173	20811	640	10108	
Muddebihal		0	2449	7103		95	
Sindagi		0	22545	25560	235	1201	
Total		118173	1989	69565	105207	1506	

Source: District at a Glance

3.5. Water available from various sources:

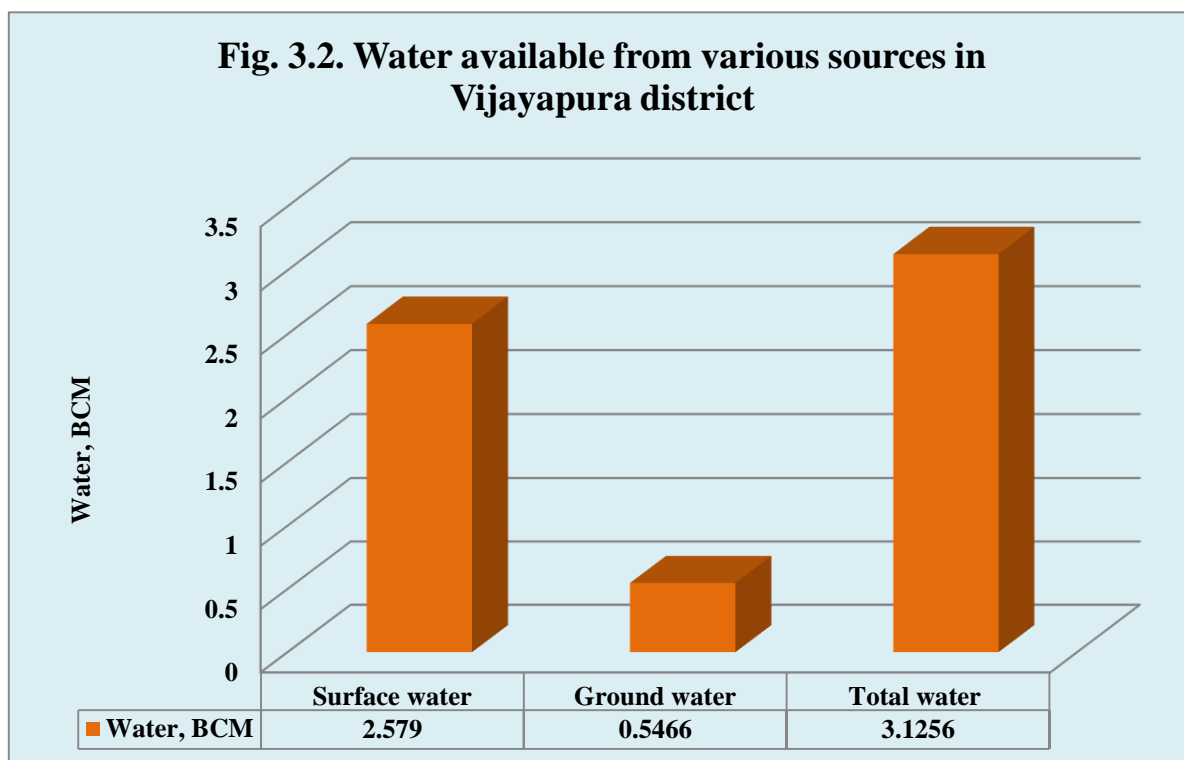
Water is available from underground water (as per Central underground Board Booklet, 2012), canals, lift irrigation and tanks (maintained by Zilla Panchayats and Minor Irrigation). Total water available for the district from underground tube wells is 0.54661 BCM and these wells are safe in taluks – Vijayapura and Muddebihal. There is less scope for further improvement unless proper recharge structures are created. Water from irrigation canals (Major and medium), minor irrigation tanks (maintained by Zilla Panchayats and Minor Irrigation Departments), lift irrigation and other water bodies is 2.579 BCM. Here also, efforts are to be made to recharge these tanks for utilization – mostly for drinking, industrial or other purposes (Table 3.5). Further, water from canals is providing drinking water facility to some of the taluks.

The total water available from various sources for Vijayapura district is 5.110367 BCM (Table 3.5, Fig. 3.2).

Table 3.5 : Water availability from various sources in Vijayapura district

Taluks	Underground water, BCM #	Surface water from canals & other sources##	Total
B. Bagevadi	0.0931808	2.579	3.1256103
Vijayapura	0.1393616		
Indi	0.1465765		
Muddebihal	0.0605381		
Sindagi	0.1069533		
Total	0.5466103	2.579	3.1256103

- Central Underground Water Board Booklet, Vijayapura district- 2012; ## - Surface water from canals (major and medium), minor irrigation tanks, lift irrigation.



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 1194 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 Mham) 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 (Bhaskar *et al.*, 2016).

Karnataka has total geographical area of 19.05 million ha receiving an annual precipitation of 1133.3 mm (average of 55 years from 1960 to 2014). About 71% of rainfall is received during south west monsoon (June to September), while north 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 Billion cubic m 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 1133.3 mm. The state is divided into four meteorological divisions, 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 1286 and 731 mm of average annual rainfall. (https://en.wikipedia.org/wiki/Rainfall_in_Karnataka).

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); (https://en.wikipedia.org/wiki/Geography_of_Karnataka).

Vijayapura district has a total geographical area of 1049,800 ha receiving an annual precipitation of 63.2 cm. Vijayapura and B. Bagewadi taluks receive higher rainfall of 67.5 to 67.7 cm, followed by Sindagi, Muddebihal and Indi taluks (63.6 to 65.5 cm). Most of the rain (67.7%) is received during south west monsoon (June to September). 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 691553.1 ha-m to Vijayapura (6.915531 Billion cubic meter, BCM). Following NCA 1976 recommendation, out of 6.915531 BCM of water, 53.8% percolates into soil (3.7205557 BCM), 17.5% as immediate evaporation loss (1.210218 BCM), 28.7% as surface water runoff (1.984757 BCM) and 12.5% as underground water (0.864441 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 litres 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].

During 2015, water requirement for domestic use in Vijayapura taluk is relatively higher (0.0383735 BCM), while, it was lower in taluks of Muddebihal and B. Bagewadi (0.0154697 to 0.0185579 BCM). The water requirements in these taluks corresponded to the prevalent population. For the district, as whole, water demand is 0.1158710 BCM in 2015 (Table 4.1). With projected growth of population of 20% during 2011 to 2020, the domestic water requirements in Vijayapura taluk would be relatively higher (0.0419265 BCM), while it would be lower in taluks of Muddebihal and B. Bagewadi (0.0169021 to 0.0202762 BCM) (Table 4.1, Fig. 4.1).

Thus, domestic water requirement is projected at 0.1265998 BCM in 2020 from the present consumption level of 0.1158710 BCM during 2015 (Table 4.1, Fig. 4.1).

Table 4.1: Domestic water demand (BCM) of Vijayapura district – Present and projected 2020

Blocks/ Taluks	Population in 2011	Water demand, BCM	Population in 2015	Water demand in 2015, BCM	Projected population, 2020	Projected water demand by 2020, BCM
B.Bagewadi	348,721	0.017183	376,619	0.0185579	411,491	0.0202762
Vijayapura	721,075	0.035531	778,761	0.0383735	850,869	0.0419266
Indi	421,169	0.020753	454,863	0.0224134	496,979	0.0244887
Muddebihal	290,691	0.014324	313,946	0.0154697	343,015	0.0169021
Sindagi	395,675	0.019497	427,329	0.0210566	466,897	0.0230063
TOTAL	2,177,331	0.107288	2,351,517	0.1158710	2,569,251	0.1265998

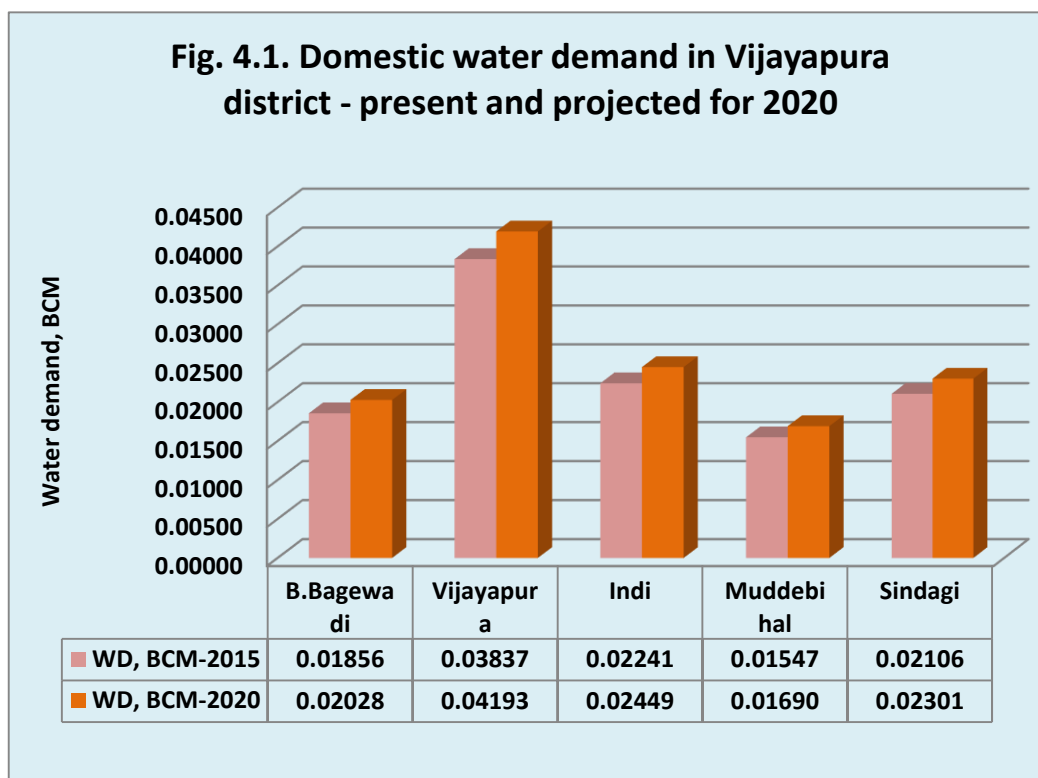
Water requirement for human being - 135 litres/head/day, lphd;

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 20% similar to as that of decadal growth rate of population of 20.2% observed during 2001-2011.

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



4.2. Water requirement for crops:

Field/horticultural/plantation crops grown in Vijayapura district are maize, groundnut, sunflower (both in Kharif & rabi), cotton, bajra, Tur, black gram, green gram, cowpea, avare, safflower, horse gram, linseed, sesamum (in Kharif only), Bengal gram, wheat, (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 maize - 60 cm, bajra - 45 cm, red gram - 70 cm, groundnut - 45 cm, sunflower/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 Vijayapura district, considering the soil type (vertisols, sandy clayey soils) and the intensity of rain. This rain water will be available for crop growth under rainfed conditions and same is used for calculation of water use by rainfed crops.

Net water requirement of irrigated crops is relatively higher (3.22969 BCM) in view of large area of various crops grown (maize, groundnut, jowar, wheat, bengal gram, sugarcane, cotton) in Indi and Sindagi taluks. Whereas, water requirement of rainfed crops is 0.6921313 BCM in view of large under crops (bajra, tur, jowar, sunflower, bengal gram) in taluks of Vijayapura and Sindagi. Water demand for total horticultural crops is 0.08193 BCM for Vijayapura district, of which major share goes to vegetable crops (0.0481696 BCM), followed by fruit crops (0.033757 BCM). Further, water demand of total horticulture crops is more in B. Bagewadi and Vijayapura taluks as compared to other taluks. The total water demand of all crops put together is 3.31162 BCM during 2015. 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 area under micro irrigation and other means. For Vijayapura district, the projected total water demand for crops is 3.642779 BCM by 2020 as compared to the present demand of 3.31162 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 Vijayapura district - 2014-15**

Taluku	Fruit crops	Vegetable crops	Total - Horticulture crops	Irrigated crops	Rainfed crops	Agriculture crops (Irrigated + Rainfed)	Total crops
	Net Water requirement, BCM						
B.Bagewadi	0.0020367	0.0258550	0.0278917	0.280132	0.1517151	0.4318465	0.4597382
Vijayapura	0.0187580	0.0078676	0.0266256	0.41294	0.1570949	0.570035	0.5966606
Indi	0.0077689	0.0060098	0.0137787	0.927984	0.0987324	1.0267155	1.0404942
Muddebihal	0.0010841	0.0030999	0.0041840	0.116372	0.1346789	0.2510505	0.2552345
Sindagi	0.0041098	0.0053373	0.0094471	0.805052	0.1499099	0.950043	0.9594901
Total	0.0337575	0.0481696	0.0819271	2.542479	0.6921313	3.2296905	3.3116176
Projected for 2020 - 10% increase	0.0371333	0.0529866	0.0901198	2.7967269	0.7613444	3.5526596	3.6427794

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/wheat - 55 cm, Bajra - 45 cm;

Here 50% of rainfall is accounted as water available for crop use on cultivable land, considering the intensity of rain and soil type- black clayey, red clayey soils. This amount of rain water has been used for rainfed crops, while working out water requirement for rainfed crops; Irrigation water requirement, ha - cm = Area of the crop, ha X Water requirement of the crop, cm; One ha-cm = 1,00,000 litres or 100 cubic meters; Source: Vijayapura district at a glance 2013-14

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

Fig. 4.2. Water demand of total crops taluk wise in Vijayapura district - 2015 and 2020

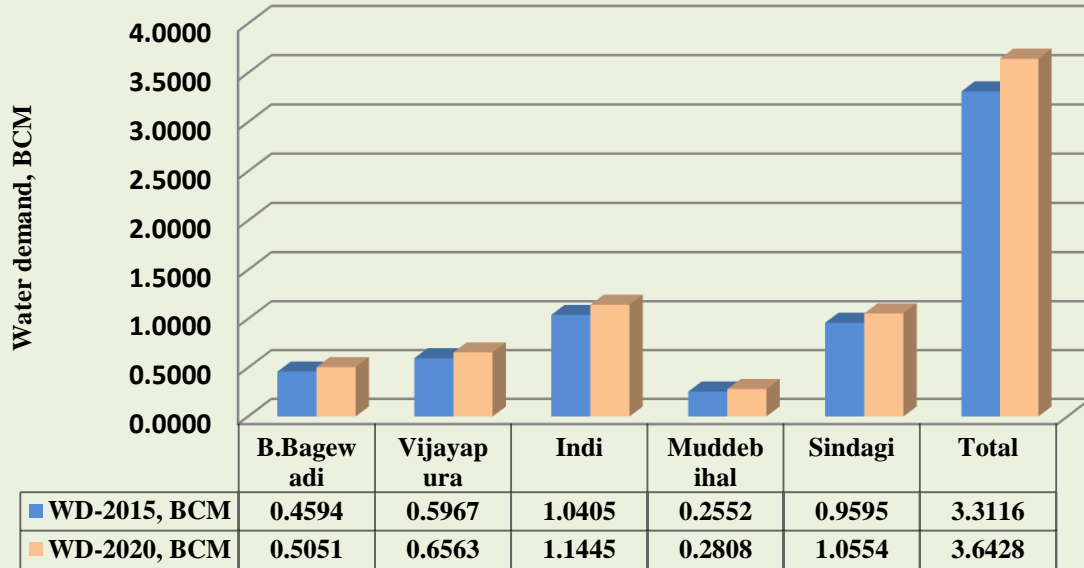
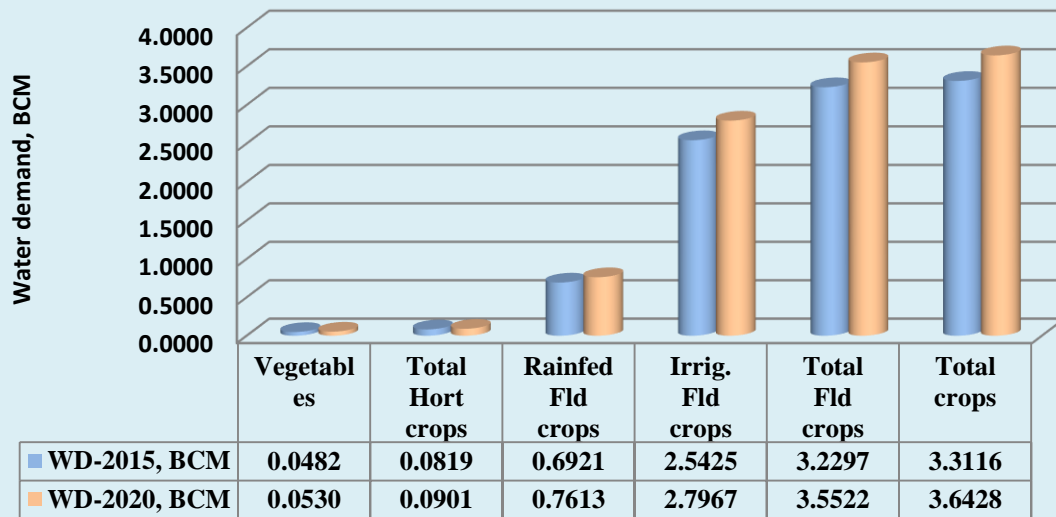


Fig. 4.2a. Water demand crop wise in Vijayapura district - 2015 and 2020



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](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% 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 live stocks for 2012 and projected for 2020 is provided taluk wise in Table 4.3.

Total population of livestock and other animals in Vijayapura district is 1456,730 during 2012 and their water requirement is 0.0075129 BCM. Considering the increase in the population of livestock at 5% from 2012 to 2020, their water demand would be 0.0078886 BCM with corresponding population of 1529,567 (Table 4.3, Fig. 4.3). Water demand of livestock is more in Indi and Vijayapura taluks, followed by Sindagi and B. Bagewadi, while it is very less in Muddebihal taluk, as reflection of livestock population in these taluks.

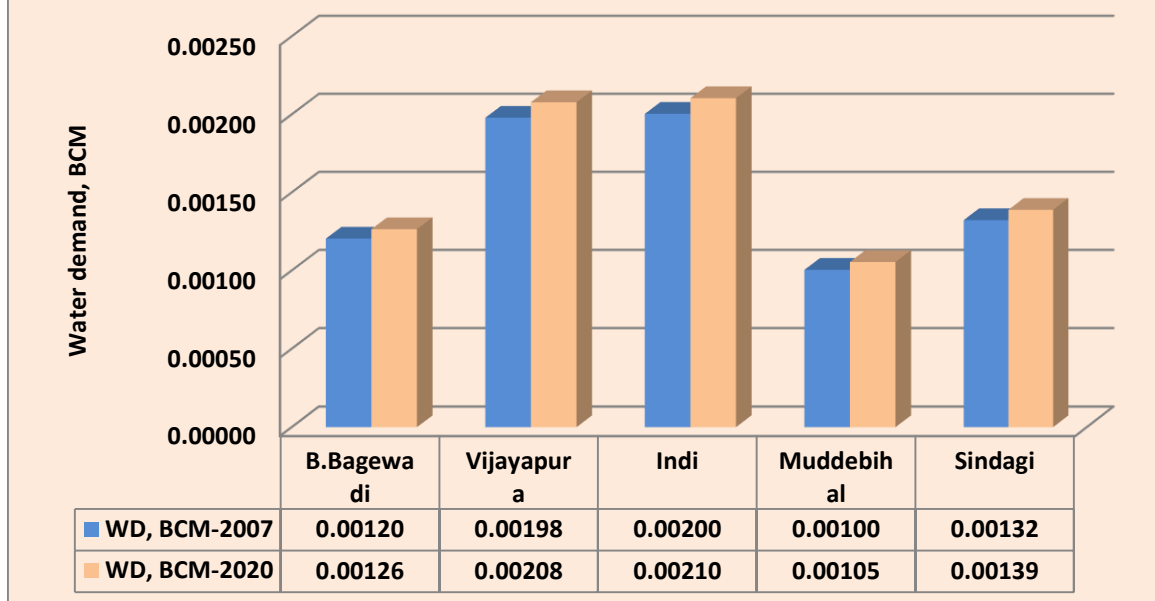
Table 4.3 : Water requirement of livestock and other animals in Vijayapura district in 2007 and projected for 2020

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
B. Bagewadi	277513	0.00120416	291389	0.00126437
Vijayapura	395419	0.00197854	415190	0.00207746
Indi	329512	0.0020036	345988	0.00210378
Muddebihal	232074	0.0010043	243678	0.00105452
Sindagi	222212	0.00132231	233323	0.00138843
Total	1456730	0.00751291	1529567	0.00788856

Water requirement for various livestock: litres/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 =

Fig. 4.3. Water demand of livestock and other animals in Vijayapura district - 2015 and 2020



{(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, Vijayapura, Vijayapura District at a glance - 2013-14

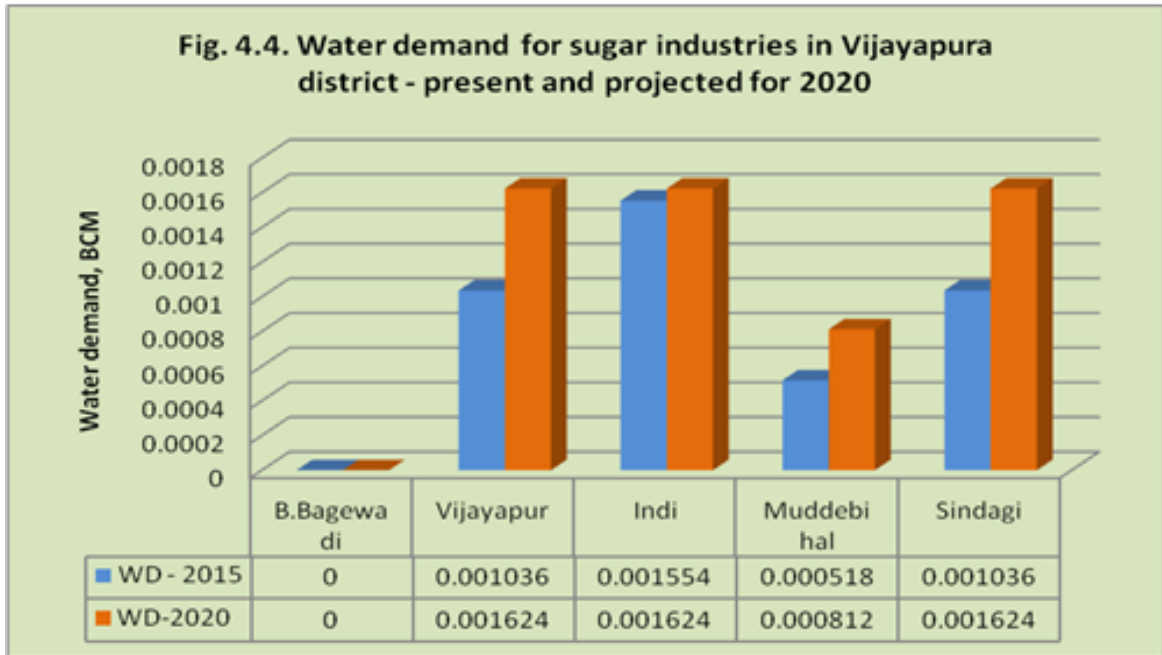
4.4. Water demand for Industry

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 Vijayapura district, there are 8 Sugar Industries, of which 3 industries exist in Indi, 2 each in Vijayapura and Sindagi. However, no sugar industry is located in B. Bagewadi taluk. Total water demand at present (2015) for 8 industries put together is 0.004144 BCM, of which major share goes to Indi taluk with three sugar industries. The projected demand for 2020 is 0.005684 BCM (which is more than 35%) (Table 4.4, Fig. 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 economically value in reusing wastewater for purposes where water quality is not an important criterion. There is a 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 Vijayapura district - Present and future demand by 2020

Sl. No.	Name of the Industry	Water demand, BCM	
		2015	2020
Sugar Industries			
1	B. Bagewadi (No sugar Industries)	0	0
2	Vijayapura (2 Sugar Industries)	0.001036	0.001624
3	Indi (3 Sugar Industries)	0.001554	0.002436
4	Muddebihal (1 Sugar Industry)	0.000518	0.000812
5	Sindagi - Renuka Sugars	0.000336	0.000924
	Manali Sugars	0.0007	0.0007
Total		0.001036	0.001624
Grand Total		0.004144	0.005684

Source: Superintending Engineer, KBJNL, Rampur; Vijayapura District at a glance - 2014-15
Information available on water requirement for Sindagi taluk has been used to generate water requirement for other sugar Industries.

Water for Sugar Industries in Sindagi is obtained from back waters of Bhima River;

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 Vijayapura district, power generation is being made from Almatti reservoir, which uses water amounting to 0.1196356 BCM to generate 290 MW power (Table 4.5). The water demand for 2020 would be the same. Of course, this quantum of water is used for irrigating crops or for other purposes. There is no additional power generation is suggested in future for Vijayapura district.

Table 4.5 : Water demand for power generation in Vijayapura 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
Almatti reservoir	290 MW	0.1196356 BCM*	None	0.1196356 BCM

* 47,000 cusecs of water at head of RL 518.00 M;

Source - Chief Engineer, KBJNL Dam, Zone Almatti

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, nurses' 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 person 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 0.011587 BCM in 2015, whereas the amount would be 0.01266 BCM by 2020 (Table 4.6, Fig. 4.5).

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

At present, water demand for all purposes in Vijayapura district is 3.57037 BCM, of which major share goes to crops' demand of 3.31162 BCM (92.8%). The next share of water demand is for domestic and power generation, amounting to 0.115871 BCM (3.2%) and 0.119636 BCM (3.4%), respectively. The water demand of livestock, industries and other purposes is around 0.6% of the total (Table 4.6, Fig. 4.5, 4.6). The projected water demand of various sectors for 2020 followed the same trend of 2015 and would be to the tune of 3.91525 BCM. The total water demand of various sectors is more in Indi taluk, followed by Sindagi and Vijayapura taluks, while is relatively lower in B. Bagewadi taluk.

