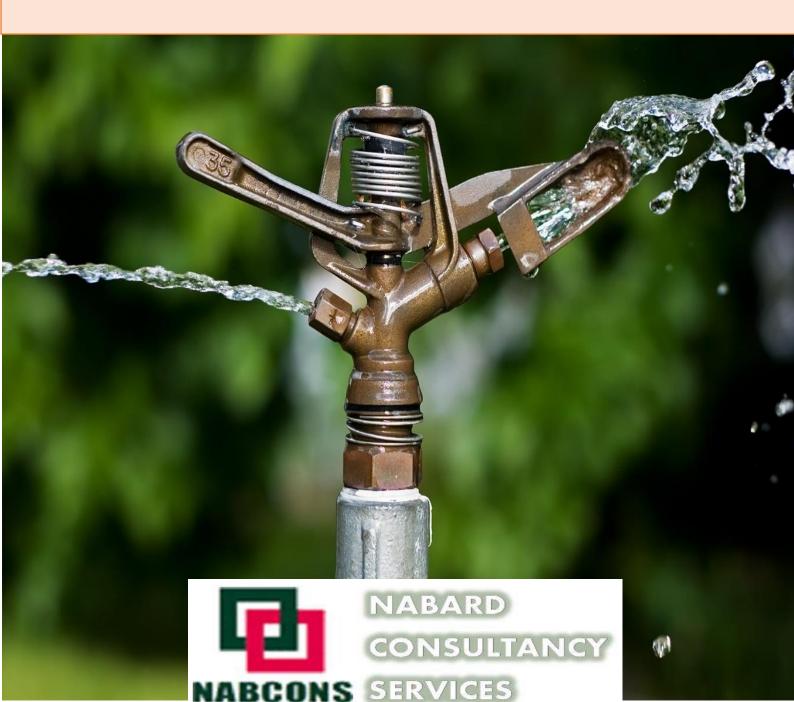


# DISTRICT IRRIGATION PLAN KARIMGANJ(ASSAM)





# District Irrigation Plan, 2016-2021 Karimganj, Assam



NABARD CONSULTANCY SERVICES PVT. LTD. Corporate Office : 24, Rajendra Place, NABARD Building, New Delhi – 110125 Reg. Office : Plot No. C24, G Taluka, 3rd Floor, NABARD Building Bandra Kurla Complex, Bandra East, Mumbai-400051



# Foreword by DLIC



# Contents

Executive Summary	
Introduction	5
Background	5
Vision	5
Objective	5
Strategy and focus area	6
Programme components	7
Rationale/ Justification	9
Methodology	
Time frame and span of the perspective plan	
Chapter 1 : General Information of the District	
1.1 District Profile	
Administrative Set-up of Karimganj	
1.2 District Demography	
1.3 Biomass and Livestock	
1.4 Agro-Ecology, Climate, Hydrology and Topography	
1.5 Soil Profile	
1.6 Soil Erosion and Runoff Status	
1.7 Land Use Pattern	
Chapter 2 : District Water Profile	
2.1 Area Wise, Crop Wise Irrigation Status	24
2.2 Area, production & productivity of Major Crops	25
2.3 Irrigation Based Classification	
Chapter 3 : Water Availability in Karimganj	
3.1 Status of water availability	
3.2 Status of Ground Water Availability	
3.3 Status of Command Area	
3.4 Existing Type of Irrigation	
Chapter 4 : Water Requirement	
4.1 Domestic Water Demand	
4.2 Crop Water Requirement	
4.3 Livestock	
4.4 Industrial Water Requirement	