Fig. 4.5. Total water demand for various sectors in Vijayapura district - 2015 and 2020

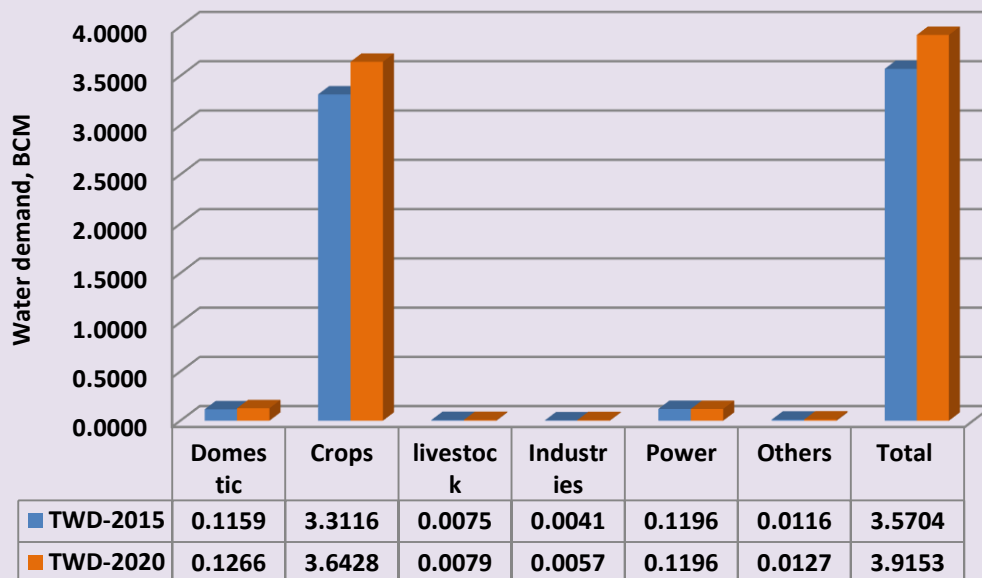


Fig. 4.6. Total water demand of various sectors taluk wise in Vijayapura district - 2015 and 2020

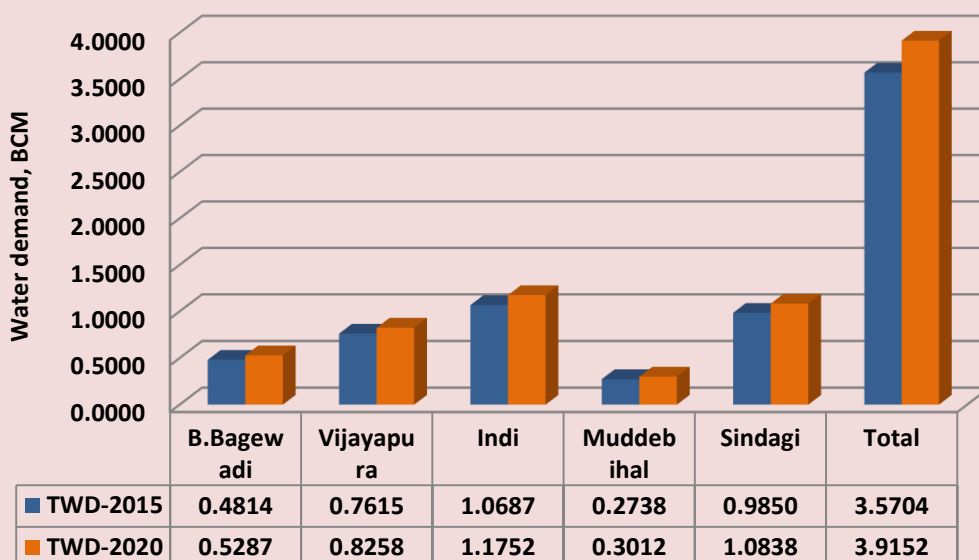


Table 4.6 : Total water demand for various sectors in Vijayapura district - present and projected demand for 2020

Taluks	Water demand at present (2015), BCM						
	Domestic	Crops (Irrigated + Rainfed)	Livestock	Industries	Power generation	Other public places	Total water demand, BCM
B.Bagewadi	0.0185579	0.4597382	0.0012042	0	0	0.0018558	0.481356
Vijayapura	0.0383735	0.5966606	0.0019785	0.001036	0.119636	0.0038373	0.761522
Indi	0.0224134	1.0404942	0.0020036	0.001554	0	0.0022413	1.068706
Muddebihal	0.0154697	0.2552345	0.0010043	0.000518	0	0.0015470	0.273773
Sindagi	0.0210566	0.9594901	0.0013223	0.001036	0	0.0021057	0.985011
Total	0.1158710	3.31162	0.0075129	0.004144	0.119636	0.0115871	3.570371
Taluks	Water demand for 2020, BCM						
B.Bagewadi	0.0202762	0.50512	0.0012644	0	0	0.0020276	0.528688
Vijayapura	0.0419266	0.65633	0.0020775	0.001624	0.119636	0.0041927	0.825787
Indi	0.0244887	1.14454	0.0021038	0.001624	0	0.0024489	1.175205
Muddebihal	0.0169021	0.28076	0.0010545	0.000812	0	0.0016902	0.301219
Sindagi	0.0230063	1.05544	0.0013884	0.001624	0	0.0023006	1.083759
Total	0.1265998	3.642779	0.0078886	0.005684	0.119636	0.0126600	3.915247

Assumption - Increase in population is 20%, crops by 10% during 2011 to 2020, livestock by 5% between 2012 to 2020, Industrial use - 10% between 2015 to 2020, Power generation – no new proposal

4.8. Water budgeting: Total water available from surface stored water is 2.579 BCM (82.5% of total water) and underground water is 0.5466 BCM (17.5% of total water available) (Table 4.7). The district receives 2.529 BCM of water for drinking, irrigation purposes from Almatti dam, Mulwad, Chimmaligi lift irrigation schemes and other sources. In addition, 0.05 BCM of water is available from minor irrigation tanks. All these water sources have been added to total water availability, i.e., 2.579 BCM. Thus, total water availability for the district from all sources at present is 3.126 BCM, which is less than the present requirement (2015) of 3.57037 BCM (Table 4.7, Fig. 4.7, 4.8). Similar trend is observed even for 2020. The water balance available after meeting all demands is negative, being -0.4448 BCM in 2015 and -0.7897 BCM projected for 2020.

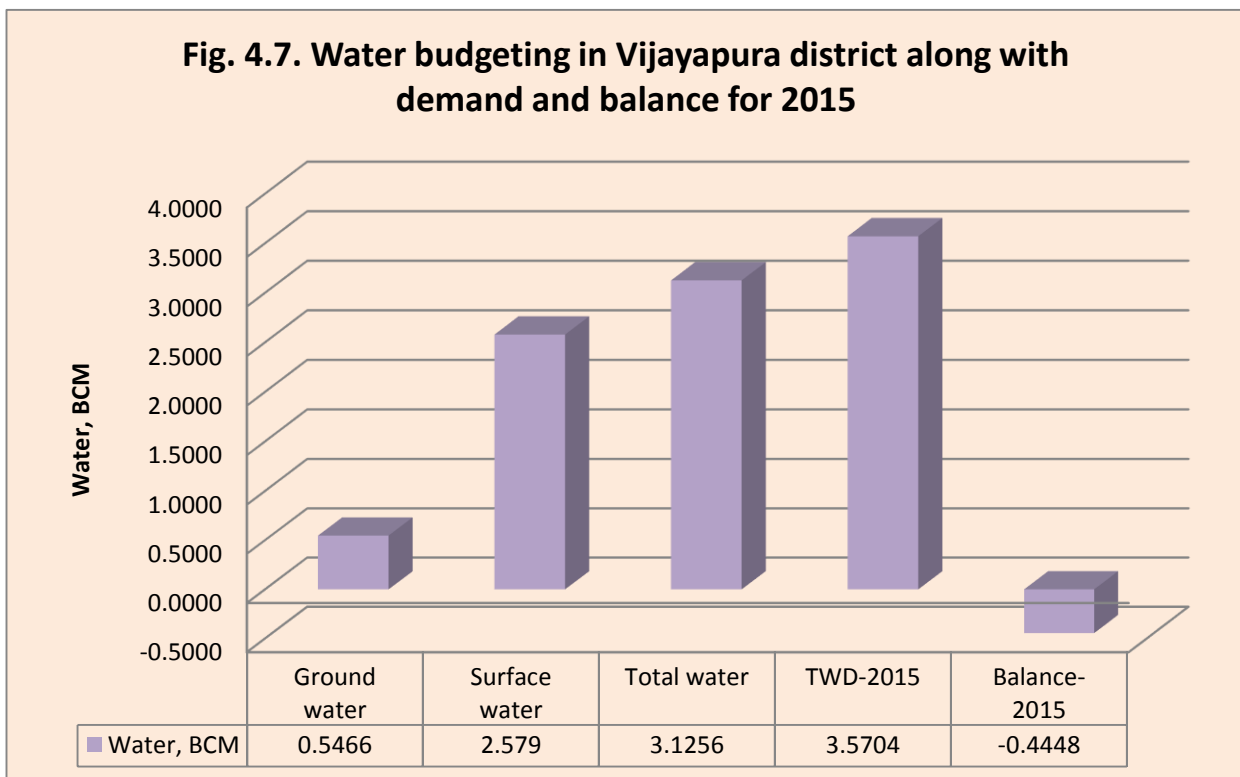
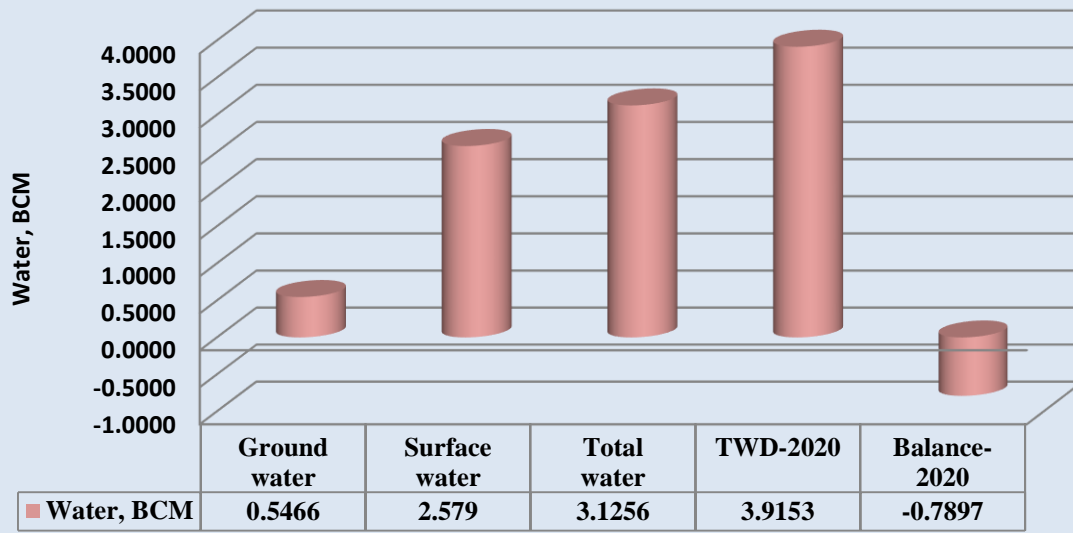


Table 4.7 : Water budgeting for Vijayapura district - available, demand and water balance – present and for 2020

Taluks	Net underground water available, BCM (CGWB)#	Water available from canals/lift irrigation, BCM##		Total water available from rain, BCM (Col. 1+2)
	1	2		3
B.Bagewadi	0.0931808	2.579		3.1256
Vijayapura	0.1393616			
Indi	0.1465765			
Muddebihal	0.0605381			
Sindagi	0.1069533			
Total	0.5466103	2.579		3.1256
Taluks	Total water demand for various sectors, BCM - 2015	Water balance available after meeting all demand, BCM-2015	Projected demand, BCM - 2020	Water balance available after meeting all demand, BCM-2020
	4	5	6	7
B.Bagewadi	0.481356	-0.4448	0.528688	-0.7897
Vijayapura	0.761522		0.825787	
Indi	1.068706		1.175205	
Muddebihal	0.273773		0.301219	
Sindagi	0.985011		1.083759	
Total	3.570371	-0.4448	3.915247	-0.7897

#- CGWB - Central Ground Water Board, 2008 for Vijayapura district - Net underground water available; ## - Information from Chief Engineer, KBJNL Dam, Zone - Almatti & Superintending Engineer, KBJNL, O & M Circle No. 2, Rampur.

Fig. 4.8. Water budgeting in Vijayapura district along with demand and balance for 2020



CHAPTER V

STRATEGIC ACTION PLAN FOR IRRIGATION IN VIJAYAPURA DISTRICT

5.1 Introduction

Vijayapura was a traditional dry land district, since centuries, even before formation of Karnataka state. Low unpredictable rabi dominated rains had been a prominent feature of the district- often leading to poor performance of kharif crops and poor economic status of majority of population in the district. Even in erstwhile Bombay Presidency, to which Vijayapura was aligned, many measures were taken up to mitigate the effects of frequent droughts. The droughts in Vijayapura were comparable to droughts of western Rajasthan. A dry land research station was established in 1940s to conduct research on methods to mitigate the effects of drought on performance of crops. Many dry land technologies have been released since then, which have helped the farmers to partially overcome the impact of drought.

The district's hydrogeological features have supported exploitation of phreatic shallow aquifers more successfully and hence, the open wells have been successful in the district. Coupled with this, even deep aquifers area also explored in the recent years in large way to meet the water demand by the crops. Ground water was the principal source of irrigation for many decades till construction of Upper Krishna Dam across river Krishna. The irrigation scenario has changed in the district has been completely transformed since then. Today, Vijayapura has the reputation of district having maximum irrigated area in the state, after completion of all ongoing irrigation projects. The new surface irrigated area developed through canals directly from the reservoir from lift irrigation schemes have provided greater support to the traditional ground water irrigated area. Despite these developments, much cultivated area remains un irrigated and must depend on rainfall.

The present situation in Vijayapura district focuses on faster completion of all lift irrigation schemes, besides plan to use ground water more judiciously. The

harvesting of vast run off in dry land areas provide additional respite to provide supportive and protective life saving irrigations as a measure of drought proofing.

The holistic district level irrigation plan needs to be developed to consider all surface water resources and suggest strategies that can help in attaining a long term sustainable solutions in surface and ground water domains. The planning considers three following issues

- 1) Faster completion of all ongoing surface irrigation major irrigation projects including all lift irrigation schemes
- 2) Efficient use ground water resource by planned exploitation of both phreatic and deeper aquifers, duly considering the annual replenishable source supported by artificial recharge
- 3) Exploring the possibilities of harvesting surface runoff by various moisture conservation structures to create additional area in dry lands to provide protective irrigation

The following district irrigation plan is drawn up considering agro-climatic features and constraints of each taluk and consolidating it as district plan. By using the opportunities provided under PMKSY, by centralised common platform of District level Committee converging the funds available in different departments.

Due to changed situations, even the cropping pattern has drastically changed in the district. Focus has been given on sugarcane and cotton cultivation in many irrigated areas, besides many oilseeds/ pulses. Large area under pigeon pea has come up in the district due to excellent price support mechanism by Government of India. Large area under horticultural crops has also come up. The preparation of district level plan helps in more efficient planning of crops and their cultivation.

5.2: Taluk plans

Table 5.1 : STRATEGIC ACTION PLAN FOR B.BAGEWADI TALUK

Concerned Ministry/ Dept.	Component	Activity	Total No. capacity (cum)	Command Area/Irrigation potential (Ha)	Period of implementation	Estimated Cost/Year wise funds requirement (in lakh Rs.)					
						I Year	II Year	III Year	IV Year	V Year	Total
	Major Irrigation										
MoWR A.I.B.P		Construction of field channels	-	100740	2	120000	111200				231200
		CAD WM Works			2	8102	8000.19				16102.19
	Externally funded projects (NABARD)										
	EFP NABARD	Improvement of tanks	29	3334	5	290	290	290	290	290	1450.0
	EFP NABARD	Construction of percolation tanks/BCB/ barrages	4	373	5	180	180	180	180	180	900.00
MoWR	HKKP	Sprinkler/Drip-Agri	6000	-	5	211.68	211.68	211.68	211.68	211.68	1058.4
	HKKP	Diesel engines-Agri	6000		5	240	240	240	240	240	1200
	HKKP	Check dam/Pickup/ barrages Mi Irri	37	712	5	365	365	365	365	365	1825.00
	HKKP	FarmPond-Agri	6000	6000	5	1500	1500	1500	1500	1500	7500.00
	HKKP	Field bunds-Agri	6000 ha	-	5	180	180	180	180	180	900.00

DORD - MORD	Convergence with MGNREGA	Farm Pond	2000	2000	5	400	400	400	400	400	2000.00	
		Multi arch check dams	500	2500	5	700	700	700	700	700	700	3500.00
		Field bunds	15000	15000	5	750	750	750	750	750	750	3750.00
		Renovation of check dams	100	500	5	40	40	40	40	40	40	200.00
MOA&FW DAC&FW	PDMC (Micro Irrigation)	DPAP Drip-Agri	2300	2300	5	720	540	360	270	180	2070	
		DPAP sprinkler-Agri	7100	7100	5	352.8	264.6	246.96	211.68	176.4	1252.44	
		DPAP DRIP - Horti	2850	2950	5	270	270	270	270	270	270	1350
MOA & FW DAC &FW	PMKSY- Watershed	AH & VS	-	-	5	33	33	32	32	32	162	
		Forestry	5375 ha	-	5	215	215	215	215	215	215	1075
		Horti	5375 ha	-	5	215	215	215	215	215	215	1075
		Others	-	-	5	685	685	684	684	684	684	3422.00
		Field bunds	30083	-	5	452	452	451	451	450	450	2256.00
		Nala bunds	70	350	5	70	70	70	70	70	70	350.00
		Check dams	60	120	5	60	60	60	60	60	60	300.00
		Percolation tanks	30	-	5	30	30	30	30	30	30	150.00
		Farm Pond	210	2100	5	34	34	34	34	34	32	168.00
		Check dams	200	200	5	200	200	200	200	200	200	1000.00
		Nala bunds	100	300	5	100	100	100	100	100	100	500.00
		Percolation tanks	50	-	5	50	50	50	50	50	50	250.00
						146579		136445.48	127275.47	7874.64	7749.36	7621.08

Fig. 5.1.

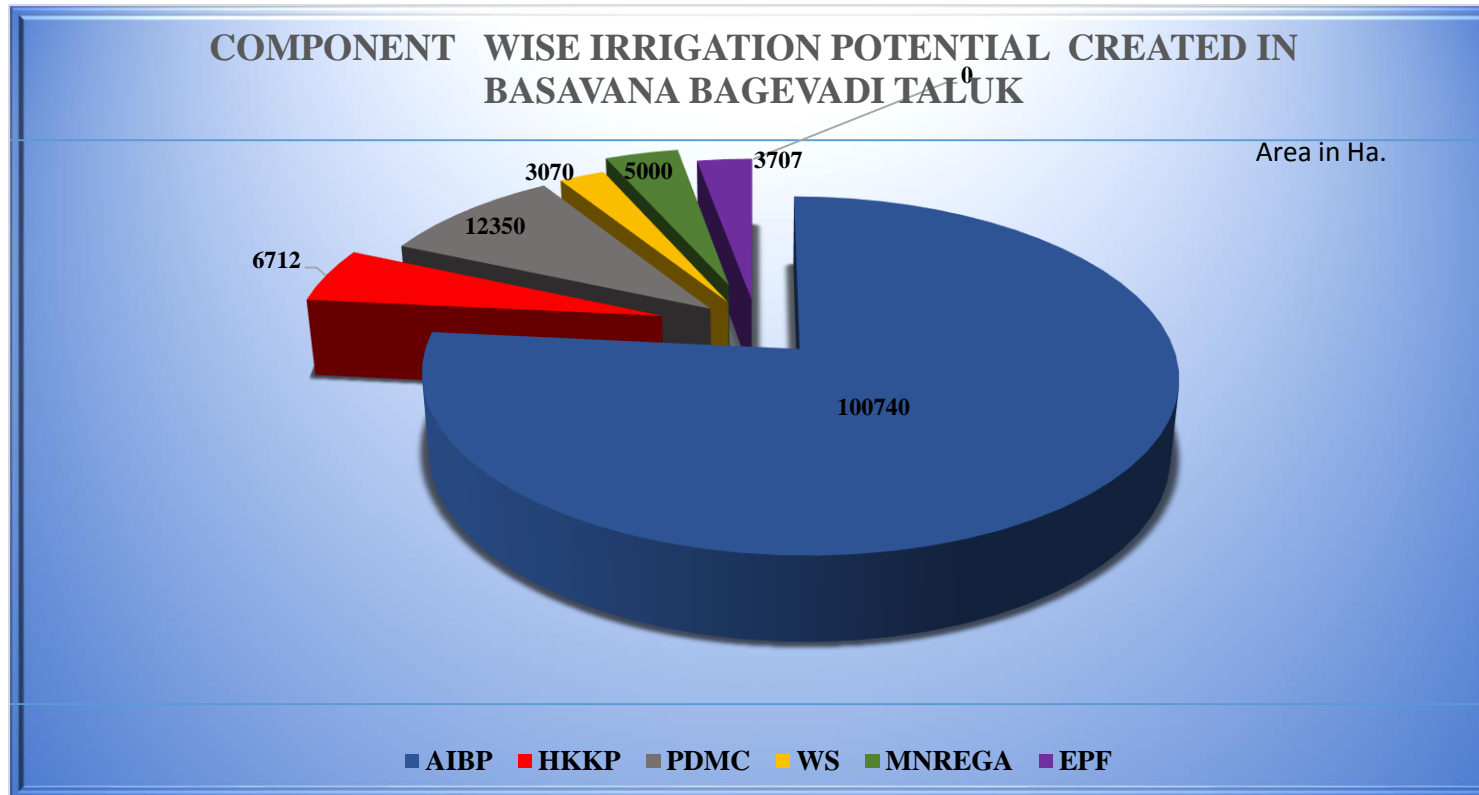


Fig. 5.2.

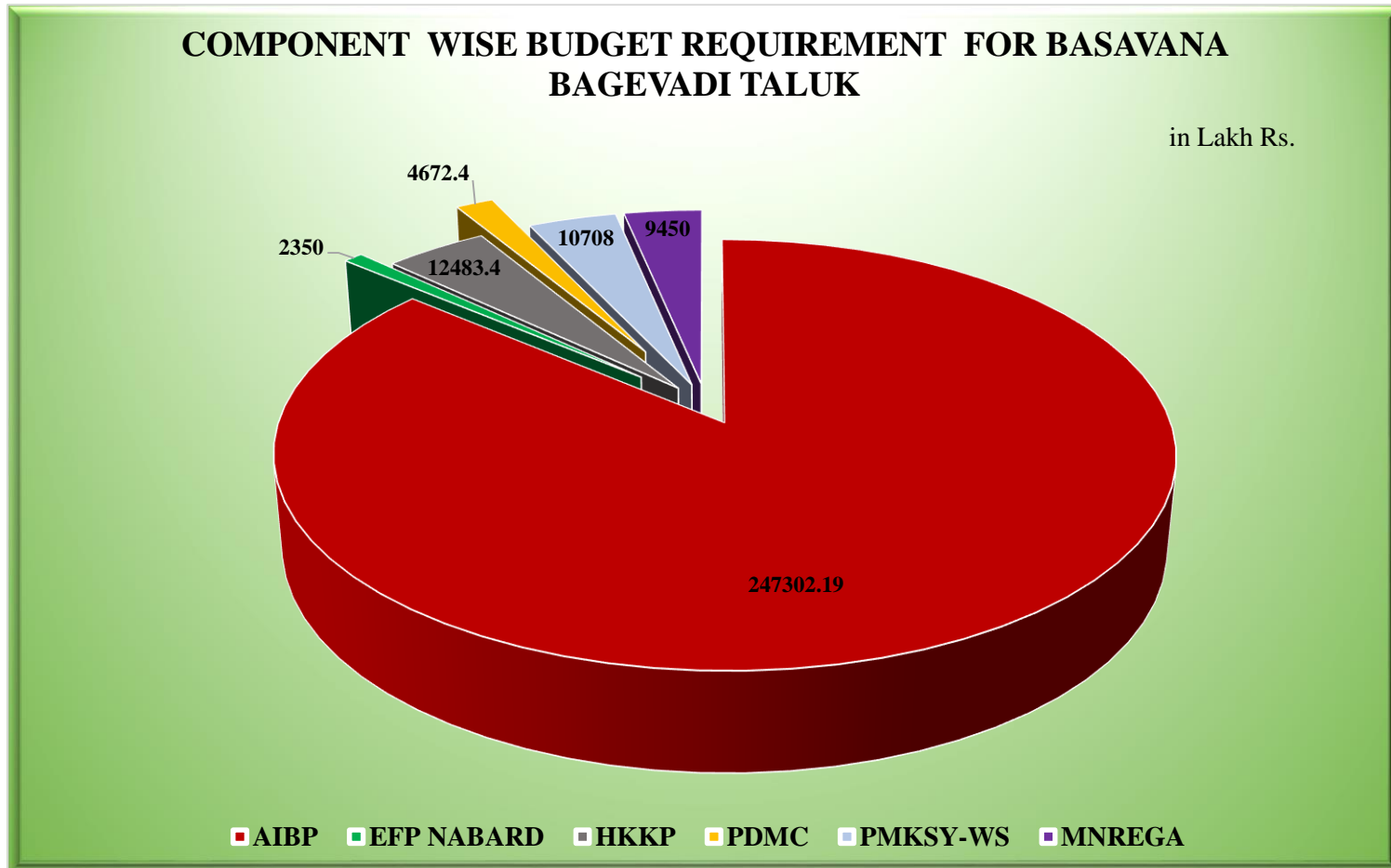


Table 5.2 : STRATEGIC ACTION PLAN FOR VIJAYAPURA TALUK

Concer ned Ministr y/ Dept.	Component	Activity	Total No. capac ity (cum)	Command Area/Irrig ation potential (Ha)	Period of imple menta tion	Estimated Cost/Year wise funds requirement (in lakh Rs.)					
						I Year	II Year	III Year	IV Year	V Year	Total
MoWR	A.I.B.P	Construction of field channels	-	66213	2	100000	98000				198000
		Chimmalagi LIS (Nagthan)		29403	2	9392	18335				27727
		Tubachi-babaleshwar lift irrigation	0.151 BCM	44735	2	114000	72446				186446
		CAD WM Works			2	3123.67	3118.66	3118.66	3118.66	3118.66	15598.31
NABARD	EFP NABARD	Improvement of tanks	47	7828	5	470	470	470	470	470	2350
		Construction of percolation tanks/bhandara/ barrages/ BCB or IMPTS works	16	704	5	232	232	232	232	232	1160
MoWR	HKKP	Diesel Engines Agri	6000		5	240	240	240	240	240	1200
		Sprinkler/Drip Agri	6000	-	5	211.68	211.68	211.68	211.68	211.68	1058.4
		Check dam/Pickup/barrages Mi Irri	44	864	5	498	498	498	498	498	2490
		Field bunds agri	6000 ha	-	5	180	180	180	180	180	900
		Farm Ponds agri	6000	6000	5	1500	1500	1500	1500	1500	7500
DORD - MORD	Convergence with MGNREGA	Farm Pond	2000	2000	5	400	400	400	400	400	2000
		Multi arch Check Dams	500	2500	5	700	700	700	700	700	3500
		Field bunds	15000	15000	5	750	750	750	750	750	3750

		Renovation of Check dams	100	500		40	40	40	40	40	200
MOA & FW DAC & FW	PDMC	DPAP Drip Agri	4300	4300	5	1080	900	720	630	540	3870
		DPAP Sprinkler Agri	10000	10000	5	441	388.08	352.8	317.52	264.8	1764.2
		DPAP Sprinkler Horti	5600	5700	5	540	540	540	540	540	2700
		MOA & FW DAC & FW Watershed activities									
MOA & FW DAC & FW	PMKSY Watershed	AH & VS	-	-	5	71	71	71	70	70	353
	Watershed	Forestry	11776 ha	-	5	471	471	471	471	471	2355
	Watershed	Horti	11776 ha	-	5	471	471	471	471	471	2355
	Watershed	Others	-	-	5	1500	1500	1500	1499	1498.5	7497.5
	Watershed	Field bunds	65923		5	989	989	989	989	988	4944
	Watershed	Nala bunds	125	625	5	125	125	125	125	125	625
	Watershed	Check dams	125	250	5	125	125	125	125	125	625
	Watershed	Percolation tanks	100	-	5	100	100	100	100	100	500
	Watershed	Farm ponds	456	4650	5	75	75	74	74	74	372
		Drought proofing through check dams and WHS									
	Watershed	Check dams	200	200	5	200	200	200	200	200	1000
	Watershed	Nala bunds	100	300	5	100	100	100	100	100	500
	Watershed	Percolation tanks	50		5	50	50	50	50	50	250
				201772		238075.35	203226.42	14229.14	14101.86	13957.64	483590.41

Fig. 5.3.

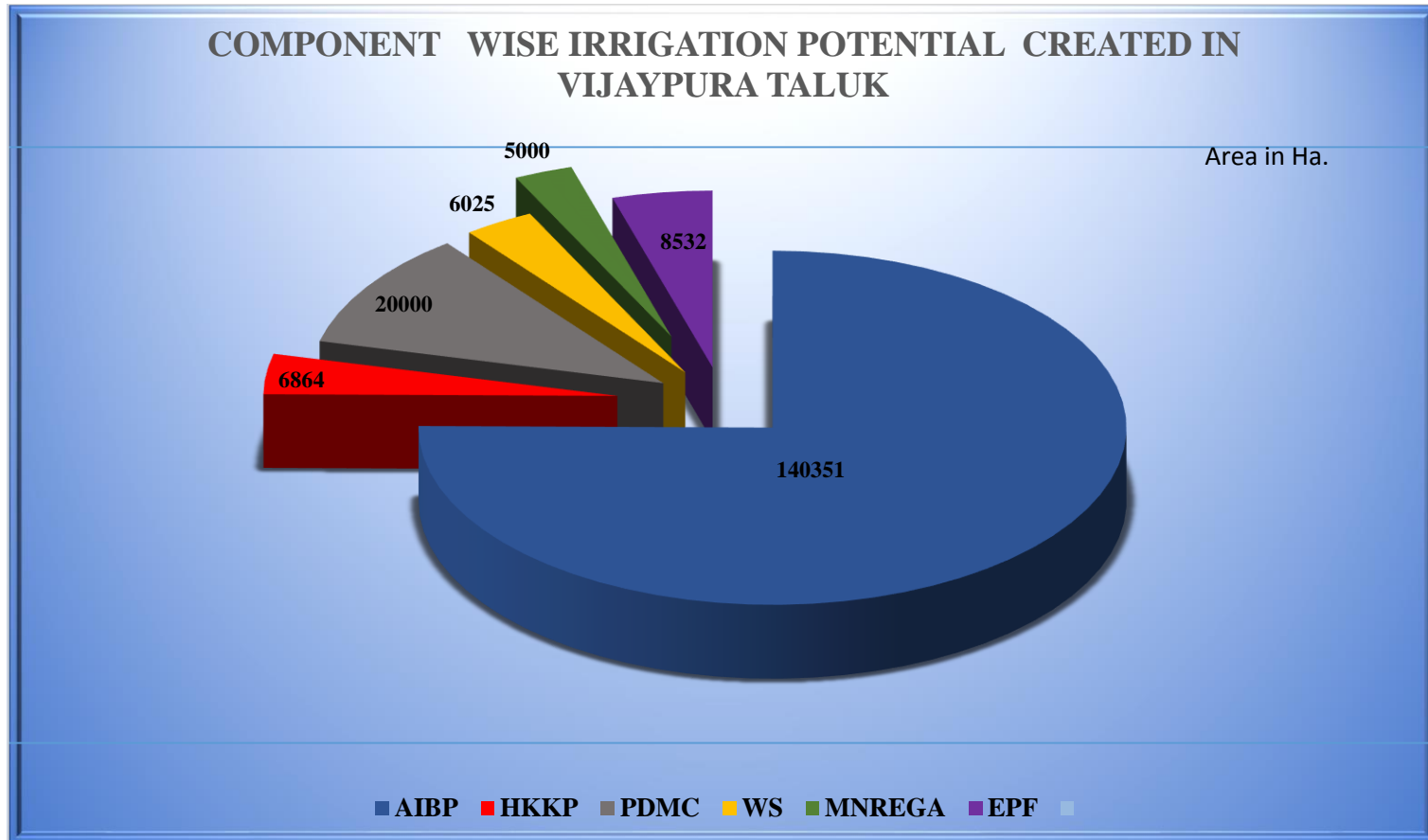


Fig. 5.4.

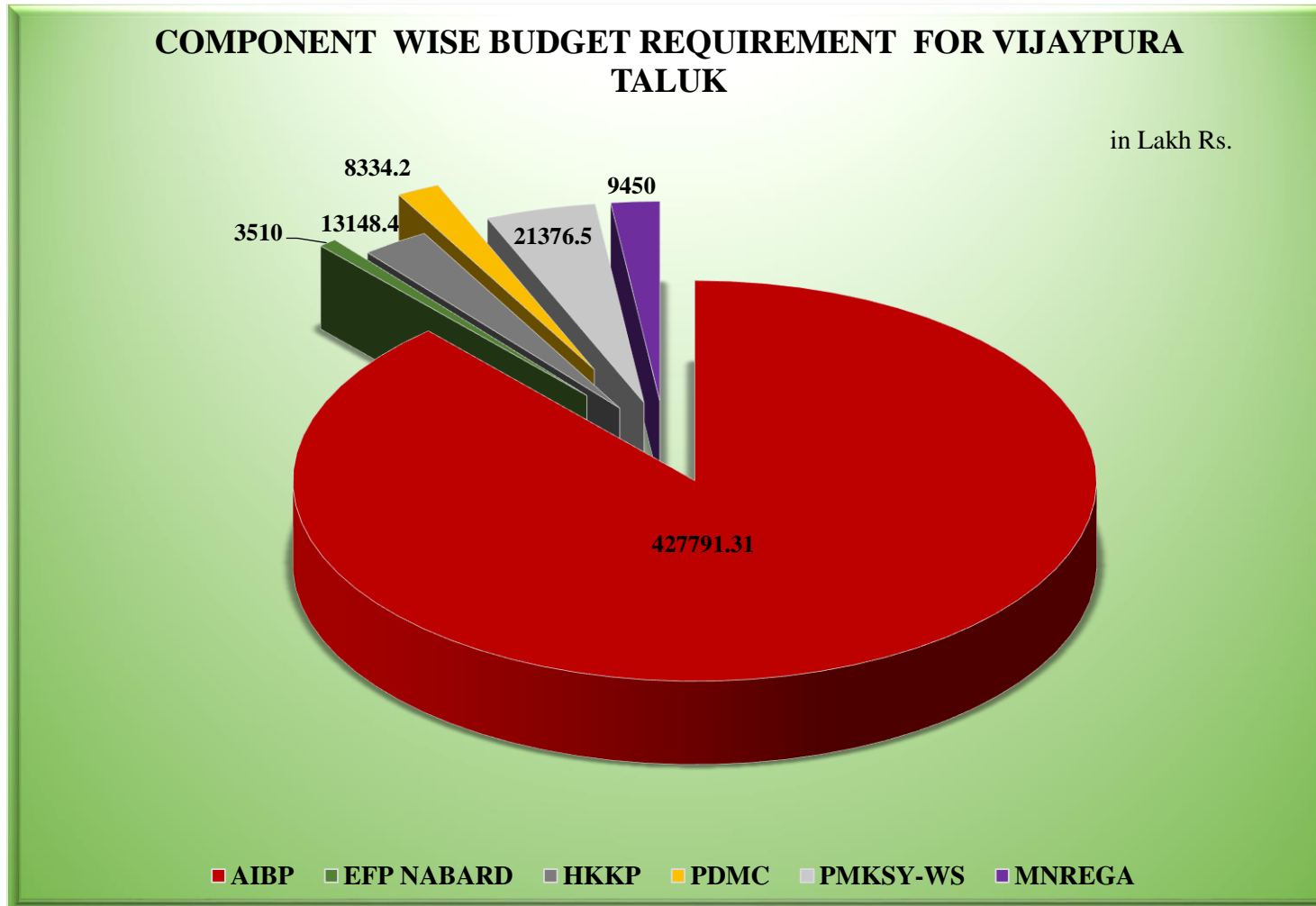


Table 5.3 : STRATEGIC ACTION PLAN FOR INDI TALUK

Concerned Ministry/ Dept.	Component	Activity	Total No. capacity (cum)	Command Area/Irrigation potential (Ha)	Period of implementation	Estimated Cost/Year wise funds requirement (in lakh Rs.)					
						I Year	II Year	III Year	IV Year	V Year	Total
	Major Irrigation										
MoWR	A.I.B.P	Construction of field channels		4754	2	7000	6454				13454
		Lift Irrigation									
		Indi Lift Irrigation		20914	2	6101	2708				8809
		Chimmalagi LIS (Korwar)		18900	2	11334	6546				17880
		Chadchan LIS		9215	2	16528	24772				41300
		Filling of MI tanks in Indi		3841	2	8500	4466				12966
		CAD WM Works			2	12450	7443.52				19893.52
NABARD	EFP NABARD	Improvement of tanks	20	2040	5	200	200	200	200	200	1000
		Construction of percolation tanks/bhandara/ barrages/ BCB or IMPTS works	11	594	5	246	246	246	246	246	1230
MoWR	HKKP	Diesel engines agriculture	6000		5	240	240	240	240	240	1200
		Field bunds agriculture	6000 ha	-	5	180	180	180	180	180	900
		Sprinkler/Drip Agri	6000	-	5	211.68	211.68	211.68	211.68	211.68	1058.4

		Check dam / pickup / barrages/Minor irrigation	36	609	5	510	510	510	510	510	2550
		Farm Ponds	6000	6000	5	1500	1500	1500	1500	1500	7500
DORD - MORD	Convergence with MGNREGA	Farm Pond	2000	2000	5	400	400	400	400	400	2000
		Multi arch check dams	500	2500	5	700	700	700	700	700	3500
		Field bunds	15000	15000	5	750	750	750	750	750	3750
		Renovation of check dams	100	500	5	40	40	40	40	40	200
MOA& FWDA C&FW	PDMC (Micro Irrigation)	DPAP Drip Agri	5400	5400	5	1350	1080	900	810	720	4860
		DAP Sprinkler Agri	11800	11800	5	529.2	458.64	423.36	352.8	317.5	2081.5
		DPAP Drip Horti	4500	4600	5	540	540	540	540	540	2700
MOA&FWDAC&FW Watershed activities											
MOA& FW DAC& FW	PMKSY Watershed	AH & VS	-	-	5	15	15	15	13	13	71
		Forestry	2355 ha	-	5	94	94	94	94	94	470
		Horti	2355 ha	-	5	94	94	94	94	94	470
		Others	-	-	5	300	300	300	300	299.1	1499.1
		Field bunds	13175	-	5	198	198	198	197	197	988
		Nala bunds	35	175	5	35	35	35	35	35	175
		Check dams	25	50	5	25	25	25	25	25	125
		Percolation tanks	18	-	5	20	20	20	18	18	96
		Farm Ponds	42	420	5	7	7	7	6	6	33

Drought proofing through check dams and WHS										
Check dams	200	200	5	200	200	200	200	200	200	1000
Nala bunds	100	300	5	100	100	100	100	100	100	500
Percolation tanks	50	-	5	50	50	50	50	50	50	250
				70447.88	60583.84	7979.04	7812.48	7686.28		154509.52

Fig. 5.5.

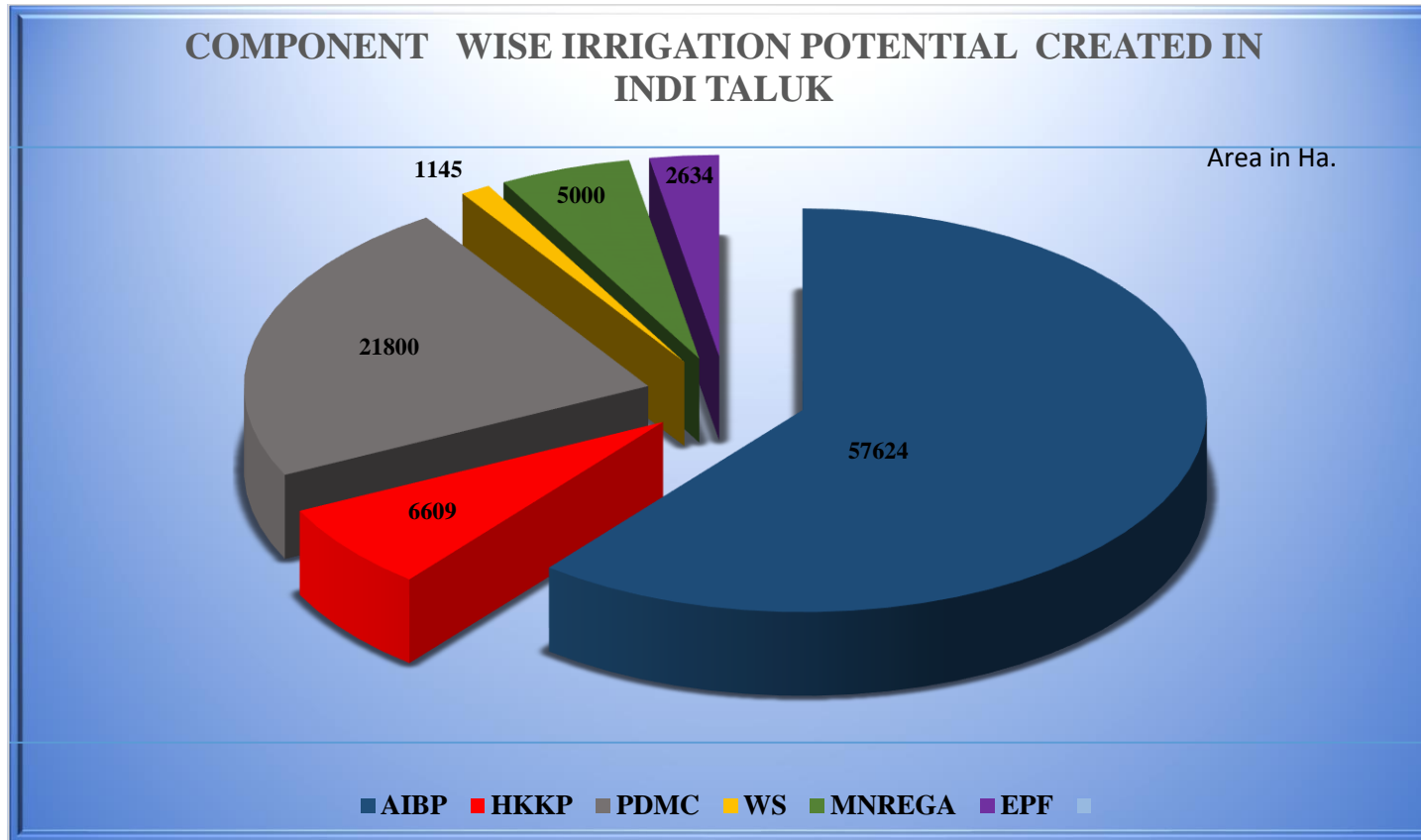


Fig. 5.6.

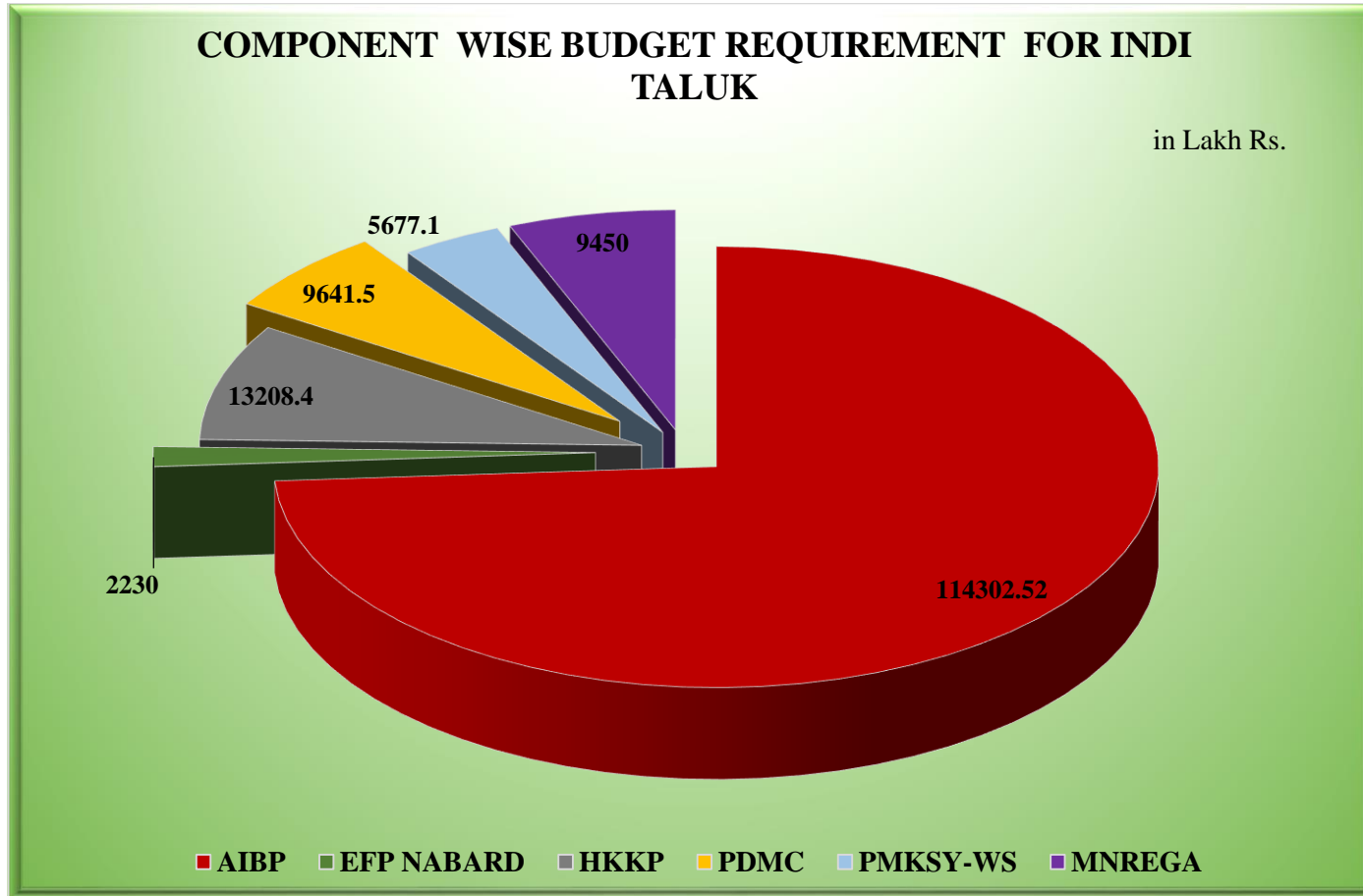


Table 5.4 : STRATEGIC ACTION PLAN FOR MUDDABIHAL TALUK

Concer ned Ministr y/ Dept.	Component	Activity	Total No. capacity (cum)	Command Area/Irrigatio n potential (Ha)	Period of implemen tation	Estimated Cost/Year wise funds requirement (in lakh Rs.)					
						I Year	II Year	III Year	IV Year	V Year	Total
MoWR	A.I.B.P	Construction of field channels		62607	2	90000	87180				177180
		CAD WM Works			2	7400	3040.9				10440.9
NABA RD	EFP NABARD	Improvement of tanks	21	3670	5	210	210	210	210	210	1050
		Construction of percolation tanks/bhandara/ barrages/ BCB or IMPTS works	13	686	5	274	274	274	274	274	1370
MoWR	HKKP	Diesel engines agriculture	6000		5	240	240	240	240	240	1200
		Sprinkler/ drip Agriculture	6000	-	5	211.68	211.68	211.68	211.68	211.68	1058.4
		Check dam / pickup / barrages Minor irrigation	20	449	5	240	240	240	240	240	1200
		Field bunds agriculture	6000 ha	-	5	180	180	180	180	180	900
		Farm Ponds agriculture	6000	6000	5	1500	1500	1500	1500	1500	7500
DORD - MORD	MGNREGA	Farm Pond	2000	2000	5	400	400	400	400	400	2000
		Multi arch Check Dams	500	2500	5	700	700	700	700	700	3500
		Field bunds	15000	15000	5	750	750	750	750	750	3750

		Renovation of Check dams	100	500	5	40	40	40	40	40	200		
MOA & FW DAC &FW	PDMC (Micro Irrigation)	Agri	3000	3000	5	720	630	540	450	360	2700		
		Agri	7400	7400	5	352.8	317.52	246.6	211.68	176.4	1305		
		Horti	1100	1200	5	180	180	180	180	180	900		
MOA & FW DAC &FW	PMKSY Watershed	AH & VS	-		5	12	12	11	11	11	57		
		Forestry	1893 ha		5	76	76	76	75	75	378		
		Horti	1893 ha		5	76	76	76	75	75	378		
		Others	-		5	241	241	241	241	241.1	1205.1		
		Field bunds	1083	-	5	159	159	159	159	158	794		
		Nala bunds	20	100	5	20	20	20	20	20	100		
		Check dams	20	40	5	20	20	20	20	20	100		
		Percolation tanks	10	-	5	10	10	10	10	10	50		
		Farm Ponds	115	1150	5	19	19	18	18	18	92		
		Drought proofing through check dams and WHS											
				Check dams	200	200	5	200	200	200	200	200	1000
				Nala bunds	100	300	5	100	100	100	100	100	500
		Percolation tanks	50	-	5	50	50	50	50	50	250		
				106802		104381.48	97077.1	6693.28	6566.36	6440.18	221158.4		

Fig. 5.7.

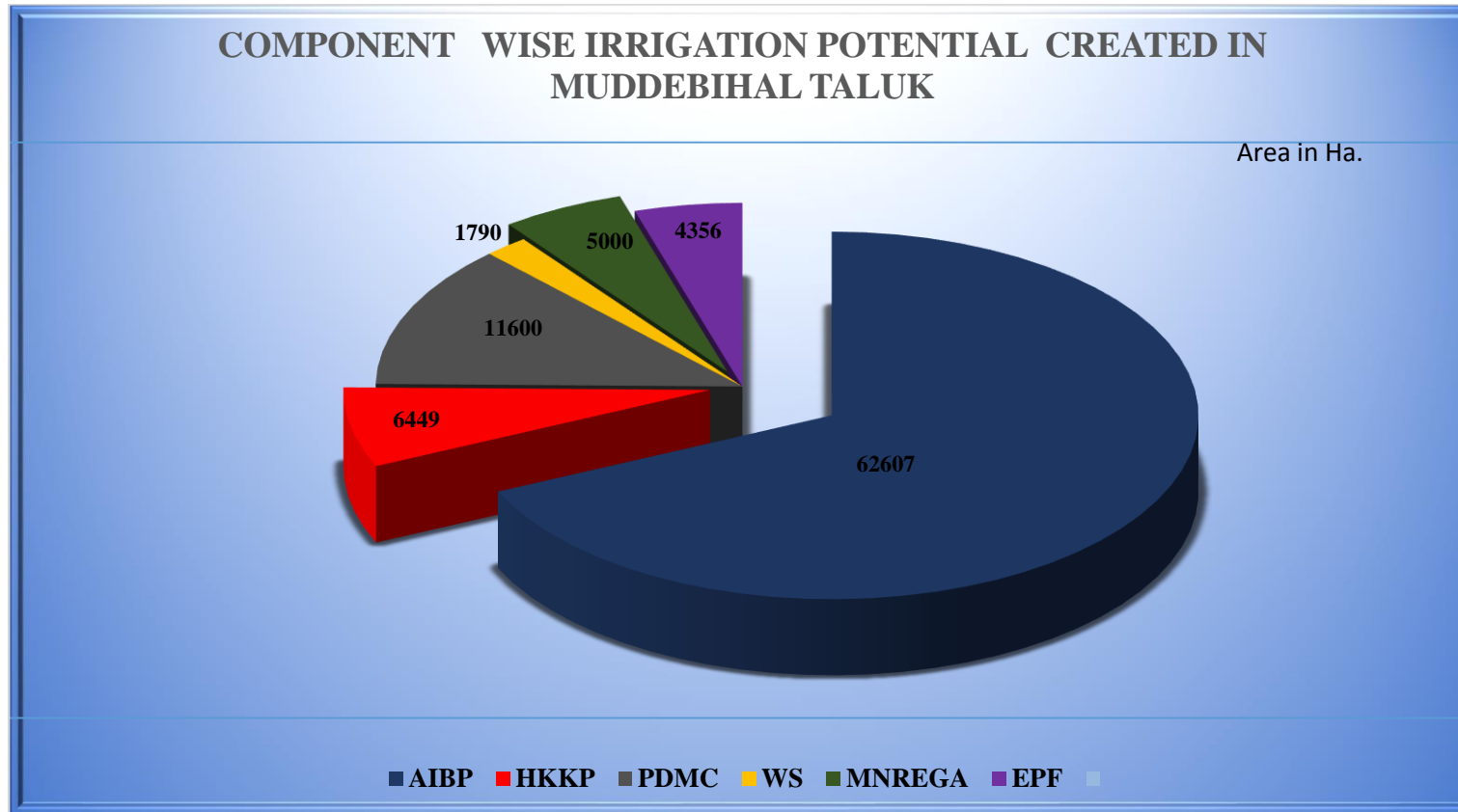


Fig. 5.8.

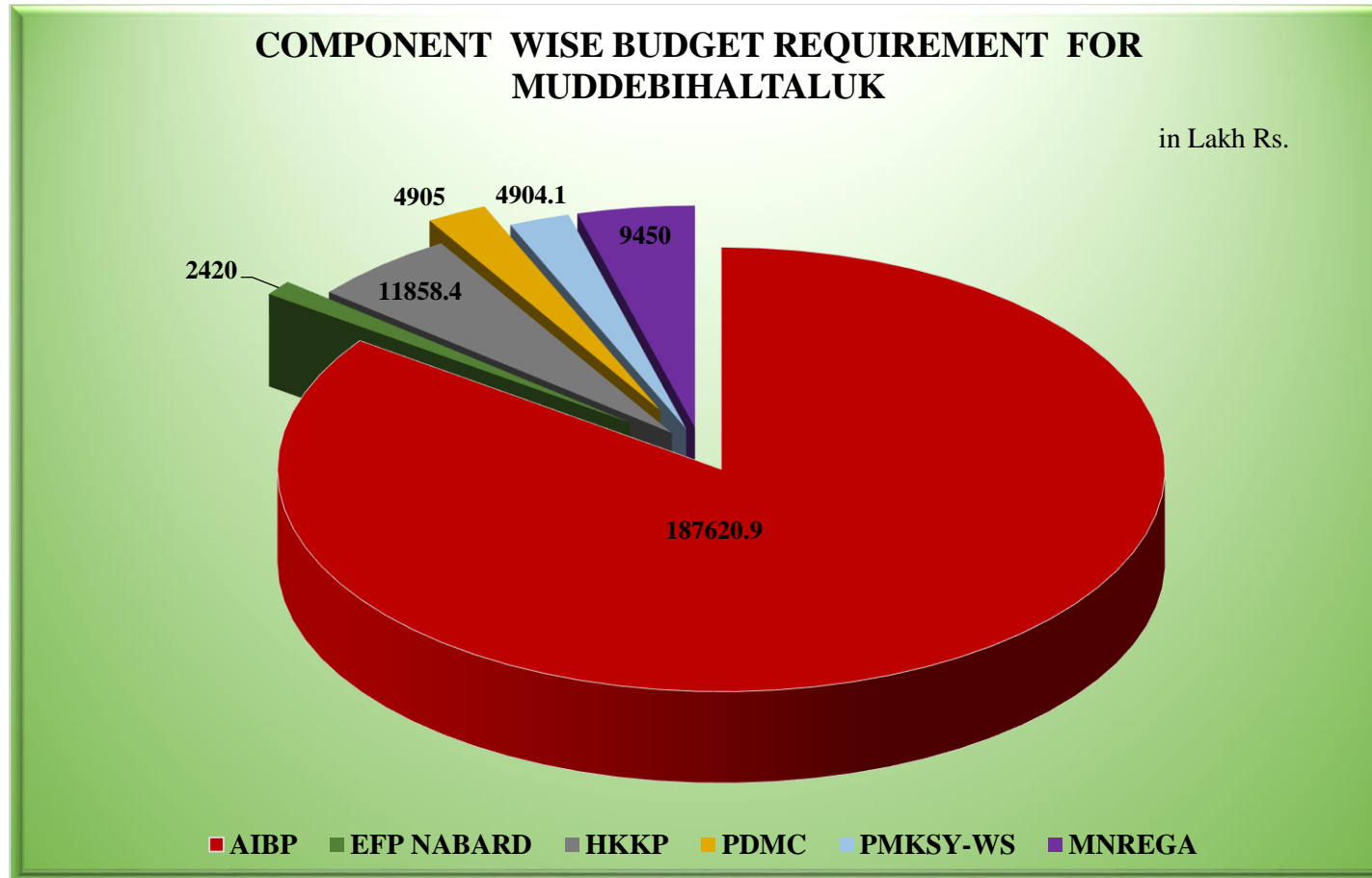


Table 5.5 : STRATEGIC ACTION PLAN FOR SINDAGI TALUK

Concerned Ministry/ Dept.	Component	Activity	Total No. capacity (cum)	Command Area/Irrigation potential (Ha)	Period of implementation	Estimated Cost/Year wise funds requirement (in lakh Rs.)					
						I Year	II Year	III Year	IV Year	V Year	Total
MoWR	A.I.B.P	Construction of field channels		26674	2	37000	38443				75443
		CAD WM Works			2	13000	11095.07				24095.07
NABARD	EFP NABARD	Improvement of tanks	35	5563	5	350	350	350	350	350	1750
		Construction of percolation tanks/bhandara / barrages/ BCB or IMPTS works	3	135	5	60	60	60	60	60	300
MoWR	HKKP	Diesel engines agriculture	6000		5	240	240	240	240	240	1200
		Field bunds agri	6000 ha	-	5	180	180	180	180	180	900
		Sprinkler/ drip Agriculture	6000	-	5	211.68	211.68	211.68	211.68	211.68	1058.4
		Check dam / pickup / barrages Minor irrigation	40	363	5	519	519	519	519	519	2595
		Farm Ponds agri	6000	6000	5	1500	1500	1500	1500	1500	7500
	MGNREGA	WS	2000	2000	5	400	400	400	400	400	2000
	MGNREGA	WS	500	2500	5	700	700	700	700	700	3500
	MGNREGA	WS	15000	15000	5	750	750	750	750	750	3750

	MGNREGA	WS	100	500	5	40	40	40	40	40	200	
MOA & FW DAC & FW	PDMC (Micro Irrigation)	DPAP Drip Agri	4700	4700	5	1080	990	810	720	630	4230	
		DPAP Sprinkler Agri	11600	11600	5	493.92	458.4	423.36	352.8	317.52	2046	
		DPAP drip Horti	2950	3050	5	270	270	270	270	270	1350	
		MOA & FWDAC & FW Watershed activities										
MOA & FW DAC & FW	PMKSY Watershed	AH & VS	-		5	12	12	11	11	11	57	
		Forestry	1900 ha		5	76	76	76	76	75	379	
		Horti	1900 ha		5	76	76	76	76	75	379	
		Others	-		5	242	242	242	242	241.6	1209.6	
		Field bunds	10661		5	160	160	160	160	159	799	
		Nala bunds	25	125	5	25	25	25	25	25	125	
		Check dams	20	40	5	20	20	20	20	20	100	
		Percolation tanks	15	-	5	15	15	15	15	15	75	
		Farm Ponds	50	500	5	8	8	8	8	8	40	
		Drought proofing through check dams and WHS										
		Check dams	200	200	5	200	200	200	200	200	1000	
		Nala bunds	100	300	5	100	100	100	100	100	500	
		Percolation tanks	50	-	5	50	50	50	50	50	250	
				79250		57778.6	57191.15	7437.04	7276.48	7147.8	136831.07	

Fig. 5.9.