4.5 Water Demand for Power Generation
4.6 Total Water Demand of the district for various sectors
4.7 Water Budget
Chapter 5 : Strategic Action plan for Irrigation in District under PMKSY40
5.1 Department wise Plan40
5.2 Component Wise Plan40
5.3 Expected Output and Outcome41
5.4 Suggestions41
Annexure I: Strategic Action Plan of AIBP by Irrigation Department
Annexure II: Strategic Action Plan of Har Khet Ko Pani by Irrigation Department
Annexure III: Strategic Action Plan of Per Drop More Crop by Agriculture Department
Annexure IV: Block wise annual action plan for irrigation (watershed) for the year 2016-17 by Soil Conservation Department
Annexure V: Strategic Action Plan of Per Drop More Crop by Horticulture Department
Annexure V: Strategic Action Plan of Per Drop More Crop by DRDA Department70
Annexure VI: Additional list of Schemes intimated by Hon'ble MP - Karimganj
Annexure VII: Block wise Additional list of Schemes intimated by Hon'ble MP – Karimganj73



# LIST OF TABLES

Table 1.1 District Profile	14
Table 1.2 Demography of Karimganj	18
Table 1.3 Livestock Population	20
Table 1.4 Agro-ecological Status	20
Table 1.5 Rainfall Pattern of District	22
Table 1.6 Land use pattern (area in ha) of the district	22
Table 1.7 Detail of operational land holdings of the district	23
Table 2.1 Crop wise status of irrigated and Rainfed	24
Table 2.2 Status of Area in Block wise	24
Table 2.3 Area of Horticulture and Plantation	25
Table 2.4 Trend of growth in the area of agricultural crops (in Ha)	25
Table 2.5 Trend in productivity of agricultural crops (q/ha)	25
Table 2.6 Trend in production of agricultural crops (in 'Qtls)	26
Table 2.7 Trend in area of horticultural crops (in ha)	27
Table 2.8 Trend in production of horticultural crops (in tonnes)	27
Table 2.9 Trend in productivity of horticultural crops (q/ha & in coconut nuts in lakh)	28
Table 3.1 Status of water availability	30
Table 3.2 Status of Ground Water Availability	32
Table 3.3 Existing Type of Irrigation	35
Table 4.1 Domestic Water Demand (MCM)	37
Table 4.2 Crop Water Requirement in Million Cubic Meter	37
Table 4.3 Taluka wise livestock water demand (in MCM)	38
Table 4.4 Present Water Demand of the district for various sectors	38
Table 4.5 Total Water Demand of the district for various sectors (Projected for 2021)	39
Table 5.1 Department-wise proposal under PMKSY	40
Table 5.2 Component wise plan	41



# LIST OF FIGURES

Figure 1.1 District Map	
Figure 1.2 Block wise Population	
Figure 1.3 Total male and female Population blocks	
Figure 4.1 Domestic Water Demand	
Figure 5.1 Share of departments in Proposal	. Error! Bookmark not defined.
Figure 5.2 Component wise plan under PMKSY	. Error! Bookmark not defined.



# ABBREVIATION

PMKSY-DIP Senapati District Manipur



#### **Executive Summary**

In an agrarian economy like India, agriculture utilizes the major share of country's exploitable water resources. Though the sector utilizes the maximum share of exploitable water resources, availability of the same at different locations to different extent makes it vital to adopt effective utilization of water through storage, channelizing and judicial use. At some places like Punjab and Haryana, the environmental and socio-economic rationale for this capture by the sector is now being questioned. Accordingly, it is needed to challenge and change the fundamentals of the prevailing view of water resources exploitation. A new and more suitable approach to water resources allocation is necessary if the population is to be adequately fed, without further degradation and destruction of the critical ecosystem services. Water productivity needs to be enhanced considerably, and economic cost-benefit analysis and pricing regimes can play a significant role in such a process. However, these economic measures will not be sufficient on their own. They will need to be buttressed by technological innovation and institutional changes in order to encourage a more equitable distribution of resources and to mitigate potential international conflicts across 'shared' water basins.