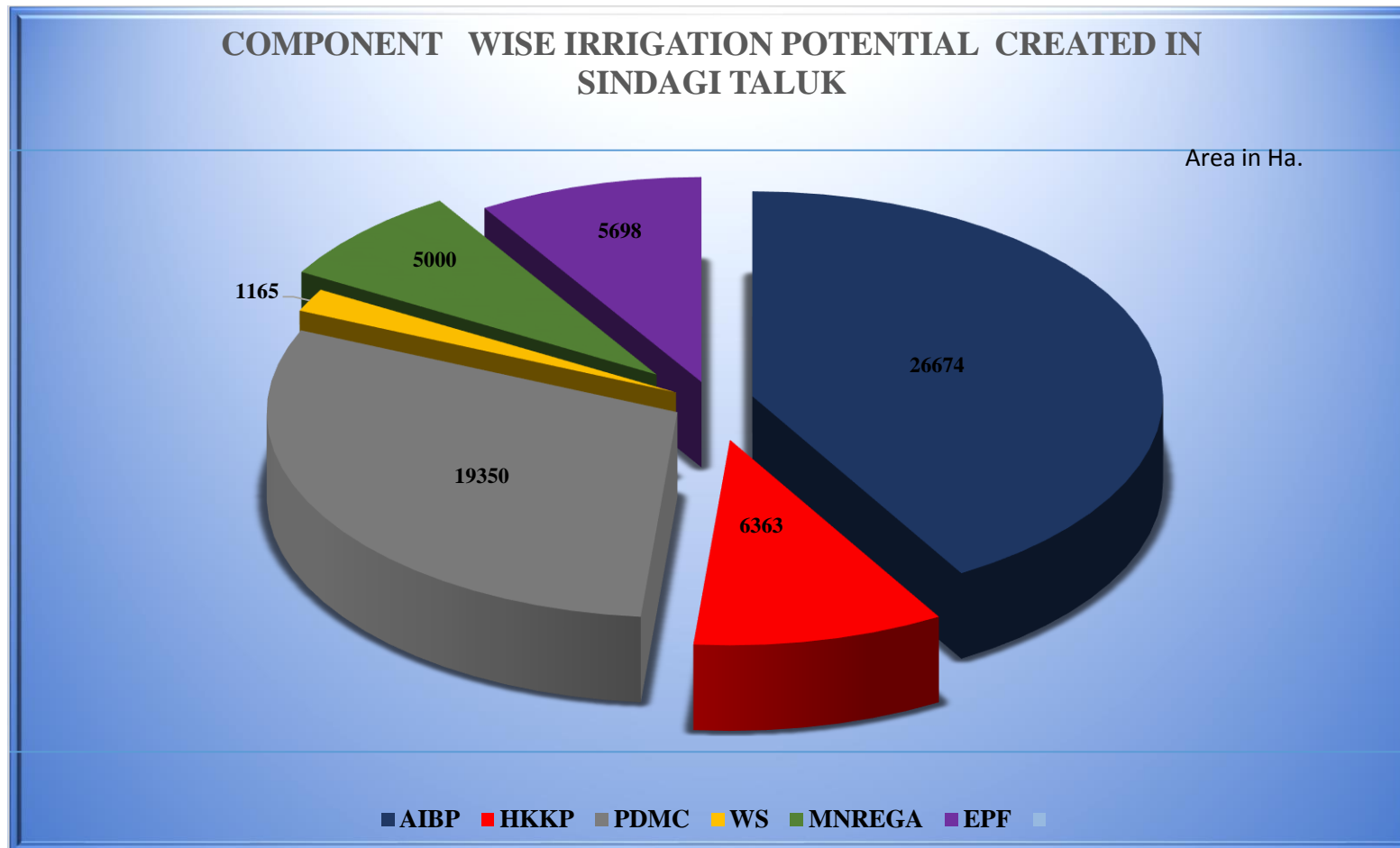
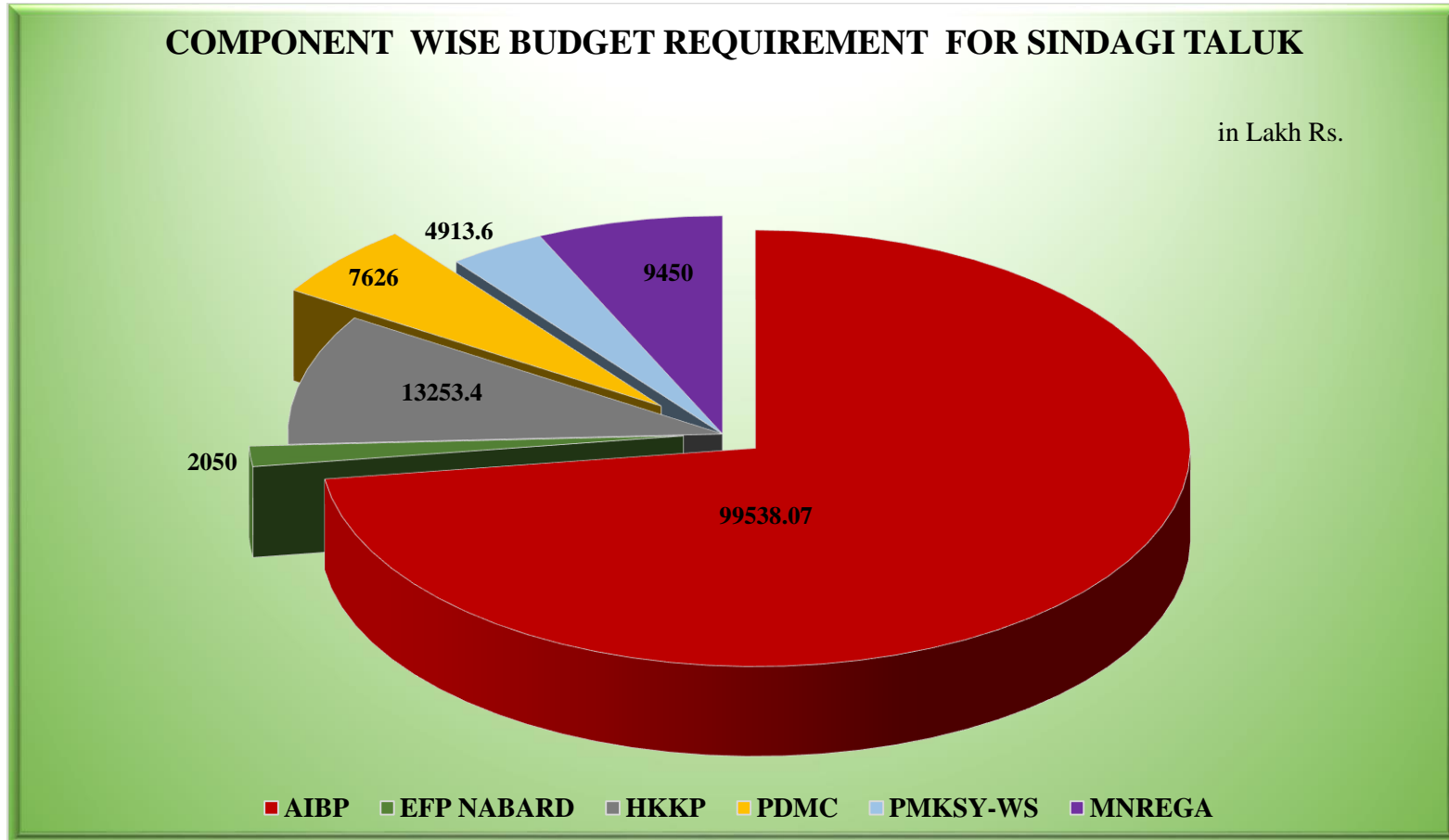


Fig. 5.10.



5.3. STRATEGIC ACTION PLAN FOR VIJAYAPURA DISTRICT

Table 5.6 : 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)	Period of Implementation (5/7yrs)	Estimated cost (in lakh Rs.)
1	Major irrigation						
	B.bagewadi	MoWR	Construction of canals	-	100740	2	231200
	Vijayapura			-	66213	2	198000
	Indi			-	4754	2	13454
	Muddebihal			-	62607	2	177180
	Sindagi			-	26674	2	75443
			Lift Irrigation schemes				
	BBagewadi	MoWR	Indi LIS	-	20914	2	8809
	Vijayapura		Chimmalagi LIS (Nagthan)	-	29403	2	27727
	Indi		Chimmalagi LIS (Korwar)	-	18900	2	17880
	Muddebihal		Chadachan LIS	-	9215	2	41300
	Sindagi		Filling of MI tanks in Indi taluk	-	3841	2	12966

	Vijayapura	MoWR	Tubachi-Babaleshwar lift Irrigation	0.151 BCM	44735	2	186446
	BBagewadi	MoWR	CAD WM WORKS	-	-	2	16102.19
	Vijayapura			-	-	2	15618.31
	Indi			-	-	2	19893.52
	Muddebihal						10440.90
	Sindagi						24095.07
			TOTAL		387996		1076554.9

Table 5.7: District Irrigation Plan – Har Khet Ko Pani

Sl. No	Name of the Blocks/sub Districts	Concerned Ministry / Department	Activity	Total Number /Capacity (cum)	Command Area/Irrigation Potential (Ha)	Period of Implementation (5/7yrs)	Estimated cost (in lakh Rs.)
1			Farm ponds Agriculture				
	B.bagewadi			6000	6000*	5	7500
	Vijayapura			6000	6000*	5	7500
	Indi			6000	6000*	5	7500
	Muddebihal			6000	6000*	5	7500
	Sindagi			6000	6000*	5	7500
2	B.Bagewadi		Field bunds agriculture	-	-	5	900
	Vijayapura			-	-	5	900
	Indi			-	-	5	900
	Muddebihal			-	-	5	900
	Sindagi			-	-	5	900
3		MoWR	Sprinkler/ drip Agriculture	-			
	B.bagewadi			-	-	5	1058.4
	Vijayapura			-	-	5	1058.4
	Indi			-	-	5	1058.4
	Muddebihal			-	-	5	1058.4
	Sindagi			-	-	5	1058.4

4	BBagewadi	MoWR	Diesel engines agriculture	-	-	5	1200
	Vijayapura			-	-	5	1200
	Indi			-	-	5	1200
	Muddebihal			-	-	5	1200
	Sindagi			-	-	5	1200
					TOTAL	30000	30000
5	B.bagewadi		Check dam / pickup / barrages Minor irrigation	37	712	5	1825
	Vijayapura			44	864	5	2490
	Indi			36	609	5	2550
	Muddebihal			20	449	5	1200
	Sindagi			40	363	5	2595
					TOTAL	177	2997
			GRAND TOTAL	30177	32997	5	63952

Table 5.8 : 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)	Period of Implementation (5/7yrs)	Estimated cost (in lakh Rs.)
1	B.bagewadi	MOA&FW DAC&FW	DPAP Drip Agriculture	2300	2300	5	2070
	Vijayapura			4300	4300	5	3870
	Indi			5400	5400	5	4860
	Muddebihal			3000	3000	5	2700
	Sindagi			4700	4700	5	4230
2		MOA&FW DAC&FW	DPAP Sprinkler Agriculture				
2	B.bagewadi			7100	7100	5	1252.4
	Vijayapura			10000	10000	5	1764.2
	Indi			11800	11800	5	2081.5
	Muddebihal			7400	7400	5	1305
	Sindagi	11600	11600	5	2046		
3	B.bagewadi	MOA&FW DAC&FW	DPAP DRIP horticulture	2850	2950	5	1350
	Vijayapura			5600	5700	5	2700
	Indi			4500	4600	5	2700
	Muddebihal			1100	1200	5	900
	Sindagi			2950	3050	5	1350
			TOTAL	84600	85100		35179.1

Table 5.9 : District Irrigation Plan- PMKSY water shed

Sl. No	Name of the Blocks/sub Districts	Concerned Ministry/Department	Activity	Total Number/Capacity (cum)	Comm and Area/Irrigation Potential (Ha)	Period of Implementation (5/7yrs)	Estimated cost (in lakh Rs.)
MOA&FWDAC & FW Watershed activities							
1	B.bagewadi	MOA&FWDA C&FW	Field bunds	30083	-	5	2256
	Vijayapura			65923	-	5	4944
	Indi			13175	-	5	988
	Muddebihal			1083	-	5	794
	Sindagi			10661	-	5	799
2	B.bagewadi	MOA&FWDAC &FW	Nala bunds	70	350	5	350
	Vijayapura			125	625	5	625
	Indi			35	175	5	175
	Muddebihal			20	100	5	100
	Sindagi			25	125	5	125
3	B.bagewadi	MOA&FWDAC &FW	Check dam	60	120	5	300
	Vijayapura			125	250	5	625
	Indi			25	50	5	125
	Muddebihal			20	40	5	100
	Sindagi			20	40	5	100
4	B.bagewadi	MOA&FWDAC &FW	Percolation tank	30	-	5	150
	Vijayapura			100	-	5	500
	Indi			18	-	5	96

	Muddebihal			10	-	5	50
	Sindagi			15	-	5	75
5	B.bagewadi	MOA&F WDAC &FW	Farm ponds	210	2100	5	168
	Vijayapura			456	4650	5	372
	Indi			42	420	5	33
	Muddebihal			115	1150	5	92
	Sindagi			50	500	5	40
6	B.bagewadi	MOA&F WDAC &FW	Horticulture	5375	-	5	1075
	Vijayapura			11776	-	5	2355
	Indi			2355	-	5	470
	Muddebihal			1893	-	5	378
	Sindagi			1900	-	5	379
7	B.bagewadi	MOA&F WDAC &FW	Forestry	5375	-	5	1075
	Vijayapura			11776	-	5	2355
	Indi			2355	-	5	470
	Muddebihal			1893	-	5	378
	Sindagi			1900	-	5	379
8	B.bagewadi	MOA&F WDAC &FW	AH & VS	-	-	5	162
	Vijayapura			-	-	5	353
	Indi			-	-	5	71
	Muddebihal			-	-	5	57
	Sindagi			-	-	5	57
9	B.bagewadi	MOA&F WDAC &FW	Others	-	-	5	3421.95
	Vijayapura			-	-	5	7497.51
	Indi			-	-	5	1499.08
	Muddebihal			-	-	5	1205.13
	Sindagi			-	-	5	1209.6
			Total	169094	10695		38831.10

Drought proofing through check dams and WHS							
10	B.bagewadi	MOA& FWDA C&FW	Check dams	200	200	5	1000
	Vijayapura			200	200	5	1000
	Indi			200	200	5	1000
	Muddebihal			200	200	5	1000
	Sindagi			200	200	5	1000
11	B.bagewadi	MOA&F WDAC &FW	Nala bunds	100	300	5	500
	Vijayapura			100	300	5	500
	Indi			100	300	5	500
	Muddebihal			100	300	5	500
	Sindagi			100	300	5	500
12	B.bagewadi	MOA&F WDAC &FW	Percolation tanks	50	-	5	250
	Vijayapura			50	-	5	250
	Indi			50	-	5	250
	Muddebihal			50	-	5	250
	Sindagi			50	-	5	250
			Total	1750	2500	5	8750
			Grand total	170844	13195	5	47579.3

Table 5.10: District Irrigation Plan - MGNREGA

Sl. No	Name of the Blocks/sub Districts	Concerned Ministry/ Department	Activity	Total Number/ Capacity (cum)	Command Area/Irrigation Potential (Ha)	Period of Implementation (5/7yrs)	Estimated Cost (in lakh Rs.)	
17		DOLR-	Newly created WHS					
17.1	B.bagewadi	MORD	Farm Ponds	2000	2000	5 years	2000	
	Vijayapura			2000	2000	5 years	2000	
	Indi			2000	2000	5 years	2000	
	Muddebihal			2000	2000	5 years	2000	
	Sindagi			2000	2000	5 years	2000	
17.2	B.bagewadi		MORD	MULTI ARCH check dam	500	2500	5 years	3500
	Vijayapura				500	2500	5 years	3500
	Indi				500	2500	5 years	3500
	Muddebihal				500	2500	5 years	3500
	Sindagi				500	2500	5 years	3500
	B.bagewadi			Field bund	15000	-	5 years	3750
	Vijayapura				15000	-	5 years	3750
	Indi	15000			-	5 years	3750	
	Muddebihal	15000			-	5 years	3750	

	Sindagi		15000	-	5 years	3750
	B.bagewadi	Renovation of Check dam	100	500	5 years	200
	Vijayapura		100	500	5 years	200
	Indi		100	500	5 years	200
	Muddebihal		100	500	5 years	200
	Sindagi		100	500	5 years	200
TOTAL			88000	25000		47250

Table 5.11: District Irrigation Plan - Newly proposed State Plan Schemes of irrigation

Sl.No	Name of the Blocks/sub Districts	Concerned Ministry/ Department	Component	Activity	Total Number/Capacity (cum)	Command Area/Irrigation Potential (Ha)	Period of Implementation (5/7yrs)	Estimated cost (in lakh Rs.)	
21.1		Name of the Scheme	State	activity					
		STATE PLAN SCHEMES - NEWLY PROPOSED							
		State Government Irrigation department	State	Nagar betta Lift IS	0.0169 BCM	14318	2	65810	
			State	Budihal- Peerapur Lift Irrigation	0.1076 BCM	9125	2	37860	
		State Government Irrigation department		Talgundi branch canal		31535	2	134000	
		State Government Irrigation department	State	ERM works for IBC km 64.000 to 172.000 & it's canal network	-	-	2	285100	
			State	TOTAL	-	54978		522770	

Table 5.12: District Irrigation Plan: Externally funded projects (NABARD)

Sl.No	Name of the Blocks/sub Districts	Concerned Ministry/ Department	Activity	Total Number/Capacity (cum)	Command Area/Irrigation Potential (Ha)	Period of Implementation (5/7yrs)	Estimated cost (in lakh Rs.)
1	B.bagewadi	NABARD	Construction of percolation tanks/bhandara/ barrages/ BCB or IMPTS works	4	373	5	900
	Vijayapura			16	704	5	1160
	Indi			11	594	5	1230
	Muddebihal			13	686	5	1370
	Sindagi			3	135	5	300
			50	2492	5	4960	
2	B.bagewadi	NABARD	Improvement of tanks	29	3334	5	1450
	Vijayapura			47	7828	5	2350
	Indi			20	2040	5	1000
	Muddebihal			21	3670	5	1050
	Sindagi			35	5563	5	1750
			152	22435	5	7600	
			GRAND TOTAL	202	24927	5	12560

FINAL ABSTRACTS OF VIJAYAPUR DISTRICT IRRIGATION PLAN

Table 5.13 : COMPONENT WISE IRRIGATION POTENTIAL TO BE CREATED (in HA)

Taluks	B.B	VJP	INDI	MDBL	SND	TOTAL
AIBP	100740	140351	57624	62607	26674	387996
HKKP	6712	6864	6609	6449	6363	32997
PDMC	12350	20000	21800	11600	19350	85100
WS	3070	6025	1145	1790	1165	13195
MNREGA	5000	5000	5000	5000	5000	25000
EPF	3707	8532	2634	4356	5698	24927
Total	131579	186772	94812	91802	64250	569215

Fig. 5.11.

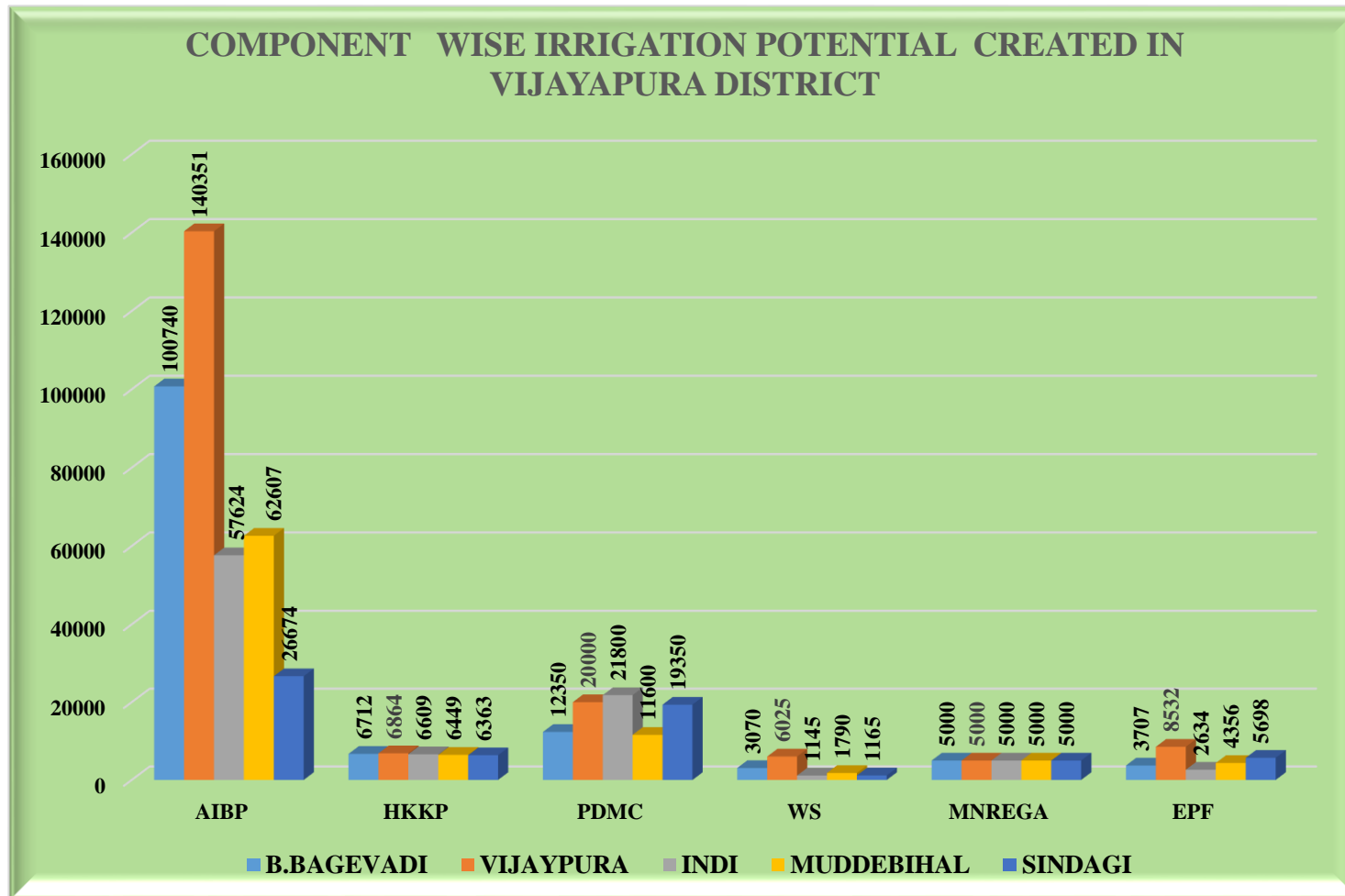


Table 5.14 : TALUK WISE-COMPONENT WISE BUDGET REQUIREMENT (lakh Rs)

Taluk	B.B	VJP	INDI	MDBL	SND	TOTAL
AIBP	247302.19	427791.31	114302.52	187620.90	99538.07	1076554.99
EFP NABARD	2350.00	3510.00	2230.00	2420.00	2050.00	12560.00
HKKP	12483.40	13148.40	13208.40	11858.40	13253.40	63952.00
PDMC	4672.40	8334.20	9641.50	4905.00	7626.00	35179.10
PMKSY-WS	10708.00	21376.50	5677.10	4904.10	4913.60	47579.30
MNREGA	9450.00	9450.00	9450.00	9450.00	9450.00	47250.00
Total	286965.99	483610.41	154509.52	221158.40	136831.07	1283075.39
Proposed State projects	522770					522770
TOTAL						1805845.39

Fig. 5.12.

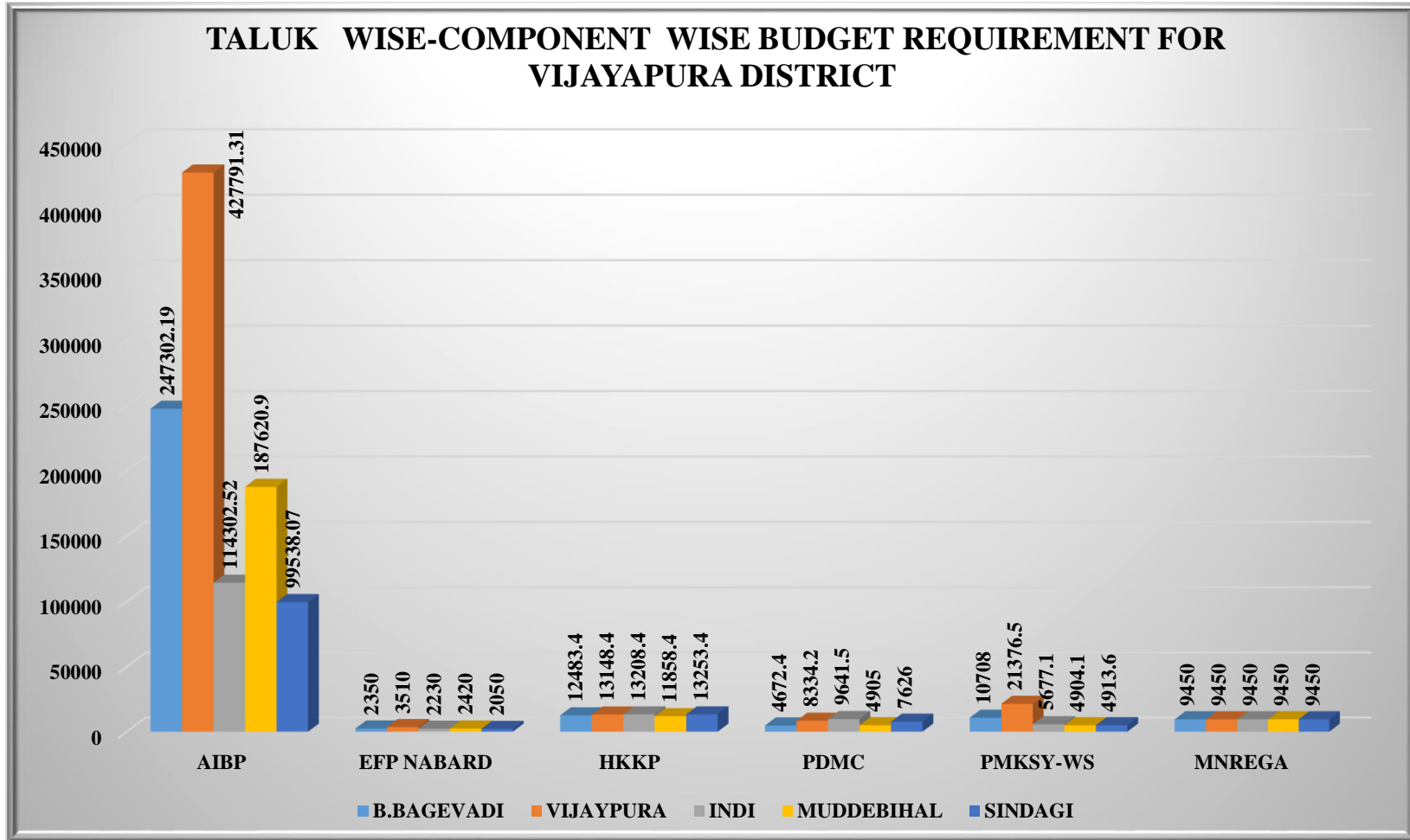


Table 5.15 : TALUK WISE- YEAR WISE BUDGET REQUIREMENT (lakh Rs)

Year	B.B	VJP	INDI	MDBL	SND	Proposed projects	TOTAL
I	136445.48	238075.35	70447.88	104381.48	57778.60	2100	609228.79
II	127275.47	203226.42	60583.84	97077.10	57191.15	164800	710153.98
III	7874.60	14229.14	7979.04	6693.28	7437.04	355870	400083.10
IV	7749.36	14121.86	7812.48	6566.36	7276.48	-	43526.54
V	7621.08	13957.64	7686.28	6440.18	7147.80	-	42852.98
Total	286965.99	483610.41	154509.52	221158.40	136831.07	522770	1805845.39

Fig. 5.13.

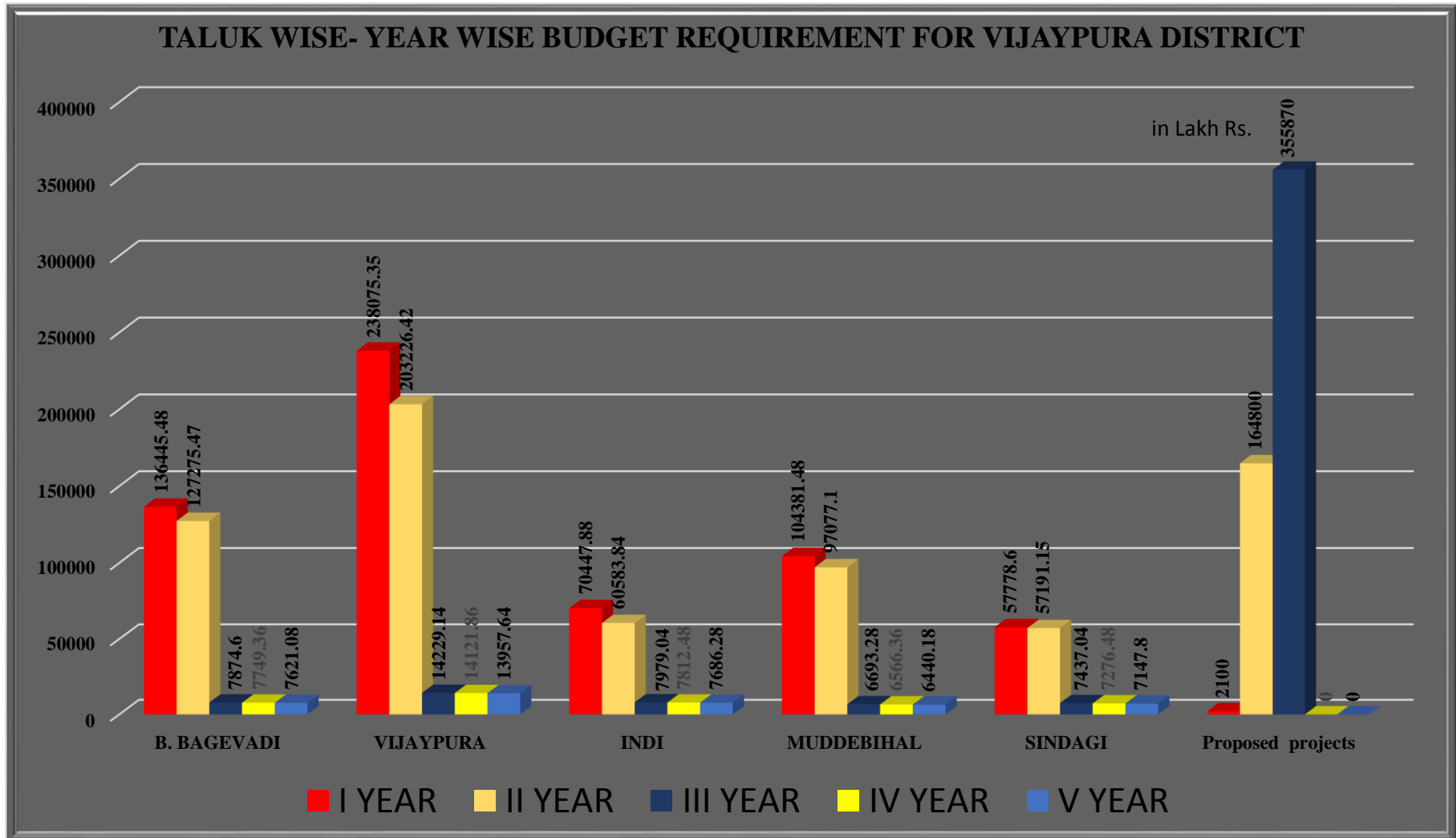
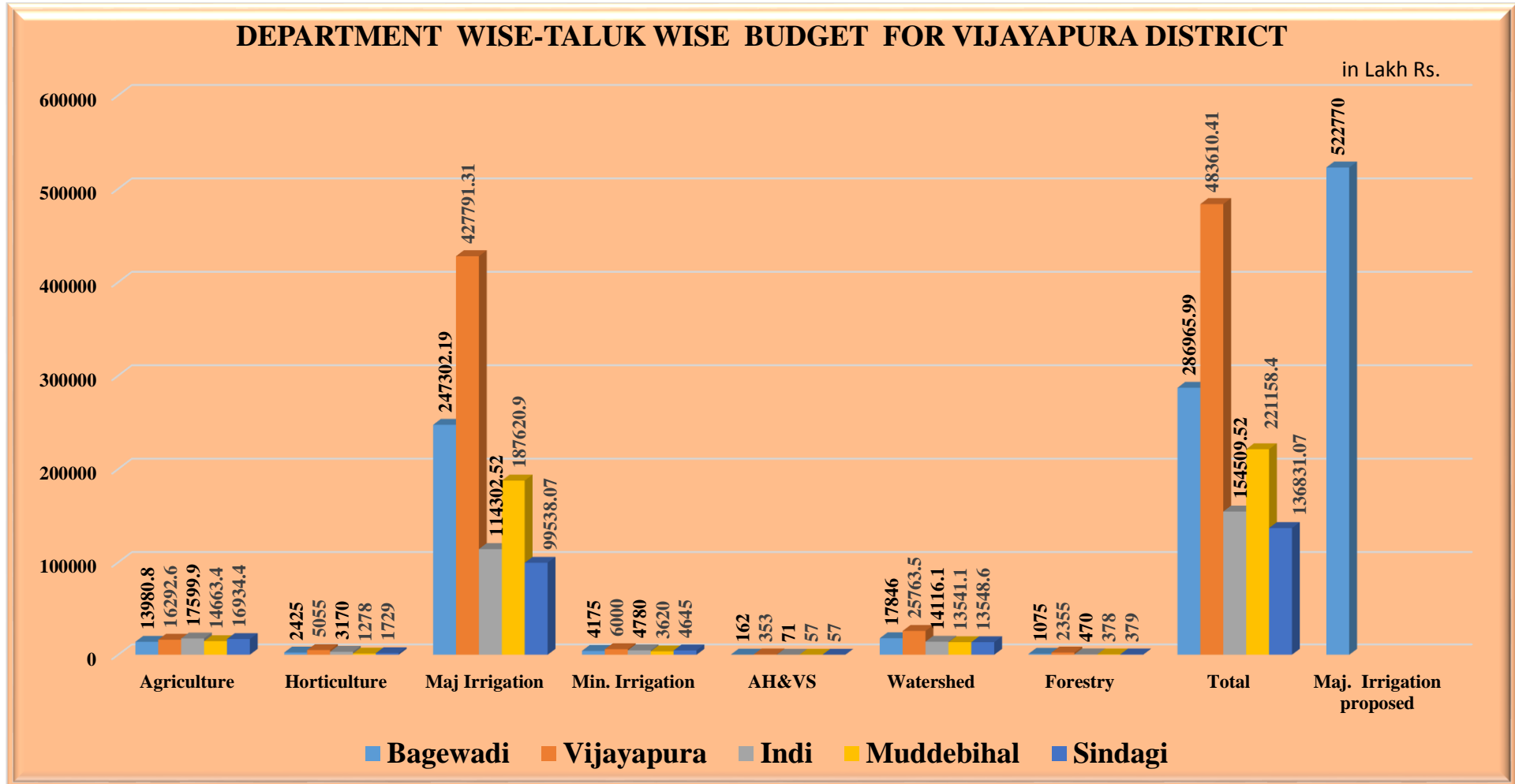


Table 5.16 : DEPARTMENT WISE-TALUK WISE BUDGET

Departments	Bagewadi	Vijayapur	Indi	Muddebihal	Sindagi	Total
Agriculture	13980.8	16292.6	17599.9	14663.4	16934.4	79471.1
Horticulture	2425	5055	3170	1278	1729	13657
Maj Irrigation	247302.19	427791.31	114302.52	187620.9	99538.07	1076554.99
Min. Irrigation	4175	6000	4780	3620	4645	23220
AH&VS	162	353	71	57	57	700
Watershed	17846	25763.5	14116.1	13541.1	13548.6	84815.3
Forestry	1075	2355	470	378	379	4657
Total	286965.99	483610.41	154509.52	221158.4	136831.07	1283075.39
Maj. Irrigation proposed	522770					522770
GRAND TOTAL						1805845.39

Fig. 5.14.



Abbreviations used:

B.B- B.Bagewadi VJP- Vijayapura MDBL- Muddebihal SND- Sindagi

AIBP- Accelerated Irrigation benefit Programme of GoI

PDMC-MI: Per drop more crops - Micro irrigation

PMKSY- WS : Pradhan mantri Krishi Sinchayee Yojana- water shed

CMNAREGA: Convergence of funds for rejuvenation/desilting/improvement of existing tanks as well as

EPF- Externally Funded Programme (NABARD)

SPF-State Funded Programme (ongoing/proposed)

Fig 5.15 : COMPONENT WISE ADDITION OF NEW IRRIGATED AREA (000 HA)

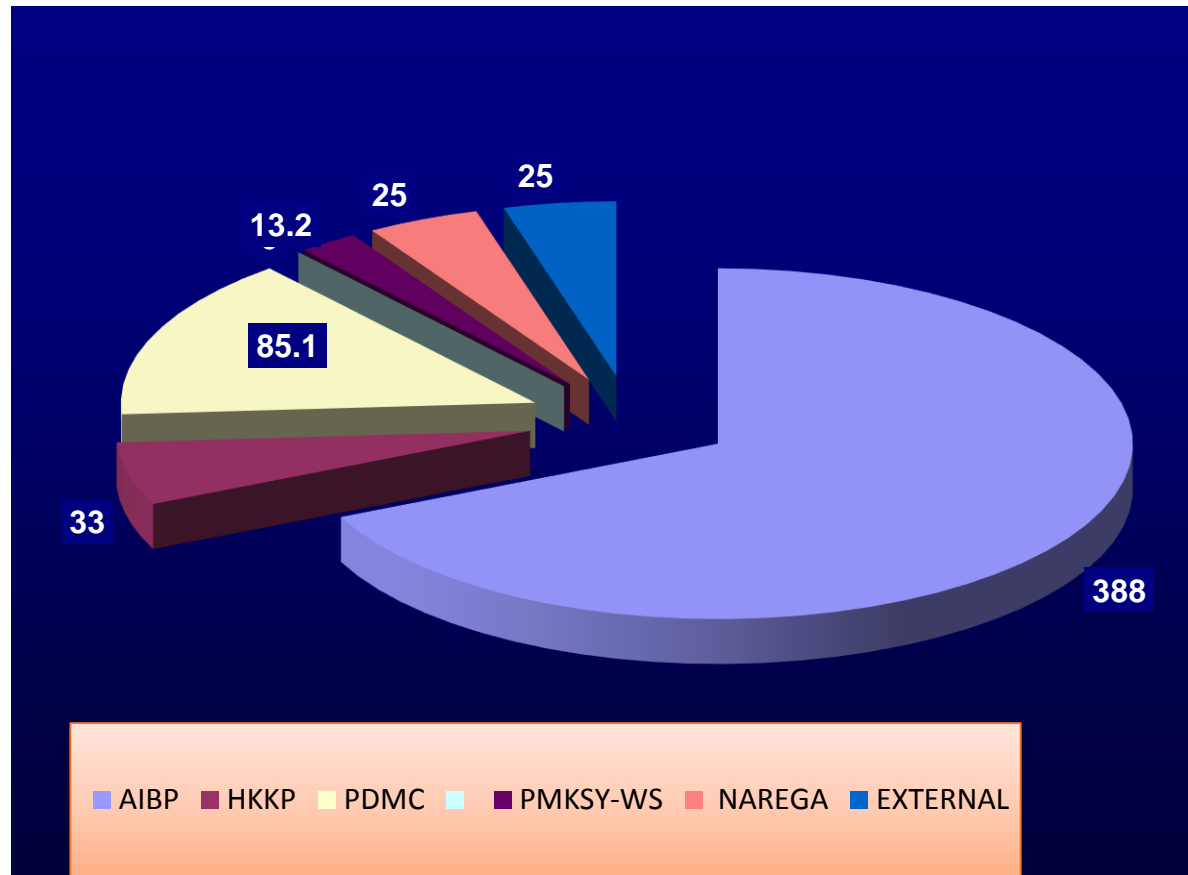
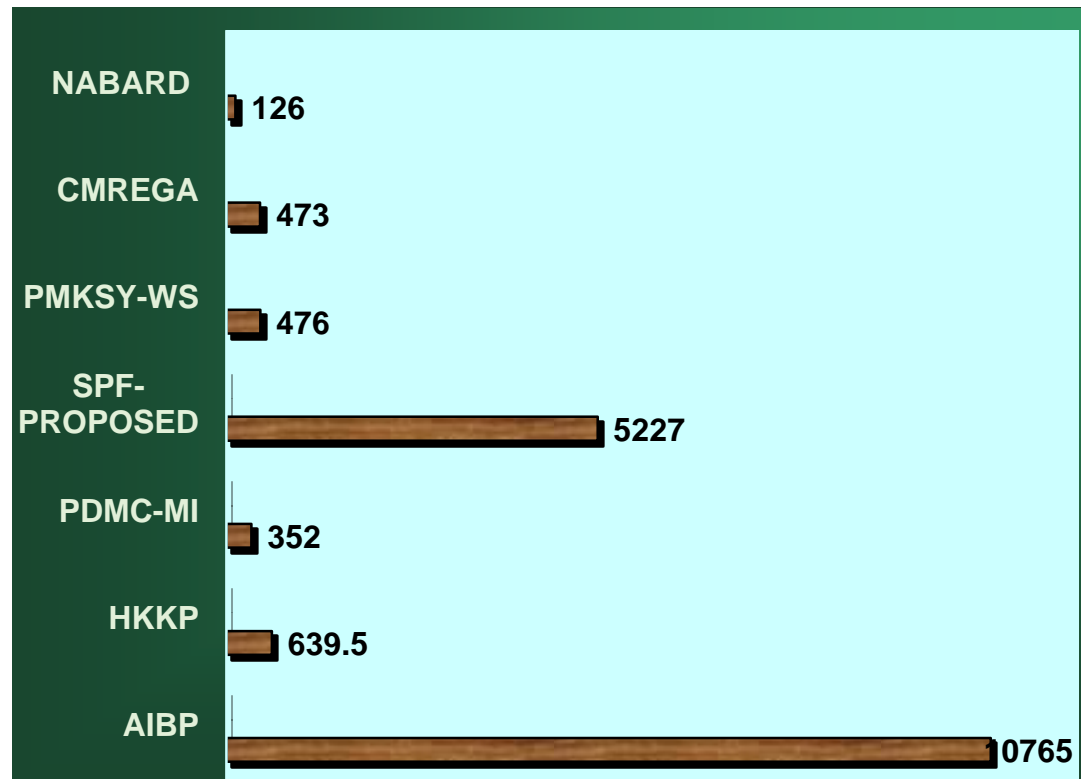


Fig. 5.16 : COMPONENT WISE ALLOCATION OF BUDGET IN PMKSY (CRORE RS)



CONCLUSIONS

- Vijayapura was traditionally drought prone district, with unpredictable low rainfall, where most of rainfed crops suffered stress situations. The limited irrigation was available by open and bore wells
- The construction of Upper Krishna Project (UKP) has changed the irrigation scenario in the district greatly, adding large area under canal irrigation, in addition to already existing irrigated area through other sources.
- Upper Krishna Project, funded by Ministry of Water Resources, is in final stages of completion. PMKSY plan includes the new structures/improvements proposed to utilize surface flown water as well as underground water, besides considering the contemplated area to be added under UKP, due to ongoing projects
- The canal irrigated area created till now (including ongoing projects), after the establishment of UKP, is to the tune of 118173 and the canal irrigation area being added from the proposed major works may work out to 389996 ha within next 2-3 years. In these areas, large number of civil work including construction of field channels are pending and will be taken up in the next 2-3 years. The total canal irrigated area after 5 years, after considering PMKSY proposals will be 506169 ha.
- In addition to canal area, new irrigated area is being added to the existing area by tanks, water harvesting structures like check dams, farm ponds, nala bunds, barrages etc. Nearly, 181219 ha will be added by these structures in the next five years. As the district, already has irrigated area

of 191638ha from sources other than canals, total irrigation is available after five years from all sources other than canals will be 372857 ha.

- Thus, total irrigated after five years is projected to be to the tune of 848368 ha (canal area of 506169 ha + other sources 372857 ha). The canal area will 59.6 % of total irrigated area.
- In addition, large number of ground water recharge structures like percolation tanks, bore well recharge structures, field bunds, bandaras are also proposed purely for recharging the underground water resources- which is the basis of increased irrigation through open wells and bore wells.
- Muddebihal and Sindagi taluk will be benefitted by new additional irrigated created under PMKSY plan, respectively by 91802 and 64250 ha. Bijapur taluk will have maximum benefit by new irrigated area of 186772 ha, while Basavan Bagewadi taluk will be added with irrigated area of 131578 ha. All the taluks will have benefit of the PMKSY plan.
- Among other components, micro irrigation plan will contribute an area of 85100 ha of new irrigated area, by substantial saving of water. Water shed programmes will create new irrigated area to the tune of 13,195 ha, while NABARD funded projects will create a new irrigated area of 24927 ha.
- AIBP component, involving various major irrigation works like field channels, field drains etc., and minor irrigation structures will have an allocation of Rs.10765 .55 crores in the next five years to ensure that canal water reaches the farmers' fields.
- Taluk wise allotment of proposed budget indicated that Vijayapur taluk will have maximum budget of Rs. 4836.1 crores, followed by Beavan

Bagewadi taluk with Rs.2869.66 crore All other taluks will be allotted with a budget ranging from Rs. 1368.3 crore to Rs. 2211.58 crores

- Among the components, Har Khet Ko Pani will be allotted with Rs 639.52 crore to focus on harvesting more rain water for crop production
- A total budget required for 5 year programme of PMKSY irrigation plan will be Rs 18058.45 crores to create a new irrigated area of 569215 ha, including the ongoing state funded UKP programme

APPENDICES

Appendix 1: Details of taluk wise rainfall

Block name	Agro Ecological Zone Type	Type of Terrain	Block Area (ha)	Normal Annual Rainfall (mm)	No. of Rainy Days (No)	Maximum Rainfall Intensity (mm)		
						Upto 15 Min	Beyond 15 but up to 30 Min	Beyond 30 but up to 60 Min
B.Bagewadi	Zone-3, Northern Dry Zone	Plain	197865	677	90			
Vijayapur	Zone-3, Northern Dry Zone	Plain	265769	675	68			
Indi	Zone-3, Northern Dry Zone	Plain	222492	636	68			
Muddebihal	Zone-3, Northern Dry Zone	Plain	149744	645	43			
sindagi	Zone-3, Northern Dry Zone	Plain	217601	655	36			
District total/Mean			1053471	657.6	61			43mm/hr

Appendix 2 : Details of taluk wise temperatures

Average Weekly Temperature(°C)									Potential Evapo Transpiration (PET)				Av elevation of Head quarter (M)	
Period									Period			Cumualative Total		
Summer (April-May)			Winter (Oct-Mar)			Rainy (June-Sept)			Summer	Winter	Rainy			
Min	Max	Mean	Min	Max	Mean	Min	Max	Mean						
23.3	38.7	31.0	13.7	38.4	26.1	22.0	37.7	29.9	391.5	881.0	632.6	1905.1		607
23.3	38.7	31.0	13.7	38.4	26.1	21.9	37.6	29.8	391.7	878.0	630.8	1900.5		770
23.3	38.3	30.8	16.1	37.2	26.7	22.6	37.6	30.1	385.6	813.5	594.3	1793.4		464
24.5	38.3	31.4	16.6	37.2	26.9	23.1	37.3	30.2	374.0	824.4	614.8	1813.2		563
23.3	38.7	31.0	13.7	38.4	26.1	21.9	37.6	29.8	391.7	877.0	630.9	1899.6		500
23.54	38.54	31.04	14.76	37.92	26.34	22.3	37.56	29.93	386.9	854.78	620.68	1862.36		580.8

Appendix 3 : Land use pattern

Source : DAP, PPR, Land Use Plan

Name of the State : Karnataka

Name of the District : Vijayapur

Sl. No.	Name of the Block	Number of the Villages covered	Total Geographical Area(Ha)	Area under Agriculture				Area under Forest	Area under other uses
				Gross Cropped Area	Net Sown Area	Area sown more than once	Cropping Intensity (%)		
1	B.Bagewadi	125	197865	171975	156977	14998	110	1143	39745
2	Vijayapur	131	265769	215810	204645	11165	105	834	60290
3	Indi	133	222492	187599	169444	18155	111	0	53048
4	Muddebihal	153	149744	117300	107182	10118	109	0	42562
5	Sindagi	150	217601	222196	191836	30360	116	0	25765
	Total	692	1053471	914880	830084	84796	110	1977	221410

Appendix 4 Taluk wise season wise cropping

Name of the Block: B.Bagewadi

Crop type	Kharif (Area in ha)			Rabi area in ha			Summer crop(Area in ha)			Total (Area in ha)		
	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total
A) Cereals	4710	1331	6041	3843	23071	26914	50	0	50	8603	24402	33005
B) otherCoarse cereals	0	0	0	0	0	0	0	0	0	0	0	0
c)Pulses	1085	36167	37252	767	80018	80785	0	0	0	1852	116185	118037
D) Oil seeds	1949	1650	3599	220	11357	11577	3000	0	3000	5169	13007	18176
E) Fibre	72	17	89	10	0	10	0	0	0	82	17	99
F)Any other crops(Sugar cane)	4732	0	4732	5545	0	5545	0	0	0	10277	0	10277
Total	12548	39165	51713	10385	114446	124831	3050	0	3050	25983	153611	179594

Name of the Block: Vijayapura

Crop type	Kharif (Area in ha)			Rabi area in ha			Summer crop(Area in ha)			Total (Area in ha)		
	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total
A) Cereals	8072	11917	19989	8651	64223	72874	583	0	583	17306	76140	93446
B) otherCoarse cereals	0	0	0	0	0	0	0	0	0	0	0	0
c)Pulses	230	26995	27225	4735	63820	68555	0	0	0	4965	90815	95780
D) Oil seeds	2274	1760	4034	374	12104	12478	767	0	767	3415	13864	17279
E) Fibre	5	0	5	26	35	61	0	0	0	31	35	66
F)Any other crops(Sugar cane)	4443	0	4443	992	0	992	439	0	439	5874	0	5874
Total	15024	40672	55696	14778	140182	154960	1789	0	1789	31591	180854	212445

Name of the Block:

Indi

Crop type	Kharif (Area in ha)			Rabi area in ha			Summer crop(Area in ha)			Total (Area in ha)		
	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total
A) Cereals	7340	5526	12866	26627	35090	61717	195	0	195	34162	40616	74778
B) otherCoarse cereals	0	0	0	0	0	0	0	0	0	0	0	0
c)Pulses	3483	22770	26253	17840	38015	55855	0	0	0	21323	60785	82108
D) Oil seeds	1087	3842	4929	765	1350	2115	4535	0	4535	6387	5192	11579
E) Fibre	0	0	0	0	0	0	0	0	0	0	0	0
F)Any other crops(Sugar cane)	30347	0	30347	41494	0	41494	184	0	184	72025	0	72025
Total	42257	32138	74395	86726	74455	161181	4914	0	4914	133897	106593	240490

Name of the Block: Muddebihal

Crop type	Kharif (Area in ha)			Rabi area in ha			Summer crop(Area in ha)			Total (Area in ha)		
	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total
A) Cereals	1146	2487	3633	1590	13245	14835	25	0	25	2761	15732	18493
B) otherCoarse cereals	0	50	50	0	0	0	0	0	0	0	50	50
c)Pulses	2295	13798	16093	4000	54363	58363	50	0	50	6345	68161	74506
D) Oil seeds	648	722	1370	500	18465	18965	1525	0	1525	2673	19187	21860
E) Fibre	205	110	315	0	0	0	0	0	0	205	110	315
F)Any other crops(Sugar cane)	6503	0	6503	6239	0	6239	0	0	0	12742	0	12742
Total	10797	17167	27964	12329	86073	98402	1600	0	1600	24726	103240	127966

Name of the Block:
Sindagi

Crop type	Kharif (Area in ha)			Rabi area in ha			Summer crop(Area in ha)			Total (Area in ha)		
	Irrigate d	Rainfe d	Total	Irrigate d	Rainfe d	Total	Irrigated	Rainfed	Total	Irrigate d	Rainfe d	Total
A) Cereals	3694	612	4306	23185	42875	66060	1000	0	1000	27879	43487	71366
B) otherCoarse cereals	0	0	0	0	0	0	0	0	0	0	0	0
c)Pulses	9723	18491	28214	8980	43150	52130	0	0	0	18703	61641	80344
D) Oil seeds	1713	2598	4311	2420	6435	8855	6950	0	6950	11083	9033	20116
E) Fibre	8021	868	8889	0	0	0	0	0	0	8021	868	8889
F)Any other crops(Sugar cane)	17594	0	17594	0	0	0	0	0	0	17594	0	17594
Total	40745	22569	63314	34585	92460	12704 5	7950	0	7950	83280	11502 9	19830 9

Vijayapura District												
Crop type	Kharif (Area in ha)			Rabi area in ha			Summer crop(Area in ha)			Total (Area in ha)		
	Irrigate d	Rainfe d	Total	Irrigate d	Rainfe d	Total	Irrigated	Rainfed	Total	Irrigate d	Rainfe d	Total
A) Cereals	24962	21873	46835	63896	17850 4	24240 0	1853	0	1853	90711	20037 7	29108 8
B) otherCoarse cereals	0	50	50	0	0	0	0	0	0	0	50	50
c)Pulses	16816	11822 1	13503 7	36322	27936 6	31568 8	50	0	50	53188	39758 7	45077 5
D) Oil seeds	7671	10572	18243	4279	49711	53990	16777	0	16777	28727	60283	89010
E) Fibre	8303	995	9298	36	35	71	0	0	0	8339	1030	9369
F)Any other crops(Sugar cane)	63619	0	63619	54270	0	54270	623	0	623	11851 2	0	11851 2
Total	121371	151711	273082	158803	507616	666419	19303	0	19303	299477	659327	958804

Appendix 5 Production and productivity of crops in different taluks(2014-15)

Area in ha, production in qtls/year and Productivity in Kg/ha											
Block	Season	crop	Rainfed			Irrigated			Total		
			Area	Production	Productivity or Yield	Area	Production	Productivity or Yield	Area	Production	Productivity or Yield
B.Bage wadi	Kariff	Maize	140	4238	3027	17401	817673	4699	17541	821911	4686
		Bajra	3803	24567	646	362	5097	1408	4165	29664	712
		Tur	38595	291392	755	235	3111	1324	38830	294504	758
		Groundnut	971	2398	247	217	2558	1179	1188	4957	417
		Sunflower	4854	14562	300	216	2143	992	5070	16705	329
		Horsegram	10	20	203	0	0		10	20	203
		Greengram	724	970	134	0	0		724	970	134
		Sesamum	18	21	114	0	0		18	21	114
	Rabi	Jowar	24800	2616	11	0	0	0	24800	2616	11
		Maize	0	0		290	10959	3779	290	10959	3779
		Wheat	2080	15995	769	500	8245	1649	2580	24240	940
		Linseed	20	44	220	0	0		20	44	220
		Bengal Gram	47650	250163	525	0	0	0	47650	250163	525
		Sunflower	5200	15028	289	0	0	635	5200	15028	289

		Safflower	280	1030	368	0	0		280	1030	368
	Summer	Maize		0		350	9958	2845	350	9958	2845
		Groundnut		0		3950	49415	1251	3950	49415	1251
		Sunflower		0		35	248	709	35	248	709
	Taluk Total		129145	623045		23556	909407		152701	1532452	
Vijaypur	Kariff	Maize	1555	32422	2085	22843	760900	3331	24398	793322	3252
		Bajra	14409	94379	655	2040	16850	826	16449	111229	676
		Tur	29933	182292	609	157	1813	1155	30090	184105	612
		Groundnut	4512	31133	690	1016	9368	922	5528	40500	733
		Sunflower	6960	20602	296	703	5547	789	7663	26148	341
		Horsegram	2267	2720	120	0	0		2267	2720	120
		Greengram	3560	3560	100	0	0		3560	3560	100
		Sesamum	137	110	80	0	0		137	110	80
	Rabi	Jowar	40859	426977	1045	2238	35226	1574	43097	462203	1072
		Maize	70	1782	2545	2421	74712	3086	2491	76494	3071
		Wheat	7867	58766	747	5557	72074	1297	13424	130841	975
		Linseed	366	681	186	0	0		366	681	186
		Bengal Gram	31871	207162	650	3110	32157	1034	34981	239319	684
		Sunflower	10588	31235	295	355	2197	619	10943	33432	306
		Safflower	640	3590	561	20	0		660	3590	544
	Summer	Maize		0		542	17588	3245	542	17588	3245
		Groundnut		0		829	6607	797	829	6607	797
		Sunflower		0		67	509	760	67	509	760
	Taluk Total		155594	1097409		41898	1035550		197492	2132959	

Indi	Kariff	Maize	2428	46982	1935	18148	551155	3037	20576	598137	2907
		Bajra	10900	59623	547	2401	24370	1015	13301	83993	631
		Tur	9415	57902	615	3570	35093	983	12985	92995	716
		Groundnut	7108	38454	541	2280	25650	1125	9388	64104	683
		Sunflower	9550	33521	351	4269	41580	974	13819	75101	543
		Horsegram	80	174	217	0	0		80	174	217
		Greengram	610	677	111	0	0		610	677	111
		Sesamum	28	27	95	0	0		28	27	95
	Rabi	Jowar	25220	232024	920	3782	49204	1301	29002	281228	970
		Maize	0	0		1230	38671	3144	1230	38671	3144
		Wheat	2513	10580	421	14775	188529	1276	17288	199109	1152
		Linseed	40	38	95	15	13	85	55	51	92
		Bengal Gram	20410	0		19130	163562	855	39540	163562	414
		Sunflower	1342	4724	352	1330	7036	529	2672	11760	440
		Safflower	10	31	311	170	791	465	180	822	456
	Summer	Maize		0		1850	54723	2958	1850	54723	2958
		Groundnut		0		12600	101304	804	12600	101304	804
		Sunflower		0		200	1074	537	200	1074	537
	Taluk Total		89654	484756		85750	1282754		175404	1767509	
Muddebihal	Kariff	Maize	187	2569	1374	1465	43276	2954	1652	45845	2775
		Bajra	7932	62108	783	275	3553	1292	8207	65661	800
		Tur	38595	235430	610	235	1459	621	38830	236889	610
		Groundnut	882	1923	218	110	752	684	992	2675	270
		Sunflower	3530	7201	204	810	4755	587	4340	11956	275

		Horsegram	430	886	206	0	0		430	886	206
		Greengram	405	514	127	0	0		405	514	127
		Sesamum	124	93	75	0	0		124	93	75
	Rabi	Jowar	14775	139624	945	310	4083	1317	15085	143706	953
		Maize	0	0		25	700	2798	25	700	2798
		Wheat	990	9474	957	380	6426	1691	1370	15900	1161
		Linseed	50	149	297	0	0		50	149	297
		Bengal Gram	33809	184259	545	1338	6610	494	35147	190869	543
		Sunflower	2100	5061	241	470	2688	572	2570	7749	302
		Safflower	1295	4066	314	0	0		1295	4066	314
	Summer	Maize		0		125	3906	3125	125	3906	3125
		Groundnut		0		4000	42200	1055	4000	42200	1055
		Sunflower		0		75	161	215	75	161	215
	Taluk Total		105104	653356		9618	120569		114722	773926	
Sindagi	Kariff	Maize	0	0	4206	6263	289977	4630	6263	289977	4630
		Bajra	7615	74094	973	1641	18822	1147	9256	92916	1004
		Tur	43525	372139	855	6378	67798	1063	49903	439937	882
		Groundnut	3263	16609	509	420	3112	741	3683	19721	535
		Sunflower	4222	15115	358	1680	8904	530	5902	24019	407
		Horsegram	431	1090	253	0	0		431	1090	253
		Greengram	35	19	54	0	0		35	19	54
	Rabi	Jowar	32316	308618	955	4650	69564	1496	36966	378182	1023
		Maize	0	0		2282	75306	3300	2282	75306	3300
		Wheat	6419	40311	628	14691	175411	1194	21110	215722	1022

		Bengal Gram	30840	192750	625	6805	59408	873	37645	252158	670
		Sunflower	5000	15800	316	2050	11050	539	7050	26850	381
		Safflower	1404	5827	415	0	0		1404	5827	415
	Summer	Maize		0		1935	62791	3245	1935	62791	3245
		Groundnut		0		7020	88101	1255	7020	88101	1255
		Sunflower		0		465	2641	568	465	2641	568
	Taluk Total		135070	104237		56280	932884		191350	1975255	
	District Total		614567	3900938		217102	4281163		831669	8182101	

Appendix 6: Irrigation based Classification

Source : Agriculture Statistic, Irrigation Statistic of CWC, Indian Statistic, Open Government Data Platform

Name of the State :Karnataka

Name of the District :vijayapur

Name of the Block :

Sl.No.	Block	Irrigated (Area in ha)		Rainfed (Area in ha)	
		Gross Irrigated Area	Net Irrigated Area*	Partially Irrigated/ Protective Irrigation	Un-Irrigated or Totally Rainfed
1	B.Bagewadi	49513	42109		122462
2	Vijayapur	67508	58708		148302
3	Indi	98025	86386		89574
4	Muddebihal	26361	23222		90939
5	Sindagi	113065	99391		109131
	Total	354472	309816		560408

*considers irrigated area now being developed in different taluks, but not officially recorded as irrigated area

Appendix 7 : Status of Water Availability

Name of the State: Karnataka

Name of the District: Vijaypur

Sl. No.	Sources	Vijaypur			
		Kharif (Ha.)	Rabi (Ha.)	Summer (Ha.)	Total (Ha.)
1	Surface Irrigation				
(i)	Canal (Major & Medium Irrigation)	650.00	650.00	-	650.00
(ii)	Minor Irrigation Tanks	7669.00	7669.00	-	7669.00
(iii)	Lift Irrigation / Diversion	0.00	0.00	-	0.00
(iv)	Various Water Bodies including Rain Water Harvesting	2610.84	2610.84	-	2610.84
(v)	Treated Effluent Recieved from STP	-	-	-	-
(vi)	Untreated Effluent	-	-	-	-
(vii)	Perennial sources of water	-	-	-	-
2	Ground Water	-	-	-	-
(i)	Popen Well	-	-	-	-
(ii)	Deep Tube Well	-	-	-	-
(iii)	Medium Tube Well	-	-	-	-
(iv)	Shallow Tube Well	-	-	-	-

Sl. No.	Sources	B.Bagewadi				Indi			
		Kharif (Ha.)	Rabi (Ha.)	Summer (Ha.)	Total (Ha.)	Kharif (Ha.)	Rabi (Ha.)	Summer (Ha.)	Total (Ha.)
1	Surface Irrigation								
(i)	Canal (Major & Medium Irrigation)	470.00	470.00	-	470.00	-	-	-	-
(ii)	Minor Irrigation Tanks	3529.00	3529.00	-	3529.00	5148.00	5148.00	-	5148.00
(iii)	Lift Irrigation / Diversion	0.00	0.00	-	0.00	0.00	0.00	-	0.00
(iv)	Various Water Bodies including Rain Water Harvesting	1297.00	1297.00	-	1297.00	9166.00	9166.00	-	9166.00
(v)	Treated Effluent Recieved from STP	-	-	-	-	-	-	-	-
(vi)	Untreated Effluent	-	-	-	-	-	-	-	-
(vii)	Perennial sources of water	-	-	-	-	-	-	-	-
2	Ground Water	-	-	-	-	-	-	-	-
(i)	Popen Well	-	-	-	-	-	-	-	-
(ii)	Deep Tube Well	-	-	-	-	-	-	-	-
(iii)	Medium Tube Well	-	-	-	-	-	-	-	-
(iv)	Shallow Tube Well	-	-	-	-	-	-	-	-

Sl. No.	Sources	Sindagi				Muddebihal			
		Kharif (Ha.)	Rabi (Ha.)	Summer (Ha.)	Total (Ha.)	Kharif (Ha.)	Rabi (Ha.)	Summer (Ha.)	Total (Ha.)
1	Surface Irrigation								
(i)	Canal (Major & Medium Irrigation)								
(ii)	Minor Irrigation Tanks	-	-	-	-	-	-	-	-
(iii)	Lift Irrigation / Diversion	2064.00	2064.00	-	2064.00	3752.00	3752.00	-	3752.00
(iv)	Various Water Bodies including Rain Water Harvesting	0.00	0.00	-	0.00	0.00	0.00	-	0.00
(v)	Treated Effluent Recieved from STP	3085.00	3085.00	-	3085.00	1155.00	1155.00	-	1155.00
(vi)	Untreated Effluent	-	-	-	-	-	-	-	-
(vii)	Perennial sources of water	-	-	-	-	-	-	-	-
2	Ground Water	-	-	-	-	-	-	-	-
(i)	Popen Well	-	-	-	-	-	-	-	-
(ii)	Deep Tube Well	-	-	-	-	-	-	-	-
(iii)	Medium Tube Well	-	-	-	-	-	-	-	-
(iv)	Shallow Tube Well	-	-	-	-	-	-	-	-

Sources	District Total			
	Kharif (Ha.)	Rabi (Ha.)	Summer (Ha.)	Total (Ha.)
Surface Irrigation				
Canal (Major & Medium Irrigation)				
Minor Irrigation Tanks	1120.00	1120.00	0.00	1120.00
Lift Irrigation / Diversion	22162.00	22162.00	0.00	22162.00
Various Water Bodies including Rain Water Harvesting	0.00	0.00	0.00	0.00
Treated effluent received from STP	17313.84	17313.84	0.00	17313.84
Untreated Effluent	0.00	0.00	0.00	0.00
Perennial sources of water	0.00	0.00	0.00	0.00
Ground Water	0.00	0.00	0.00	0.00
Open Well	0.00	0.00	0.00	0.00
Deep Tube Well	0.00	0.00	0.00	0.00
Medium Tube Well	0.00	0.00	0.00	0.00
Shallow Tube Well	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00

Appendix 8: Status of Command area –Indi taluk

Sl.No.	Village	Total area	Developed area	Undeveloped area	Developed Command	Un-Developed command
1	2	3	4	5	4+7	5+8
IBC (Indi)						
1	Arjunagi(BK)	1327.3	1117.97	209.33	1117.97	209.33
2	Marsanalli	695.83	412.94	282.89	412.94	282.89
3	Theggihalli	691.77	397.01	294.76	397.01	294.76
4	Golasar	1205.12	941.9	263.22	941.9	263.22
5	Nadh (K.D)	1457.69	1003.64	454.05	1003.64	454.05
6	Miragi	1086.91	395.27	691.64	395.27	691.64
7	Shirashyad	3351.48	2002.01	1349.47	2002.01	1349.47
8	Sangogi	1030.19	522.49	507.7	522.49	507.7
9	Masali (B.K)	3191.67	1124.9	2066.77	1124.9	2066.77
10	Masali (K.D)	853.48	114.16	739.32	114.16	739.32
11	Nadh (B.K)	1160.23	854.54	305.69	854.54	305.69
12	Sathalagav	2232.87	1903.85	329.02	1903.85	329.02
13	Lalasangi	2568.57	1494.76	1073.81	1494.76	1073.81
14	Salotagi	6918.06	925.75	5992.31	925.75	5992.31
15	Khyadagi	1966.50	1277.19	689.31	1277.19	689.31

16	Rodagi	1775.15	1153.81	621.34	1153.81	621.34
17	Nagarahalli	556.02	395.37	160.65	395.37	160.65
18	Bhuyyar	2771.93	1763.48	1008.45	1763.48	1008.45
19	Shivapur	496.67	461.97	34.7	461.97	34.7
20	Indi	7658.99	209.51	7449.48	209.51	7449.48
21	Ingalagi	2012.91	1082.65	930.26	1082.65	930.26
22	Hirebevanloor	3744.06	2717.76	1026.3	2717.76	1026.3
23	Alur	2779.13	1210.72	1568.41	1210.72	1568.41
24	Agharakhed	5275.68	4194.99	1080.69	4194.99	1080.69
25	Chikkamanur	1160.29	900.71	259.58	900.71	259.58
26	Bathagunaki	803.55	52.43	751.12	52.43	751.12
27	Nandhral	774.51	339.42	435.09	339.42	435.09
28	Hingani	1738.15	1052.97	685.18	1052.97	685.18
29	Baragudi	1019.57	825.61	193.96	825.61	193.96
30	Halasangi	3158.01	1145.1	2012.91	1145.1	2012.91
31	Arjanal	1688.26	178.04	1510.22	178.04	1510.22
32	Yelagi	1128.74	89.74	1039	89.74	1039
33	Anachi	372.19	333.92	38.27	333.92	38.27
34	Shiragoor	442.12	300.19	141.93	300.19	141.93
35	Chanegav	1320.19	375.79	944.4	375.79	944.4
36	Dhulakhed	1845.07	1032.33	812.74	1032.33	812.74
37	Manankalaga	1150.09	840.61	309.48	840.61	309.48
38	Maragoor	1259.12	862.24	396.88	862.24	396.88
39	Shiranal	806.86	726.70	80.16	726.7	80.16
40	Taddhewadi	1170.07	838.20	331.87	838.2	331.87
41	Loni(KD)	805.09	390.62	414.47	390.62	414.47

42	Keroor	1034.37	544.65	489.72	544.65	489.72
43	Takali	1179.53	737.65	441.88	737.65	441.88
44	Hatthalli	1616.43	880.26	736.17	880.26	736.17
45	Havinal	3936.92	1341.65	2595.27	1341.65	2595.27
46	Kenchinal	412.3	7.60	404.7	7.6	404.7
47	Ahirsanga	3061.21	565.51	2495.7	565.51	2495.7
48	Loni(BK)	2398.61	390.62	2007.99	390.62	2007.99
49	Lachyan	2488.22	496.36	1991.86	496.36	1991.86
50	Padnur	1711.64	1327.17	384.47	1327.17	384.47
51	Shiragur	1073.65	1068.55	5.1	1068.55	5.1
52	Gubbewad	-----	3265	0	3265	0
53	Bairunagi	1335.22	55.58	1279.64	55.58	1279.64
54	holisank	752.51	420.67	331.84	420.67	331.84
55	Umarani	1307.21	680.18	627.03	680.18	627.03
56	Nivaragi	1650.13	798.71	851.42	798.71	851.42
57	Revatagav	2288.28	693.37	1594.91	693.37	1594.91
58	Umaraj	2454.77	750.57	1704.2	750.57	1704.2
59	Dasur	485.53	209.45	276.08	209.45	276.08
60	Govindapur	279.85	74.29	205.56	74.29	205.56
sub total of lbc (Indi)		106916.47	52271.1	54645.37	52271.1	54645.37
ILC (Indi)						
1	Tamba	6202.34	4457.94	1744.4	4457.94	1744.4
2	Wade	477.27	325	152.27	325	152.27
3	Banthanal	870.94	656.86	214.08	656.86	214.08
4	Masali BK	3191.67	454.51	2737.16	454.51	2737.16
5	Banahatti	467.43	257.89	209.54	257.89	209.54

6	Shirakanahalli	1195.44	59.5	1135.94	59.5	1135.94
7	Benakanahalli	2001.67	462.67	1539	462.67	1539
8	Shivapur	496.67	178.88	317.79	178.88	317.79
9	Tadavalaga	5545.46	48.5	5496.96	48.5	5496.96
10	Tennihalli	1380.42	405.22	975.2	405.22	975.2
11	Goranal	1445.16	1369.54	75.62	1369.54	75.62
12	Masali K D	853.48	195.55	657.93	195.55	657.93
13	hire Rugi	3340.49	255.28	3085.21	255.28	3085.21
14	Salotagi	6918.06	99.96	6818.1	99.96	6818.1
15	Ganganahalli	-----	29	_	29	_
16	Kenganal	494.18	173.64	320.54	173.64	320.54
sub total of ILC Indi		34880.68	9429.94	25450.74	9429.94	25450.74
Grand Total IBC+ILC of Indi		141797.15	61701.04	80096.11	61701.04	80096.11

Appendix 9 Status of command area in SIndagi taluk

Name of the village	Total area	Developed area	unDeveloped command
Honnalli	416.24	63.03	353.21
Bhramhadevana madu	603.26	137.47	465.79
Khainur	1188.36	932.48	255.88
Golageri	1037.83	43.49	994.34
Maradi	994.22	470.08	524.14
Sungathan	1307.9	348.56	959.34
Nandagiri	694.75	34.55	660.2
Goravagundagi	777.23	315.49	461.74
Nagavi	1073.67	630.32	443.35
Bantanur	1168.46	211.25	957.21
Moratagi	2514.28	2017.61	496.67
Guttaragi	1884.66	4.85	1879.81
Kerur	984.41	377.19	607.22
Kulekumatagi	1300.94	1120.31	180.63
Hanchinal	628.3	613.87	14.43
Kakkalamele	4327.31	3587.39	739.92
Sirasagi	425.8	352.58	73.22
Bagalur	1145.26	961.07	184.19

Yargal(KD)	1110.64	283.69	826.95
Yargal(BK)	3189.13	101.8	3087.33
Gabsavalagi	1701.16	657.67	1043.49
basanal	186.07	147.52	38.55
jetnal	600.09	662.89	-62.8
Ahaheri	1180.43	451.77	728.66
Mangalur	814.34	497.84	316.5
Malaghan	2165.37	634.07	1531.3
Somjhal	1323.44	1156.41	167.03
Asangihal	882.5	314.06	568.44
Gundagi	2158.29	625.11	1533.18
Devaranavadagi	2268.72	1965.29	303.43
Kumasigi	2058.80	1885.43	173.37
Bhommanhalli	794.47	793.85	0.62
Almel	6328.13	4919.52	1408.61
Madnalli	994.77	964.19	30.58
Kuarabathhalli	865.63	706.58	159.05
Byadagihal	341.91	283.22	58.69
Devanagaon	4196.86	3608.03	588.83
Kadalevad	711.05	694.48	16.57
Havalagi	671.21	342.87	328.34
Korahalli	2331.23	1070.33	1260.9
Kallahalli	367.39	62.31	305.08
Babaleshwara	1029.00	220.18	808.82
Huvinahalli	849.48	722	127.48
Ramanahalli	614.71	402.17	212.54

Guddalli	556.21	527.43	28.78
Vibhuthihalli	340.24	307.5	32.74
Tarapur	343.61	205.19	138.42
Tontapur	218	176.81	41.19
kadani	1776.94	1307	469.94
Tavara khed	682.4	376.9	305.5
Balaganur	5932.09	1348.12	4583.97
Uchitanavadagi	340.59	264.54	76.05
Alahalli	1079.56	623.25	456.31
Madari	590.31	220.57	369.74
sub Total of IBC(Sindagi)			32315.47
Asantapur	706.79	350.17	356.62
Halagundakanal	573.08	85.37	487.71
Karavinal	1225.16	822.82	402.34
B-Madu	603.26	430.56	172.7
Golageri	1037.83	1000.18	37.65
Yaragal BK	3189.13	3154.45	34.68
Guttaragi	1884.66	1272.53	612.13
Sindagi	7364.15	1542.84	5821.31
Yaragal KD	1110.64	87.99	1022.65
Ahaheri	1180.43	834.57	345.86
Benakotagi	880.15	865.17	14.98
Rampur PA	524.65	405.74	118.91
Babaleshwara	1029.00	196.09	832.91
Kalahalli	367.39	109.67	257.72
Ganihar	2426.23	1715.71	710.52

Hikkanagutti	1315.36	1158.83	156.53
Chandakavate	5426.58	4470.41	956.17
Balaganur	5932.09	2016.67	3915.42
Korahalli	2331.23	197.82	2133.41
Madabal	4377.18	1338.79	3038.39
Byakod	2084.59	87.46	1997.13
Byalihal	530.43	161.24	369.19
Yankanchi	4886.17	4035.17	851
Nandagiri	694.75	650.11	44.64
Honnalli	416.24	265	151.24
Saladahalli	376.65	366.56	10.09
Alagur	3572.45	149.4	3423.05
Khanapur	704.77	610.26	94.51
Kadarapur	595.2	521.02	74.18
Dhavalur	2352.54	286.25	2066.29
Gubbewadi	1362.77	83.81	1278.96
Bannahatti(PA)	562.44	70.87	491.57
Mannapur	373.45	60.97	312.48
Bankalagi	604.90	276.15	328.75
Kannolli	4463.7	292.62	4171.08
Otihal	1001.56	142.57	858.99
Hachyal	1414.98	237.65	1177.33
Bandal	2351.81	486.29	1865.52
Dambal	680.52	431.55	248.97
Sasabal	1151.93	314.28	837.65
Chattaraki	3469.45	523.99	2945.46

Animadu	230.17	139.53	90.64
Nagarahalli	838.61	243.69	594.92
Chikkarugi	3352.48	1208.41	2144.07
Ganganahalli	876.37	222.96	653.41
Suragihalli	1018.28	773.79	244.49
Somapur	420.14	408.11	12.03
Budihal	751.22	278.8	472.42
Chattanahalli	289.57	80.96	208.61
Yalagod	2214.7	72.97	2141.73
Mangalur	814.34	145.7	668.64
Vandal	708	285.61	422.39
Total of Sindagi ILC			52680.04
Grand Total IBC+ILC of Sindagi			84995.51

Appendix 10 : Details of minor irrigation works

Sl. No.	Name of Work	District	Taluka	Unic ID	Estd. Cost (Rs. In Lakhs)	Potential planned in Ha.
1	2	3	4	5	6	7
1	Construction of Check dam (site -1)across Nala near village Kakhandaki	Vijaypur	Vijaypur		30.00	12.14
2	Construction of Check dam (site -2)across Nala near village Kakhandaki	Vijaypur	Vijaypur		35.00	16.19
3	Construction of Check dam (site -3)across Nala near village Kakhandaki	Vijaypur	Vijaypur		30.00	10.12
4	Construction of Check dam (site -1)across Nala near village Karjol	Vijaypur	Vijaypur		40.00	18.21
5	Construction of Check dam (site -2)across Nala near village Karjol	Vijaypur	Vijaypur		45.00	14.16
6	Construction of Check dam (site -3)across Nala near village Karjol	Vijaypur	Vijaypur		35.00	12.14
7	Construction of Check dam (site -2)across Nala near village Dudihal	Vijaypur	Vijaypur		90.00	26.31
8	Construction of Check dam (site -3)across Nala near village Dudihal	Vijaypur	Vijaypur		85.00	28.33
9	Construction of Check dam (site -1)across Nala near village Babanagar	Vijaypur	Vijaypur		25.00	14.16
10	Construction of Check dam (site -2)across Nala near village Babanagar	Vijaypur	Vijaypur		30.00	12.14
11	Construction of Check dam (site -3)across Nala near village Babanagar	Vijaypur	Vijaypur		30.00	10.12
12	Construction of Check dam (site -4)across Nala near village Babanagar	Vijaypur	Vijaypur		25.00	12.14
13	Construction of Check dam (site -5)across Nala near village Babanagar	Vijaypur	Vijaypur		25.00	12.14
14	Construction of Check dam (site -1)across Nala near village Kannal	Vijaypur	Vijaypur		15.00	10.12
15	Construction of Check dam (site -2)across Nala near village Kannal	Vijaypur	Vijaypur		15.00	10.12
16	Construction of Check dam (site -3)across Nala near village Kannal	Vijaypur	Vijaypur		15.00	8.09

17	Construction of Check dam (site -4)across Nala near village Kannal	Vijaypur	Vijaypur		30.00	12.14
18	Construction of Check dam (site -5)across Nala near village Kannal	Vijaypur	Vijaypur		25.00	14.16
19	Construction of Check dam (site -6)across Nala near village Kannal	Vijaypur	Vijaypur		25.00	14.16
20	Construction of Check dam (site -1)across Nala near village Kannur	Vijaypur	Vijaypur		25.00	16.19
21	Construction of Check dam (site -2)across Nala near village Kannur	Vijaypur	Vijaypur		20.00	16.19
22	Construction of Check dam (site -3)across Nala near village Kannur	Vijaypur	Vijaypur		25.00	10.12
23	Construction of Check dam (site -3)across Nala near village Makhanapur	Vijaypur	Vijaypur		90.00	40.47
24	Construction of Check dam (site -1)across Nala near village Ankalagi	Vijaypur	Vijaypur		35.00	16.19
25	Construction of Check dam (site -2)across Nala near village Ankalagi	Vijaypur	Vijaypur		40.00	18.21
26	Construction of Check dam (site -1)across Nala near village Aheri	Vijaypur	Vijaypur		55.00	18.21
27	Construction of Check dam (site -2)across Nala near village Aheri	Vijaypur	Vijaypur		60.00	24.28
28	Construction of Check dam (site -1)across Nala near village Shivanagi	Vijaypur	Vijaypur		45.00	20.23
29	Construction of Check dam (site -2)across Nala near village Shivanagi	Vijaypur	Vijaypur		40.00	18.21
30	Construction of Check dam (site -1)across Nala near village Minchanal	Vijaypur	Vijaypur		65.00	32.38
31	Construction of Check dam (site -2)across Nala near village Minchanal	Vijaypur	Vijaypur		70.00	22.26
32	Construction of Check dam (site -1)across Nala near village Dhanyal	Vijaypur	Vijaypur		25.00	12.14
33	Construction of Check dam (site -1)across Nala near village Nagaral	Vijaypur	Vijaypur		30.00	12.14
34	Construction of Check dam (site -2)across Nala near village Nagaral	Vijaypur	Vijaypur		45.00	16.19
35	Construction of Check dam (site -1)across Nala near village Gonasagi	Vijaypur	Vijaypur		85.00	32.38
36	Construction of Check dam (site -2)across Nala near village Gonasagi	Vijaypur	Vijaypur		80.00	28.33
37	Construction of Bandhara (site -2)across Nala near village Habbal hatti	Vijaypur	Vijaypur		95.00	32.38
38	Construction of Bandhara (site -3)across Nala near village Habbal hatti	Vijaypur	Vijaypur		85.00	24.28
39	Construction of Bandhara (Umarani) across Nala near village Kanamadi	Vijaypur	Vijaypur		200.00	32.38
40	Construction of Bandhara (Malakandavar) across Nala near village Kanamadi	Vijaypur	Vijaypur		155.00	28.33
41	Construction of Bandhara (Kakamari) across Nala near village Kanamadi	Vijaypur	Vijaypur		75.00	24.28
42	Construction of Bandhara (Bakrabai) across Nala near village Kanamadi	Vijaypur	Vijaypur		110.00	36.42

43	Construction of Bandhara (Yallamman Hall) across Nala near village Kanamadi	Vijaypur	Vijaypur		85.00	20.23
44	Construction of Bandhara (Dodda halla) across Nala near village Bijjaragi	Vijaypur	Vijaypur		200.00	44.52
45	Construction of Check Dam site -1 across Nala near village Narasalagi	Vijaypur	B.Bagewadi		30.00	16.19
46	Construction of Check Dam site -2 across Nala near village Narasalagi	Vijaypur	B.Bagewadi		25.00	14.16
47	Construction of Check Dam site -1 across Nala near village Huveen Hipparagi	Vijaypur	B.Bagewadi		25.00	16.19
48	Construction of Check Dam site -2 across Nala near village Huveen Hipparagi	Vijaypur	B.Bagewadi		25.00	16.19
49	Construction of Check Dam site -1 across Nala near village Salodagi	Vijaypur	B.Bagewadi		20.00	22.26
50	Construction of Check Dam site -2 across Nala near village Salodagi	Vijaypur	B.Bagewadi		25.00	24.28
51	Construction of Check Dam site -1 across Nala near village Byakod	Vijaypur	B.Bagewadi		30.00	16.19
52	Construction of Check Dam site -2 across Nala near village Byakod	Vijaypur	B.Bagewadi		30.00	20.23
53	Construction of Check Dam site -3 across Nala near village Byakod	Vijaypur	B.Bagewadi		30.00	24.28
54	Construction of Check Dam site -1 across Nala near village Jayawadagi	Vijaypur	B.Bagewadi		30.00	16.19
55	Construction of Check Dam site -2 across Nala near village Jayawadagi	Vijaypur	B.Bagewadi		30.00	12.14
56	Construction of Check Dam site -1 across Nala near village Masuti	Vijaypur	B.Bagewadi		65.00	24.28
57	Construction of Check Dam site -2 across Nala near village Masuti	Vijaypur	B.Bagewadi		55.00	24.28
58	Construction of Check Dam site -1 across Nala near village Mulawad	Vijaypur	B.Bagewadi		50.00	12.14
59	Construction of Check Dam site -2 across Nala near village Mulawad	Vijaypur	B.Bagewadi		50.00	16.19
60	Construction of Check Dam site -3 across Nala near village Mulawad	Vijaypur	B.Bagewadi		50.00	16.19
61	Construction of Check Dam site -1 across Nala near village Talewad	Vijaypur	B.Bagewadi		45.00	16.19
62	Construction of Check Dam site -2 across Nala near village Talewad	Vijaypur	B.Bagewadi		50.00	20.23
63	Construction of Check Dam site -3 across Nala near village Talewad	Vijaypur	B.Bagewadi		60.00	16.19
64	Construction of Check Dam site -1 across Nala near village Ukkali	Vijaypur	B.Bagewadi		40.00	12.14
65	Construction of Check Dam site -2 across Nala near village Ukkali	Vijaypur	B.Bagewadi		40.00	16.19
66	Construction of Check Dam site -3 across Nala near village Ukkali	Vijaypur	B.Bagewadi		40.00	16.19
67	Construction of Check Dam site -4 across Nala near village Ukkali	Vijaypur	B.Bagewadi		35.00	12.14

68	Construction of Check Dam site -1 across Nala near village Deginal	Vijaypur	B.Bagewadi		35.00	12.14
69	Construction of Check Dam site -2 across Nala near village Deginal	Vijaypur	B.Bagewadi		35.00	16.19
70	Construction of Check Dam site -1 across Nala near village Nandihal	Vijaypur	B.Bagewadi		30.00	16.19
71	Construction of Check Dam site -2 across Nala near village Nandihal	Vijaypur	B.Bagewadi		30.00	16.19
72	Construction of Check Dam site -1 across Nala near village Hattarakihal	Vijaypur	B.Bagewadi		55.00	12.14
73	Construction of Check Dam site -2 across Nala near village Hattarakihal	Vijaypur	B.Bagewadi		55.00	12.14
74	Construction of Check Dam site -1 across Nala near village Masabinal	Vijaypur	B.Bagewadi		65.00	24.28
75	Construction of Check Dam site -2 across Nala near village Masabinal	Vijaypur	B.Bagewadi		75.00	24.28
76	Construction of Check Dam site -1 across Nala near village Nidagundi	Vijaypur	B.Bagewadi		40.00	16.19
77	Construction of Check Dam site -2 across Nala near village Nidagundi	Vijaypur	B.Bagewadi		55.00	16.19
78	Construction of Check Dam site -1 across Nala near village Biraladinni	Vijaypur	B.Bagewadi		50.00	24.28
79	Construction of Check Dam site -1 across Nala near village Budani	Vijaypur	B.Bagewadi		110.00	40.47
80	Construction of Check Dam site -2 across Nala near village Budani	Vijaypur	B.Bagewadi		110.00	40.47
81	Construction of BCB across Nala near village Budani	Vijaypur	B.Bagewadi		200.00	40.47
82	Construction of Check Dam site -1 across Nala near village Alur	Vijaypur	Muddebihal		35.00	12.14
83	Construction of Check Dam site -2 across Nala near village Alur	Vijaypur	Muddebihal		40.00	16.19
84	Construction of Check Dam site -3 across Nala near village Alur	Vijaypur	Muddebihal		40.00	12.14
85	Construction of Check Dam site -1 across Nala near village Bavoor	Vijaypur	Muddebihal		50.00	16.19
86	Construction of Check Dam site -2 across Nala near village Bavoor	Vijaypur	Muddebihal		40.00	20.23
87	Construction of Check Dam site -3 across Nala near village Bavoor	Vijaypur	Muddebihal		50.00	20.23
88	Construction of Check Dam site -1 across Nala near village Nalavatwad	Vijaypur	Muddebihal		50.00	16.19
89	Construction of Check Dam site -2 across Nala near village Nalavatwad	Vijaypur	Muddebihal		60.00	16.19
90	Construction of Check Dam site -3 across Nala near village Nalavatwad	Vijaypur	Muddebihal		50.00	16.19
91	Construction of Check Dam site -1 across Nala near village Bommanhalli	Vijaypur	Muddebihal		45.00	16.19
92	Construction of Check Dam site -2 across Nala near village Bommanhalli	Vijaypur	Muddebihal		50.00	20.23

93	Construction of Bandhara site -1 across Nala near village Bommanhalli	Vijaypur	Muddebihal		110.00	40.47
94	Construction of Bandhara site -2 across Nala near village Bommanhalli	Vijaypur	Muddebihal		110.00	40.47
95	Construction of Bandhara site -3 across Nala near village Bommanhalli	Vijaypur	Muddebihal		120.00	40.47
96	Construction of Bridge cum Bandhara site -1 across Nala near village Guttihal	Vijaypur	Muddebihal		150.00	60.70
97	Construction of Check Dam site -1 across Nala near village Tumbagi	Vijaypur	Muddebihal		35.00	12.14
98	Construction of Check Dam site -2 across Nala near village Tumbagi	Vijaypur	Muddebihal		35.00	16.19
99	Construction of Check Dam site -1 across Nala near village Yaragal	Vijaypur	Muddebihal		40.00	16.19
100	Construction of Check Dam site -2 across Nala near village Yaragal	Vijaypur	Muddebihal		40.00	20.23
101	Construction of Check Dam site -1 across Nala near village Kupanur	Vijaypur	Muddebihal		50.00	20.23
102	Construction of Check dam/Pickup near Salaotagi village (Site-1)	Vijaypur	Indi		65.00	8.09
103	Construction of Check dam/Pickup near Salaotagi Village (Site-2)	Vijaypur	Indi		65.00	8.09
104	Construction of Check dam/Pickup near Salaotagi Village (Site-3)	Vijaypur	Indi		65.00	8.09
105	Construction of Check dam/Pickup near Salaotagi Village (Site-4)	Vijaypur	Indi		65.00	8.09
106	Construction of Check dam/Pickup near Salaotagi Village (Site-5)	Vijaypur	Indi		65.00	8.09
107	Construction of BCB to Miragi-Hanchinal road (site-1)	Vijaypur	Indi		225.00	40.47
108	Construction of BCB to Arjunagi BK -Arjunagi KD road (site-2)	Vijaypur	Indi		225.00	40.47
109	Construction of BCB to Balganur -Banthnal road (site-3)	Vijaypur	Indi		300.00	80.94
110	Construction of Barrage near Horthi Village (Site-1)	Vijaypur	Indi		100.00	40.47
111	Construction of Barrage near Horthi Village (Site-2)	Vijaypur	Indi		50.00	12.14
112	Construction of Barrage near Anachi Village (Site-3)	Vijaypur	Indi		30.00	6.48
113	Construction of Barrage near Halasangi Village (Site-4)	Vijaypur	Indi		40.00	8.09
114	Construction of Check dam/Pickup near Inchageri village (Site-1)	Vijaypur	Indi		40.00	10.12
115	Construction of Check dam/Pickup near Inchageri village (Site-2)	Vijaypur	Indi		40.00	10.12
116	Construction of Check dam/Pickup near Inchageri village (Site-3)	Vijaypur	Indi		40.00	10.12
117	Construction of Check dam/Pickup near Gijjivanagi village (Site-4)	Vijaypur	Indi		25.00	8.09

118	Construction of Check dam/Pickup near Nimbaragi village (Site-5)	Vijaypur	Indi		25.00	8.09
119	Construction of Check dam/Pickup near Jeerankalagi village (Site-6)	Vijaypur	Indi		25.00	8.09
120	Construction of Check dam/Pickup near Jeerankalagi village (Site-7)	Vijaypur	Indi		50.00	10.12
121	Construction of Check dam/Pickup near Talwar vasti in Bardol village(Site-1)	Vijaypur	Indi		35.00	8.09
122	Construction of Check dam/Pickup near Talwar vasti in Bardol village(Site-2)	Vijaypur	Indi		35.00	8.09
123	Construction of Check dam/Pickup near Bardol (LT) village (Site-3)	Vijaypur	Indi		35.00	8.09
124	Construction of Check dam/Pickup near Bardol (LT) village (Site-4)	Vijaypur	Indi		35.00	8.09
125	Construction of Check dam/Pickup near Bardol (LT) village (Site-5)	Vijaypur	Indi		35.00	8.09
126	Construction of Check dam/Pickup in Godihal village (Site-6)	Vijaypur	Indi		35.00	8.09
127	Construction of Check dam/Pickup in Godihal village (Site-7)	Vijaypur	Indi		35.00	8.09
128	Construction of Check dam/Pickup in Godihal village (Site-8)	Vijaypur	Indi		35.00	8.09
129	Construction of Check dam/Pickup in Kerur village (Site-9)	Vijaypur	Indi		35.00	8.09
130	Construction of Check dam/Pickup in Kerur village (Site-10)	Vijaypur	Indi		35.00	8.09
131	Construction of Check dam/Pickup in Kerur village (Site-11)	Vijaypur	Indi		35.00	8.09
132	Construction of Check dam/Pickup near Revatgaon village (Site-1)	Vijaypur	Indi		70.00	24.28
133	Construction of Check dam/Pickup near Revatgaon village (Site-2)	Vijaypur	Indi		200.00	80.94
134	Construction of Check dam/Pickup near Nevaragi village (Site-3)	Vijaypur	Indi		80.00	16.19
135	Construction of Check dam/Pickup near Havinal village (Site-1)	Vijaypur	Indi		50.00	16.19
136	Construction of Check dam/Pickup near Havinal village (Site-2)	Vijaypur	Indi		50.00	16.19
137	Construction of Check dam/Pickup near Havinal village (Site-3)	Vijaypur	Indi		175.00	32.38
138	Construction of Check dam/Pickup near Yargal B.K village (Site-1)	Vijaypur	Sindagi		50.00	4.05
139	Construction of Check dam/Pickup near Yargal B.K village (Site-2)	Vijaypur	Sindagi		50.00	4.05
140	Construction of Check dam/Pickup near Bisnal village	Vijaypur	Sindagi		50.00	6.07
141	Construction of Check dam/Pickup near Gabsvalagi village	Vijaypur	Sindagi		50.00	4.86
142	Construction of BCB near Manglore village	Vijaypur	Sindagi		100.00	40.47

143	Construction of Check dam/Pickup near Somjal village	Vijaypur	Sindagi		50.00	40.47
144	Construction of Check dam/Pickup near Devernavadagi village (site-1)	Vijaypur	Sindagi		60.00	6.07
145	Construction of Check dam/Pickup near Devernavadagi village (site-2)	Vijaypur	Sindagi		60.00	6.07
146	Construction of BCB near Kakkalmeli village	Vijaypur	Sindagi		125.00	20.23
147	Construction of Check dam/Pickup near Kurabthalli village (site-1)	Vijaypur	Sindagi		45.00	6.07
148	Construction of Check dam/Pickup near Kurabthalli village (site-2)	Vijaypur	Sindagi		45.00	6.07
149	Construction of Check dam/Pickup near Almel village	Vijaypur	Sindagi		60.00	4.86
150	Construction of Check dam/Pickup near Korhalli village	Vijaypur	Sindagi		60.00	4.05
151	Construction of Check dam/Pickup near Kalhalli village	Vijaypur	Sindagi		50.00	4.05
152	Construction of Check dam/Pickup near Kanolli village (Site-1)	Vijaypur	Sindagi		35.00	4.05
153	Construction of Check dam/Pickup near Kanolli village (Site-2)	Vijaypur	Sindagi		35.00	4.05
154	Construction of Check dam/Pickup near Bandhal village (Site-1)	Vijaypur	Sindagi		50.00	4.86
155	Construction of Check dam/Pickup near Bandhal village (Site-2)	Vijaypur	Sindagi		50.00	4.86
156	Construction of Check dam/Pickup near Sompur village	Vijaypur	Sindagi		40.00	4.86
157	Construction of Check dam/Pickup near Hachyal village	Vijaypur	Sindagi		40.00	4.86
158	Construction of Check dam/Pickup near Chandkavate village (Site-1)	Vijaypur	Sindagi		40.00	4.05
159	Construction of Barrage near Chandkavate village (Site-2)	Vijaypur	Sindagi		100.00	32.38
160	Construction of Check dam/Pickup near Baykod village (Site-1)	Vijaypur	Sindagi		40.00	4.86
161	Construction of Check dam/Pickup near Baykod village (Site-2)	Vijaypur	Sindagi		40.00	4.86
162	Construction of Check dam/Pickup near Banhatti PA village	Vijaypur	Sindagi		40.00	4.86
163	Construction of Barrage near Madbal village (Site-1)	Vijaypur	Sindagi		75.00	8.09
164	Construction of Barrage near Madbal village (Site-2)	Vijaypur	Sindagi		75.00	8.09
165	Construction of Barrage near Kondguli village (Site-1)	Vijaypur	Sindagi		75.00	8.09
166	Construction of BCB near Kondguli village (Site-2)	Vijaypur	Sindagi		100.00	12.14
167	Construction of Check dam/Pickup near Hanchali village (Site-1)	Vijaypur	Sindagi		35.00	7.28
168	Construction of Check dam/Pickup near Hanchali village (Site-2)	Vijaypur	Sindagi		50.00	7.28

169	Construction of Check dam/Pickup near Yalgod village	Vijaypur	Sindagi		50.00	4.05
170	Construction of Check dam/Pickup near Vandal village	Vijaypur	Sindagi		75.00	4.05
171	Construction of Barrage near Kadrapur village	Vijaypur	Sindagi		75.00	10.12
172	Construction of Barrage near Khanapur village	Vijaypur	Sindagi		75.00	10.12
173	Construction of Barrage near Brahamdevarmadu village	Vijaypur	Sindagi		125.00	10.12
174	Construction of BCB near Anemadu village	Vijaypur	Sindagi		85.00	10.12
175	Construction of BCB near Chatnalli village	Vijaypur	Sindagi		125.00	10.12
176	Construction of Check dam/Pickup near Halgundaknal village	Vijaypur	Sindagi		60.00	8.09
177	Construction of Barrage near Budhihal PT village	Vijaypur	Sindagi		100.00	4.86
178	Construction of Check dam/Pickup near Niralagi village	Vijaypur	Sindagi		50.00	4.86
					10660.00	2998.38

II EXTERNAL FUNDS(PROPOSED IN NABARD(RIDF-22), 4702 NON-NABARD & SDP PROGRAMME)

1	Const of Perculation Tank near Khakandaki	Vijaypur	Vijaypur		100.00	60.00
2	Const of Perculation Tank near Siddapur	Vijaypur	Vijaypur		100.00	58.00
3	Const of Bandara near Ankalagi	Vijaypur	Vijaypur		100.00	56.00
4	IMPTS to Perculation Tank Near Ittangihal Village	Vijaypur	Vijaypur		50.00	40.00
5	IMPTS to Nagaral Tank	Vijaypur	Vijaypur		50.00	40.00
6	IMPTS to Nidoni (New) Tank	Vijaypur	Vijaypur		50.00	40.00
7	IMPTS to Kanamadi (New) Tank	Vijaypur	Vijaypur		50.00	40.00
8	IMPTS to Bijjaragi Tank & Others	Vijaypur	Vijaypur		50.00	40.00
9	IMPTS to Bellubbi Tank	Vijaypur	Vijaypur		100.00	40.00
10	Const of Bandara to Sy No. 386 of Smt.Tarabai Harishchandra Kurle	Vijaypur	Vijaypur		100.00	45.00
11	Const of Bandara near Shivanagi Site I	Vijaypur	Vijaypur		65.00	40.00
12	Const of Bandara near Shivanagi Site II	Vijaypur	Vijaypur		65.00	40.00
13	Const of Bandara near Jambagi Site I	Vijaypur	Vijaypur		65.00	40.00

14	Const of Bandara near Jambagi Site II	Vijaypur	Vijaypur		65.00	40.00
15	Const of Bandara near Hubanur	Vijaypur	Vijaypur		100.00	45.00
16	Const of Bandara to Tank near Kanamadi Village	Vijaypur	Vijaypur		50.00	40.00
					1160.00	704.00
17	Const of BCB near Budani	Vijaypur	B.Bagewadi		200.00	48.00
18	Const of BCB to Sy No. 148/3 near Halyal-Ambalnoor	Vijaypur	B.Bagewadi		100.00	80.00
19	Const of BCB near Kanal-Jayawadagi	Vijaypur	B.Bagewadi		100.00	50.00
20	Const of BCB to the Tank across Unnibhavi-Siddanath road near Hunshyal P C Village	Vijaypur	B.Bagewadi		140.00	50.00
21	Const of BCB to the Tank across Malaghan-Doodihal road	Vijaypur	B.Bagewadi		160.00	55.00
22	Const of BCB to Tank near Masabinal Village	Vijaypur	B.Bagewadi		100.00	45.00
23	Const of BCB to the Tank across road of Golasangi-Hangaragi Village	Vijaypur	B.Bagewadi		100.00	45.00
					900.00	373.00
24	Const of BCB to the Tank across road near Hebbal of Devaranavadagi-Kakkalmeli Village	Vijaypur	Sindagi		100.00	45.00
25	IMPTS to BCB Across Bhima River Near Kadlewad	Vijaypur	Sindagi		100.00	45.00
26	Const of Bandara @ Tamba-Satnal	Vijaypur	Sindagi		100.00	45.00
					300.00	135.00
27	Const of Bandara near Hadalgeri	Vijaypur	Muddebihal		100.00	54.00
28	Const of Bandara near Kyatangodi	Vijaypur	Muddebihal		100.00	53.00
29	IMPTS to M.I.Tank near Madinal	Vijaypur	Muddebihal		100.00	45.00
30	IMPTS to M.I.Tank near Malakapur	Vijaypur	Muddebihal		100.00	45.00
31	IMPTS to Perculation Tank Near Malagaladinni Village	Vijaypur	Muddebihal		100.00	45.00
32	Const of BCB from Handral to Vanahalli road	Vijaypur	Muddebihal		200.00	80.00
33	Const of Bandara near Navadagi Tanda	Vijaypur	Muddebihal		45.00	40.00
34	Const of Bandara to Manidaddi Nala near Bhantanoor Village	Vijaypur	Muddebihal		45.00	40.00

35	Const of Barrage to Phattepur Tank	Vijaypur	Muddebihal		45.00	40.00
36	Const of Barrage to Gundakanal Halla	Vijaypur	Muddebihal		45.00	40.00
37	Const of BCB to the road across Hosalli to Jalapur Tank	Vijaypur	Muddebihal		95.00	42.00
38	Const of BCB to the road across Bommanahalli to Gadisomanal Tank	Vijaypur	Muddebihal		95.00	42.00
39	Const of BCB near Galapuji across Galapuji-Takkalaki road	Vijaypur	Muddebihal		300.00	120.00
					1370.00	686.00
40	Const of Barrage near tamba Site III	Vijaypur	Indi		200.00	63.00
41	Impts to BCB @ Umrani-Lavangi	Vijaypur	Indi		50.00	83.00
42	Impts to Hattalli Barrage	Vijaypur	Indi		50.00	65.00
43	Const of Barrage near Nada Village	Vijaypur	Indi		300.00	63.00
44	Const of Perculation Tank Near Ahirsang Village	Vijaypur	Indi		120.00	50.00
45	IMPTS to BCB near Atharga-Honnalli in Indi Taluka	Vijaypur	Indi		30.00	40.00
46	Const of BCB to Halla near Deginal Village	Vijaypur	Indi		80.00	45.00
47	Const of Check Dam to Gadyal Tank near Jigajivanagi	Vijaypur	Indi		80.00	45.00
48	Const of BCB near Border Alur, Hirebevanur & Ingalagi Villages	Vijaypur	Indi		115.00	50.00
49	Const of Barrage near Nimbali K D village	Vijaypur	Indi		55.00	40.00
50	Const of PT near Hingani Village	Vijaypur	Indi		150.00	50.00
					1230.00	594.00
					8690.00	4390.00

III IMPROVEMENTS OF TANKS

1	M.I. Tank at Makhanapur	Vijaypur	Vijaypur		50.00	435
2	- do - Hanchinal	Vijaypur	Vijaypur		50.00	358
3	- do - Kaggod	Vijaypur	Vijaypur		50.00	221
4	- do - Bharatagi	Vijaypur	Vijaypur		50.00	648
5	-do - Lohagaon	Vijaypur	Vijaypur		50.00	205
6	-do- Yakkundi	Vijaypur	Vijaypur		50.00	410

7	-do- Mamadapur(Big)	Vijaypur	Vijaypur		50.00	257
8	-do- Katral	Vijaypur	Vijaypur		50.00	582
9	-do- Bomanahalli	Vijaypur	Vijaypur		50.00	519
10	-do- Koulagi aheri	Vijaypur	Vijaypur		50.00	319
11	-do- Dyaberi	Vijaypur	Vijaypur		50.00	161
12	-do -Babaleshwar	Vijaypur	Vijaypur		50.00	81
13	-do- Nidoni (Old)	Vijaypur	Vijaypur		50.00	63
14	-do- Kumathe(Old)	Vijaypur	Vijaypur		50.00	106
15	-do- Somadevarhatti	Vijaypur	Vijaypur		50.00	90
16	-do- Yatnal	Vijaypur	Vijaypur		50.00	151
17	-do- Aheri	Vijaypur	Vijaypur		50.00	138
18	-do- Bijjaragi	Vijaypur	Vijaypur		50.00	100
19	-do- Kanamadi	Vijaypur	Vijaypur		50.00	101
20	-do- Uppaladinni	Vijaypur	Vijaypur		50.00	56
21	-do- Mamadapur(small)	Vijaypur	Vijaypur		50.00	60
22	-do- Kumatagi (old)	Vijaypur	Vijaypur		50.00	60
23	-do- Kumatagi(New)	Vijaypur	Vijaypur		50.00	106
24	-do- Domanal	Vijaypur	Vijaypur		50.00	190
25	-do- Ankalagi	Vijaypur	Vijaypur		50.00	156
26	-do- Arakeri	Vijaypur	Vijaypur		50.00	145
27	-do- Nidoni (New)	Vijaypur	Vijaypur		50.00	63
28	-do- Nagaral	Vijaypur	Vijaypur		50.00	65
29	-do- Hunshyal	Vijaypur	Vijaypur		50.00	67
30	-do- Begam Talab (p)	Vijaypur	Vijaypur		50.00	40
31	-- do - Aheri-Jambagi	Vijaypur	Vijaypur		50.00	330
32	-do- Aliyabad	Vijaypur	Vijaypur		50.00	45

33	-do- Kumathe (New)	Vijaypur	Vijaypur		50.00	40
34	-do- Takkalaki (PT)	Vijaypur	Vijaypur		50.00	55
35	-do- Somadevar hatti (PT)	Vijaypur	Vijaypur		50.00	60
36	-do- Lohagaon (PT)	Vijaypur	Vijaypur		50.00	40
37	-do- Kakhandaki (Site-I)	Vijaypur	Vijaypur		50.00	164
38	-do- Kakhandaki (Site-II)	Vijaypur	Vijaypur		50.00	164
39	Rampur P.T.	Vijaypur	Vijaypur		50.00	40
40	Dhannaragi P.T.	Vijaypur	Vijaypur		50.00	121
41	Ittangihal-Kilarahattii P.T.	Vijaypur	Vijaypur		50.00	40
42	Hunshyal PT	Vijaypur	Vijaypur		50.00	361
43	Ittangihal PT	Vijaypur	Vijaypur		50.00	89
44	Jalageri PT	Vijaypur	Vijaypur		50.00	121
45	Kanamadi PT Site-2	Vijaypur	Vijaypur		50.00	125
46	Babanagar PT (Varankodi)	Vijaypur	Vijaypur		50.00	40
47	Arjunagi PT	Vijaypur	Vijaypur		50.00	40
					2350.00	7828
48	M.I. Tank at Kirishyal	Vijaypur	B.Bagewadi		50.00	375
49	-do- Sulakhed	Vijaypur	B.Bagewadi		50.00	271
50	-do- Ronihal	Vijaypur	B.Bagewadi		50.00	237
51	-do- Kupakaddi	Vijaypur	B.Bagewadi		50.00	304
52	-do- Mukartihal	Vijaypur	B.Bagewadi		50.00	356
53	-do- Asangi	Vijaypur	B.Bagewadi		50.00	180
54	-do- Aralichandi	Vijaypur	B.Bagewadi		50.00	104
55	-do- Masuti	Vijaypur	B.Bagewadi		50.00	59
56	-do- Nagawad	Vijaypur	B.Bagewadi		50.00	100
57	-do- Mannur	Vijaypur	B.Bagewadi		50.00	100

58	-do- Kudagi	Vijaypur	B.Bagewadi		50.00	132
59	-do- Garasangi	Vijaypur	B.Bagewadi		50.00	196
60	-do- Akalawadi	Vijaypur	B.Bagewadi		50.00	57
61	-do- Managuli	Vijaypur	B.Bagewadi		50.00	61
62	-do- Malaghan	Vijaypur	B.Bagewadi		50.00	88
63	-do- Agasabal	Vijaypur	B.Bagewadi		50.00	51
64	-do- Talewad	Vijaypur	B.Bagewadi		50.00	40
65	-do- Muttagi	Vijaypur	B.Bagewadi		50.00	40
66	-do- Malaghan	Vijaypur	B.Bagewadi		50.00	40
67	-do- P.T. @ Ukkali	Vijaypur	B.Bagewadi		50.00	40
68	-do- Bellubbi PT	Vijaypur	B.Bagewadi		50.00	40
69	-do- Wadawadgi PT	Vijaypur	B.Bagewadi		50.00	40
70	-do- Masuti PT	Vijaypur	B.Bagewadi		50.00	70
71	-do- Huvini-Hipparagi	Vijaypur	B.Bagewadi		50.00	40
72	-do- Talewad	Vijaypur	B.Bagewadi		50.00	42
73	-do- Mulwad	Vijaypur	B.Bagewadi		50.00	49
74	Kadaganur PT	Vijaypur	B.Bagewadi		50.00	121
75	Ukkali PT	Vijaypur	B.Bagewadi		50.00	61
76	Ingaleshwar Shiddeshwar PT	Vijaypur	B.Bagewadi		50.00	40
					1450.00	3334
77	M.I. Tank at Hokarni	Vijaypur	Muddebihal		50.00	235
78	-do- Ingalageri	Vijaypur	Muddebihal		50.00	248
79	-do- Madikeshirur	Vijaypur	Muddebihal		50.00	943
80	-do- Advi-Hulagabal	Vijaypur	Muddebihal		50.00	405
81	-do- Madinal	Vijaypur	Muddebihal		50.00	210
82	-do- Basarkod	Vijaypur	Muddebihal		50.00	166

83	-do- Alakoppar	Vijaypur	Muddebihal		50.00	84
84	-do- Gundakarajagi(Rudagi)	Vijaypur	Muddebihal		50.00	126
85	-do- Mudnal	Vijaypur	Muddebihal		50.00	108
86	-do- Balaganur	Vijaypur	Muddebihal		50.00	120
87	-do- Geddalamari	Vijaypur	Muddebihal		50.00	172
88	-do- Agasabal	Vijaypur	Muddebihal		50.00	112
89	-do- Malkapur	Vijaypur	Muddebihal		50.00	116
90	-do- Hagargond	Vijaypur	Muddebihal		50.00	149
91	-do- Tarnal	Vijaypur	Muddebihal		50.00	65
92	M.I. Tank at Hirur Tamadaddi	Vijaypur	Muddebihal		50.00	114
93	M>I.Tank at Arasanal PT	Vijaypur	Muddebihal		50.00	58
94	PT Jalapur	Vijaypur	Muddebihal		50.00	110
95	PT Kolor	Vijaypur	Muddebihal		50.00	49
96	PT Vanahalli	Vijaypur	Muddebihal		50.00	40
97	Malagaladinni PT	Vijaypur	Muddebihal		50.00	40
					1050.00	3670
98	M.I. Tank at Kadlewad	Vijaypur	Sindagi		50.00	272
99	-do- Halayarnal (Devoor)	Vijaypur	Sindagi		50.00	101
100	-do- Kudargond	Vijaypur	Sindagi		50.00	198
101	-do- Hunashyal	Vijaypur	Sindagi		50.00	101
102	-do- Budihal	Vijaypur	Sindagi		50.00	91
103	-do- Aski	Vijaypur	Sindagi		50.00	124
104	Devar hippargi PT	Vijaypur	Sindagi		50.00	40
105	-do- Mula savalagi	Vijaypur	Sindagi		50.00	40
106	Ingalagi MI	Vijaypur	Sindagi		50.00	65
107	-do- Puradal	Vijaypur	Sindagi		50.00	235

108	-do- Chikkarugi (Ganganalli)	Vijaypur	Sindagi		50.00	61
109	Yankanchi MI	Vijaypur	Sindagi		50.00	125
110	Padaganur PT	Vijaypur	Sindagi		50.00	81
111	-- do -Gubbewad (Sasbal)	Vijaypur	Sindagi		50.00	40
112	-- do -Devar hipparagi PT S-2	Vijaypur	Sindagi		50.00	42
113	Bommanjogi MI	Vijaypur	Sindagi		50.00	247
114	Padaganur PT (Ramthirtha)	Vijaypur	Sindagi		50.00	40
115	Devar hipparagi PT Site-II	Vijaypur	Sindagi		50.00	49
116	Mannur PT	Vijaypur	Sindagi		50.00	43
117	Devar hippargi S-3 PT	Vijaypur	Sindagi		50.00	45
					1000.00	2040
118	M.I. Tank at Tadavalaga	Vijaypur	Indi		50.00	284
119	-do- Hanjagi	Vijaypur	Indi		50.00	304
120	-do- Kotnal	Vijaypur	Indi		50.00	291
121	-do- Nandargi	Vijaypur	Indi		50.00	334
122	-do- Jigajivanagi	Vijaypur	Indi		50.00	967
123	-do- Gundawan Site-1	Vijaypur	Indi		50.00	505
124	-do-Gundawan site-2	Vijaypur	Indi		50.00	443
125	-do- Kularagi	Vijaypur	Indi		50.00	135
126	-do- Inchageri	Vijaypur	Indi		50.00	56
127	-do- Kudagi	Vijaypur	Indi		50.00	105
128	-do- Horti	Vijaypur	Indi		50.00	431
129	-do- Deginal	Vijaypur	Indi		50.00	102
130	-do- Chadachan	Vijaypur	Indi		50.00	120
131	-do- Rajanal	Vijaypur	Indi		50.00	124

132	-do- Satalgaon	Vijaypur	Indi		50.00	40
133	-do- Hadalsang	Vijaypur	Indi		50.00	45
134	-od- Nimbali	Vijaypur	Indi		50.00	121
135	-do- Babalad	Vijaypur	Indi		50.00	51
136	-do- Indi Site-1 PT	Vijaypur	Indi		50.00	41
137	-do- Indi (2) PT	Vijaypur	Indi		50.00	41
138	-do- Jigajivanagi PT	Vijaypur	Indi		50.00	45
139	-do- Savalagi PT	Vijaypur	Indi		50.00	44
140	-do- Hiranagi PT	Vijaypur	Indi		50.00	49
141	-do- Hirebenur PT	Vijaypur	Indi		50.00	49
142	-do- Deginal PT	Vijaypur	Indi		50.00	97
143	-do-Godihal	Vijaypur	Indi		50.00	250
144	-do-Halahalli	Vijaypur	Indi		50.00	40
145	-do- MI Tank Jigajivanagi	Vijaypur	Indi		50.00	154
146	Chandu Tanda PT	Vijaypur	Indi		50.00	49
147	Shiradon PT	Vijaypur	Indi		50.00	40
148	Hadalsang PT S-2	Vijaypur	Indi		50.00	40
149	Godihal PT	Vijaypur	Indi		50.00	41
150	-do- PT Agasanal	Vijaypur	Indi		50.00	45
151	-do- PT Shirakanhalli	Vijaypur	Indi		50.00	40
152	Halahalli PT	Vijaypur	Indi		50.00	40
					1750.00	5563
					13450.00	39307.00
				GRAND TOTAL	32800.00	46695.38
				Say :-	232.20	Crores

Appendix 11 : Details of works proposed under Har Khet Ko Pani componenet

PMKSY-HER KHET KO PANI

Distric t: Vijayapur Distric Abstract.

SI. No	Activity	Phy/ Fin	B.Bagewadi	Vijayapur	Muddebihal	Indi	Sindgi	Total
	Krishi Bhagya							
1	Farm Ponds @ 1200 No's per Year for 5 Years (21X21X3) mtr Size with lining @ Rs 1.25 lakhs each	Phy	6000	6000	6000	6000	6000	30000
		Fin	7500	7500	7500	7500	7500	37500
2	Field Bund Ha	Phy	6000	6000	6000	6000	6000	30000
		Fin	900	900	900	900	900	4500
3	Sprinklers/ Drip	Phy	6000	6000	6000	6000	6000	30000
		Fin	1058.4	1058.4	1058.4	1058.4	1058.4	5292
4	Diesel engines	Phy	6000	6000	6000	6000	6000	30000
		Fin	1200	1200	1200	1200	1200	6000
	Total Fin (Rs in Lakhs)	Phy	24000	24000	24000	24000	24000	120000
		Fin	10658.4	10658.4	10658.4	10658.4	10658.4	53292

Appendix 12: Details of water shed activities- PMKSY-WD

District :Vijayapura

Action Plan 2016-17 to 2020-21

Sl. No	Activities	Activities	
		Phy	Fin
1	Administrative cost*		3805.40
2	Institution & capacity building		1902.70
3	Entry Point Activities*		1553.22
4	Detailed Project Report*		388.31
5	Monitoring & Evaluation*		388.31
<u>6</u>	<u>Watershed Works</u>	-	
	a. Agril.		
	FB (Ha)	130425	9781.85
	NB (Nos)	275	1375.00
	CD (Nos)	250	1250.00
	PT (Nos)	173	865.00
	FP (Nos)	882	705.60
	b. Horti. (Ha)	23299	4659.67
	c. Forest (Ha)	23299	4659.67
	d. AH & VS		701.02
7	Livelihood activities for the asset-less persons		2718.14
8	Production system & micro-enterprises		3106.45
9	Consolidation Phase		970.77
	Total		38831.10

PMKSY-WD			
Taluk :B.Bagewadi		Action Plan 2016-17 to 2020-21	
Sl. No	Activities	Activities	
		Phy	Fin
1	Administrative cost*		877.88
2	Institution & capacity building		438.94
3	Entry Point Activities*		358.32
4	Detailed Project Report*		89.58
5	Monitoring & Evaluation*		89.58
6	<u>Watershed Works</u>		
	a. Agril.		
	FB (Ha)	30083	2256.23
	NB (Nos)	70	350.00
	CD (Nos)	60	300.00
	PT (Nos)	30	150.00
	FP (Nos)	210	168.00
	b. Horti. (Ha)	5375	1074.96
	c. Forest (Ha)	5375	1074.96
	d. AH & VS		161.89
7	Livelihood activities for the asset-less persons		627.06
8	Production system & micro-enterprises		716.64
9	Consolidation Phase		223.95
	Total		8958.00

PMKSY-WD
Action Plan 2016-17 to 2020-21
Taluk:Vijaypur

Sl. No	Activities	Activities	
		Phy	Fin
1	Administrative cost*		1923.45
2	Institution & capacity building		961.72
3	Entry Point Activities*		785.08
4	Detailed Project Report*		196.27
5	Monitoring & Evaluation*		196.27
<u>6</u>	Watershed Works		
	a. Agril.		
	FB (Ha)	65923	4944.21
	NB (Nos)	125	625.00
	CD (Nos)	125	625.00
	PT (Nos)	100	500.00
	FP (Nos)	465	372.00
	b. Horti. (Ha)	11776	2355.24
	c. Forest (Ha)	11776	2355.24
	d. AH & VS		353.30
7	Livelihood activities for the asset-less persons		1373.89
8	Production system & micro-enterprises		1570.16
9	Consolidation Phase		490.68
	Total		19627.50

PMKSY-WD
Action Plan 2016-17 to 2020-21
Taluk: muddebihal

Sl. No	Activities	Activies	
		Phy	Fin
1	Administrative cost*		309.17
2	Institution & capacity building		154.59
3	Entry Point Activities*		126.19
4	Detailed Project Report*		31.55
5	Monitoring & Evaluation*		31.55
<u>6</u>	<u>Watershed Works</u>	-	
	a. Agril.		
	FB (Ha)	10583	793.72
	NB (Nos)	20	100.00
	CD (Nos)	20	100.00
	PT (Nos)	10	50.00
	FP (Nos)	115	92.00
	b. Horti. (Ha)	1893	378.58
	c. Forest (Ha)	1893	378.58
	d. AH & VS		56.79
7	Livelihood activities for the asset-less persons		220.84
8	Production system & micro-enterprises		252.38
9	Consolidation Phase		78.87
	Total		3154.80

PMKSY-WD
Action Plan 2016-17 to 2020-21
Taluk: Indi

Sl. No	Activities	Activities	
		Phy	Fin
1	Administrative cost*		384.58
2	Institution & capacity building		192.29
3	Entry Point Activities*		156.97
4	Detailed Project Report*		39.24
5	Monitoring & Evaluation*		39.24
<u>6</u>	<u>Watershed Works</u>	-	
	a. Agril.		
	FB (Ha)	13175	988.11
	NB (Nos)	35	175.00
	CD (Nos)	25	125.00
	PT (Nos)	18	90.00
	FP (Nos)	42	33.60
	b. Horti. (Ha)	2355	470.92
	c. Forest (Ha)	2355	470.92
	d. AH & VS		71.68
7	Livelihood activities for the asset-less persons		274.70
8	Production system & micro-enterprises		313.94
9	Consolidation Phase		98.11
	Total		3924.300

PMKSY-WD
Action Plan 2016-17 to 2020-21
Taluk:Sindagi

Sl. No	Activities	Activities	
		Phy	Fin
1	Administrative cost*		310.32
2	Institution & capacity building		155.16
3	Entry Point Activities*		126.66
4	Detailed Project Report*		31.67
5	Monitoring & Evaluation*		31.67
<u>6</u>	Watershed Works	-	
	a. Agril.		
	FB (Ha)	10661	799.58
	NB (Nos)	25	125.00
	CD (Nos)	20	100.00
	PT (Nos)	15	75.00
	FP (Nos)	50	40.00
	b. Horti. (Ha)	1900	379.98
	c. Forest (Ha)	1900	379.98
	d. AH & VS		57.36
7	Livelihood activities for the asset-less persons		221.66
8	Production system & micro-enterprises		253.32
9	Consolidation Phase		79.16
	Total		3166.50

Strategic Action Plan Year wise -PMKSY(watershed)

District: Vijayapura District Abstract.

Rs. in Lakhs

SI. No	Activity	Total Financial (Rs in Lakhs)	Total Physical	Year wise allocation									
				2016-17		2017-18		2018-19		2019-20		2020-21	
				Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
14	Drought proofing through Check Dams/ Water harvesting Structures												
a	Check Dams @ RS 5.0 Lakh each	5000	1000	200	1000	200	1000	200	1000	200	1000	200	1000
b	Nala Bund @ Rs. 5.00 Lakh each	2500	500	100	500	100	500	100	500	100	500	100	500
c	Percolation Tank @ Rs. 5.00 Lakh each	1250	250	50	250	50	250	50	250	50	250	50	250
	Total (a)	8750	1750	350	1750	350	1750	350	1750	350	1750	350	1750

Strategic Action Plan Year wise -PMKSY(watershed)

Taluk : B.bagewadi

Rs. in Lakhs

SI. No	Activity	Total Financial (Rs in Lakhs)	Total Physical	Year wise allocation									
				2016-17		2017-18		2018-19		2019-20		2020-21	
				Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
Drought proofing through Check Dams/ Water harvesting Structures													
a	Check Dams @ RS 5.0 Lakh each	1000	200	40	200	40	200	40	200	40	200	40	200
b	Nala Bund @ Rs. 5.00 Lakh each	500	100	20	100	20	100	20	100	20	100	20	100
c	Percolation Tank @ Rs. 5.00 Lakh each	250	50	10	50	10	50	10	50	10	50	10	50
Total (a)		1750	350	70	350	70	350	70	350	70	350	70	350

Strategic Action Plan Year wise -PMKSY(watershed)

Taluk :Vijaypura

Rs. in Lakhs

SI. No	Activity	Total Financial (Rs in Lakhs)	Total Physical	Year wise allocation									
				2016-17		2017-18		2018-19		2019-20		2020-21	
				Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
14	Drought proofing through Check Dams/ Water harvesting Structures												
a	Check Dams @ RS 5.0 Lakh each	1000	200	40	200	40	200	40	200	40	200	40	200
b	Nala Bund @ Rs. 5.00 Lakh each	500	100	20	100	20	100	20	100	20	100	20	100
c	Percolation Tank @ Rs. 5.00 Lakh each	250	50	10	50	10	50	10	50	10	50	10	50
	Total (a)	1750	350	70	350	70	350	70	350	70	350	70	350

Strategic Action Plan Year wise -PMKSY(watershed)

Taluk: Muddebihal

Rs. in Lakhs

SI. No	Activity	Total Financial (Rs in Lakhs)	Total Physical	Year wise allocation									
				2016-17		2017-18		2018-19		2019-20		2020-21	
				Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
14	Drought proofing through Check Dams/ Water harvesting Structures												
a	Check Dams @ RS 5.0 Lakh each	1000	200	40	200	40	200	40	200	40	200	40	200
b	Nala Bund @ Rs. 5.00 Lakh each	500	100	20	100	20	100	20	100	20	100	20	100
c	Percolation Tank @ Rs. 5.00 Lakh each	250	50	10	50	10	50	10	50	10	50	10	50
	Total (a)	1750	350	70	350	70	350	70	350	70	350	70	350

Strategic Action Plan Year wise -PMKSY(watershed)

Taluk:Indi

Rs. in Lakhs

SI. No	Activity	Total Financial (Rs in Lakhs)	Total Physical	Year wise allocation									
				2016-17		2017-18		2018-19		2019-20		2020-21	
				Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
14	Drought proofing through Check Dams/ Water harvesting Structures												
a	Check Dams @ RS 5.0 Lakh each	1000	200	40	200	40	200	40	200	40	200	40	200
b	Nala Bund @ Rs. 5.00 Lakh each	500	100	20	100	20	100	20	100	20	100	20	100
c	Percolation Tank @ Rs. 5.00 Lakh each	250	50	10	50	10	50	10	50	10	50	10	50

Strategic Action Plan Year wise -PMKSY(watershed)

Taluk: Sindagi

Rs. in Lakhs

SI. No	Activity	Total Financial (Rs in Lakhs)	Total Physical	Year wise allocation									
				2016-17		2017-18		2018-19		2019-20		2020-21	
				Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
14	Drought proofing through Check Dams/ Water harvesting Structures												
a	Check Dams @ RS 5.0 Lakh each	1000	200	40	200	40	200	40	200	40	200	40	200
b	Nala Bund @ Rs. 5.00 Lakh each	500	100	20	100	20	100	20	100	20	100	20	100
c	Percolation Tank @ Rs. 5.00 Lakh each	250	50	10	50	10	50	10	50	10	50	10	50
	Total (a)	1750	350	70	350	70	350	70	350	70	350	70	350

Appendix 13 : works proposed under MNRGEA

PMKSY-WD Convergence with MGNREGA Fresh Works Year Wise Brack up.

**District: Vijayapur District
Abstract.**

SI. No	Activity	Phy/ Fin	B.Bagewadi	Vijayapur	Muddebiha 1	Indi	Sindgi	Total
1	Field Bund @ Rs. 25000 Ha	Phy	15000	15000	15000	1500 0	15000	75000
		Fin	3750	3750	3750	3750	3750	18750
2	Multi Arch Check dams @ Rs.7.00 Lakh each	Phy	500	500	500	500	500	2500
		Fin	3500	3500	3500	3500	3500	17500
3	Farm Pond @ RS.1.00 lakhs each	Phy	2000	2000	2000	2000	2000	10000
		Fin	2000	2000	2000	2000	2000	10000
	Total	Phy	17500	17500	17500	1750 0	17500	87500
		Fin	9250	9250	9250	9250	9250	46250
1	Renovation of CD's of NREGA/ WDD @ 2.00 lakhs each (including Desilting)	Phy	100	100	100	100	100	500
		Fin	200	200	200	200	200	1000

PMKSY-WD Convergence with MGNREGA Fresh Works Year Wise Break up.

Taluk: B.Bagewadi

Rs. in Lakhs

SI.No	Activity	Phy/ Fin	2016-17	2017-18	2018-19	2019-20	2020-21	Total
1	Field Bund @ Rs. 25000 Ha	Phy	3000	3000	3000	3000	3000	15000
		Fin	750	750	750	750	750	3750
2	Multi Arch Check dams @ Rs.7.00 Lakh each	Phy	100	100	100	100	100	500
		Fin	700	700	700	700	700	3500
3	Farm Pond @ RS.1.00 lakhs each	Phy	400	400	400	400	400	2000
		Fin	400	400	400	400	400	2000
	Total	Phy	3500	3500	3500	3500	3500	17500
		Fin	1850	1850	1850	1850	1850	9250
	Renovation of CD's of NREGA/ WDD @ 2.00 lakhs each (including Desilting)	Phy	20	20	20	20	20	100
		Fin	40	40	40	40	40	200

PMKSY-WD Convergence with MGNREGA Fresh Works Year Wise Break up.

Taluk: Vijayapura

Rs. in Lakhs

SI.No	Activity	Phy/ Fin	2016-17	2017-18	2018-19	2019-20	2020-21	Total
1	Field Bund @ Rs. 25000 Ha	Phy	3000	3000	3000	3000	3000	15000
		Fin	750	750	750	750	750	3750
2	Multi Arch Check dams @ Rs.7.00 Lakh each	Phy	100	100	100	100	100	500
		Fin	700	700	700	700	700	3500
3	Farm Pond @ RS.1.00 lakhs each	Phy	400	400	400	400	400	2000
		Fin	400	400	400	400	400	2000
	Total	Phy	3500	3500	3500	3500	3500	17500
		Fin	1850	1850	1850	1850	1850	9250
1	Renovation of CD's of NREGA/ WDD @ 2.00 lakhs each (including Desilting)	Phy	20	20	20	20	20	100
		Fin	40	40	40	40	40	200

PMKSY-WD Convergence with MGNREGA Fresh Works Year Wise Break up.

Taluk: Muddebihal

Rs. in Lakhs

SI.No	Activity	Phy/ Fin	2016-17	2017-18	2018-19	2019-20	2020-21	Total
1	Field Bund @ Rs. 25000 Ha	Phy	3000	3000	3000	3000	3000	15000
		Fin	750	750	750	750	750	3750
2	Multi Arch Check dams @ Rs.7.00 Lakh each	Phy	100	100	100	100	100	500
		Fin	700	700	700	700	700	3500
3	Farm Pond @ RS.1.00 lakhs each	Phy	400	400	400	400	400	2000
		Fin	400	400	400	400	400	2000
	Total	Phy	3500	3500	3500	3500	3500	17500
		Fin	1850	1850	1850	1850	1850	9250
1	Renovation of CD's of NREGA/ WDD @ 2.00 lakhs each (including Desilting)	Phy	20	20	20	20	20	100
		Fin	40	40	40	40	40	200

PMKSY-WD Convergence with MGNREGA Fresh Works Year Wise Break up.

Taluk: Indi

Rs. in Lakhs

SI.No	Activity	Phy/ Fin	2016-17	2017-18	2018-19	2019-20	2020-21	Total
1	Field Bund @ Rs. 25000 Ha	Phy	3000	3000	3000	3000	3000	15000
		Fin	750	750	750	750	750	3750
2	Multi Arch Check dams @ Rs.7.00 Lakh each	Phy	100	100	100	100	100	500
		Fin	700	700	700	700	700	3500
3	Farm Pond @ RS.1.00 lakhs each	Phy	400	400	400	400	400	2000
		Fin	400	400	400	400	400	2000
	Total	Phy	3500	3500	3500	3500	3500	17500
		Fin	1850	1850	1850	1850	1850	9250
1	Renovation of CD's of NREGA/ WDD @ 2.00 lakhs each (including Desilting)	Phy	20	20	20	20	20	100
		Fin	40	40	40	40	40	200

PMKSY-WD Convergence with MGNREGA Fresh Works Year Wise Break up.

Taluk: Sindagi

Rs. in Lakhs

SI.No	Activity	Phy/ Fin	2016-17	2017-18	2018-19	2019-20	2020-21	Total
1	Field Bund @ Rs. 25000 Ha	Phy	3000	3000	3000	3000	3000	15000
		Fin	750	750	750	750	750	3750
2	Multi Arch Check dams @ Rs.7.00 Lakh each	Phy	100	100	100	100	100	500
		Fin	700	700	700	700	700	3500
3	Farm Pond @ RS.1.00 lakhs each	Phy	400	400	400	400	400	2000
		Fin	400	400	400	400	400	2000
	Total	Phy	3500	3500	3500	3500	3500	17500
		Fin	1850	1850	1850	1850	1850	9250
1	Renovation of CD's of NREGA/ WDD @ 2.00 lakhs each (including Desilting)	Phy	20	20	20	20	20	100
		Fin	40	40	40	40	40	200

Appendix 14 : details of micro irrigation

Strategies : Action Plan For Irrigation in District Under PMKSY-Per drop more crop								
VIJAYAPURA DISTRICT								
SL. NO.	YEAR	Concerned Ministry/Department	Component	Activity	Total Number	Command Area/ Irrigation Potential (Ha)	Period of Implementation (5Years)	Estimated Cost (In Lakhs)
1	2016-17	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP & NDPAP DRIP	5500	5500		4950.00
				DPAP & NDPAP SRINKLER	12300	12300		2169.72
2	2017-18	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP & NDPAP DRIP	4600	4600		4140.00
				DPAP & NDPAP SRINKLER	10700	10700		1887.48
3	2018-19	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP & NDPAP DRIP	3700	3700		3330.00
				DPAP & NDPAP SRINKLER	9600	9600		1693.44
4	2019-20	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP & NDPAP DRIP	3200	3200		2880.00
				DPAP & NDPAP SRINKLER	8200	8200		1446.48
5	2020-21	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP & NDPAP DRIP	2700	2700		2430.00
				DPAP & NDPAP SRINKLER	7100	7100		1252.44
	Total	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP & NDPAP DRIP	19700	19700		17730.00
				DPAP & NDPAP SRINKLER	47900	47900		8449.56
			Grand Total		67600	67600		26179.56

Strategies : Action Plan For Irrigation in District Under PMKSY-Per drop more crop

Name of The Block: B.bagewadi

SL. NO.	YEAR	Concerned Ministry/Department	Component	Activity	Total Number	Command Area/ Irrigation Potential(Ha)	Period of Implementation (5Years)	Grant Requirement (Rs. In Lakhs)
1	2016-17	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	800	800		720.00
				DPAP SRINKLER	2000	2000		352.80
2	2017-18	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	600	600		540.00
				DPAP SRINKLER	1500	1500		264.60
3	2018-19	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	400	400		360.00
				DPAP SRINKLER	1400	1400		246.96
4	2019-20	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	300	300		270.00
				DPAP SRINKLER	1200	1200		211.68
5	2020-21	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	200	200		180.00
				DPAP SRINKLER	1000	1000		176.40
	Total	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	2300	2300		2070.00
				DPAP SRINKLER	7100	7100		1252.44
Grand Total					9400	9400		33124.91

Strategies : Action Plan For Irrigation in District Under PMKSY-Per drop more crop

Name of The Block: VIJAYAPUR

SL. NO.	YEAR	Concerned Ministry/Department	Component	Activity	Total Number	Command Area/ Irrigation Potential (Ha)	Period of Implementation (5Years)	Estimated Cost (In Lakhs)
1	2016-17	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	1200	1200		1080.00
				DPAP SRINKLER	2500	2500		441.00
2	2017-18	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	1000	1000		900.00
				DPAP SRINKLER	2200	2200		388.08
3	2018-19	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	800	800		720.00
				DPAP SRINKLER	2000	2000		352.80
4	2019-20	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	700	700		630.00
				DPAP SRINKLER	1800	1800		317.52
5	2020-21	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	600	600		540.00
				DPAP SRINKLER	1500	1500		264.60
	Total	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	4300	4300		3870.00
				DPAP SRINKLER	10000	10000		1764.00
			Grand Total		14300	14300		33124.91

Strategies : Action Plan For Irrigation in District Under PMKSY-Per drop more crop

Name of The Block: MUDEBIHAL

Sl. NO.	YEAR	Concerned Ministry/Department	Component	Activity	Total Number	Command Area/ Irrigation Potential(Ha)	Period of Implementation (5Years)	Estimated Cost (In Lakhs)
1	2016-17	Agriculture Department	Per Drop More Crop (Micro Irrigation)	NDPAP DRIP	800	800		720.00
				NDPAP SRINKLER	2000	2000		352.80
2	2017-18	Agriculture Department	Per Drop More Crop (Micro Irrigation)	NDPAP DRIP	700	700		630.00
				NDPAP SRINKLER	1800	1800		317.52
3	2018-19	Agriculture Department	Per Drop More Crop (Micro Irrigation)	NDPAP DRIP	600	600		540.00
				NDPAP SRINKLER	1400	1400		246.96
4	2019-20	Agriculture Department	Per Drop More Crop (Micro Irrigation)	NDPAP DRIP	500	500		450.00
				NDPAP SRINKLER	1200	1200		211.68
5	2020-21	Agriculture Department	Per Drop More Crop (Micro Irrigation)	NDPAP DRIP	400	400		360.00
				NDPAP SRINKLER	1000	1000		176.40
Total		Agriculture Department	Per Drop More Crop (Micro Irrigation)	NDPAP DRIP	3000	3000		2700.00
				NDPAP SRINKLER	7400	7400		1305.36

Strategies : Action Plan For Irrigation in District Under PMKSY-Per drop more crop

Name of The Block: INDI								
SL. NO.	YEAR	Concerned Ministry/Department	Component	Activity	Total Number	Command Area/ Irrigation Potential(Ha)	Period of Implementation (5Years)	Estimated Cost (In Lakhs)
1	2016-17	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	1500	1500		1350.00
				DPAP SRINKLER	3000	3000		529.20
2	2017-18	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	1200	1200		1080.00
				DPAP SRINKLER	2600	2600		458.64
3	2018-19	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	1000	1000		900.00
				DPAP SRINKLER	2400	2400		423.36
4	2019-20	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	900	900		810.00
				DPAP SRINKLER	2000	2000		352.80
5	2020-21	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	800	800		720.00
				DPAP SRINKLER	1800	1800		317.52
	Total	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	5400	5400		4860.00
				DPAP SRINKLER	11800	11800		2081.52
			Grand Total		17200	17200		33124.91

Strategies : Action Plan For Irrigation in District Under PMKSY-Per drop more crop

Name of The Block: SINDAGI

SL. NO.	YEAR	Concerned Ministry/Department	Component	Activity	Total Number	Command Area/ Irrigation Potential (Ha)	Period of Implementation (5Years)	Estimated Cost (In Lakhs)
1	2016-17	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	1200	1200		1080.00
				DPAP SRINKLER	2800	2800		493.92
2	2017-18	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	1100	1100		990.00
				DPAP SRINKLER	2600	2600		458.64
3	2018-19	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	900	900		810.00
				DPAP SRINKLER	2400	2400		423.36
4	2019-20	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	800	800		720.00
				DPAP SRINKLER	2000	2000		352.80
5	2020-21	Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	700	700		630.00
				DPAP SRINKLER	1800	1800		317.52
Total		Agriculture Department	Per Drop More Crop (Micro Irrigation)	DPAP DRIP	4700	4700		4230.00
				DPAP SRINKLER	11600	11600		2046.24
			Grand Total		16300	16300		33124.91