Water has unique characteristics that determine both its allocation and use as a resource by agriculture. Agricultural use of water for irrigation is itself contingent on land resources. In a situation of growing water scarcity and rising demands for non-agricultural (household and industrial) use of water, reassessment of sectoral allocations of water are inevitable. In developing countries, irrigated agriculture plays a vital role in contributing towards domestic food security and poverty alleviation. Therefore, achievement of these objectives is dependent on adequate allocations of water to agriculture. Justification of such allocations requires that irrigated agriculture be a cost-effective means of achieving stated political or social objectives, such as food security or poverty alleviation, and that all externalities be taken into account in the pricing mechanism. Improved allocation of irrigation water is required within the agriculture sectors in order to achieve greater efficiency in the use of irrigation water and existing irrigation infrastructure. Reallocation is also required in order to reduce waterlogging and salinization of irrigation (caused by over extraction of groundwater and depletion and pollution of surface water).

Government of India launched Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) to address the constraints in providing assured irrigation as well as increasing efficiency and productivity of current water use to bring more prosperity to the rural areas. Priorities of



Government of India were reflected in the Hon'ble President's address to the joint Session of the Parliament of 16th Lok Sabha where he 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 Pani'. 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 recurrnce 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 popularised to ensure 'Per drop-More crop".

PMKSY has been approved with an indicative outlay of Rs.50, 000 crore over a period of five years from 2015-16 to 2019-20. The programme is an amalgamation of on-going schemes of Ministry of Water Resources, River Development and Ganga Rejuvenation, Ministry of Agriculture & Cooperation and Ministry of Rural Development. The existing schemes AIBP, CADWM, MI, SWMA, and Watershed& Convergence with MGNREGA were brought together under the umbrella program of PMKSY. Further the scheme seeks convergence with scheme like Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNRES), Rashtriya Krishi Vikas Yojana (RKVY), Jawaharlal Nehru National Solar Mission and Rural Electrification programmes (JLNNSM&REP), Rural Infrastructure Development Fund (RIDF), Members of Parliament Local Area Development Scheme (MPLAD), Members of Legislative Assembly Local Area Development Fund (MLALAD), Local Body Funds (LBF), Working Plan of State Forest Department (WPSFD) etc. The PMKSY will be implemented in an area development mode only by adopting a decentralized state level planning and projected execution structure that will allow the state to draw up their own irrigation development plans based on DIPs and SIPs with a horizon of 5-7 years. The program will be supervised and coordinated utilizing the existing mechanism and structure available under Rashtriya Krishi Vikas Yojana (RKVY) program with state agriculture department acting as the State Nodal Agency for implementation of PMKSY. However, the implementing departments for the four components like AIBP, PMKSY (Har Khet Ko Pani), PMKSY (Per drop more crop) and PMKSY (watershed development) will be decided by the respective program ministry/department.

The 05 chapters along with introduction chapter, explains the profile of district, its water requirement for agriculture and allied sector, water availability, assessment of water



requirement for various sectors and strategic action plan for augmentation and effective management of available water resources.

#### **District Demography:**

As per 2011 census,thePopulation of the district is 1228686, out of that 1118986 (91.07%) live in rural area and 109700 (8.93%) in urban areas. The density is 679.21 per/Km & sex ratio is 961 females per 1000 males in rural area and 982 females per 1000 males in urban area of the district. The schedule caste, schedule tribe and general population are12.85%, 0.16%, & 86.99 % respectively of the total population. The average literacy rate in Block area is 76.75%. Male literacy is 82.95% and female literacy is70.11% in Block area. Male literacy is higher than female literacy both in rural and urban areas.

#### Agriculture in Karimganj:

The total geographical area of the district is 180900 hectares & out of that 51.52 % is cultivable area. The district receives total rainfall in between 2800-3200 mm per year and more than 70% received during 7 months via, April to October. Summer (Boro rice) paddy and vegetable crops are mainly grown in Beels and Haor situation and low lying area. In winter season crops suffer from water stress and require irrigation. Even higher rainfall areas needed irrigations at critical stages. There is a significantly gap between the potential irrigated area & actual irrigated areas

#### **District Water Profile:**

Ground water in the area is mostly used for domestic and irrigation purposes. Ground water draft for industrial purpose is 26.36mcm. Net ground water available in the district is 425.58 mcm and ground water draft for all uses is 28.36mcm mcm. The stage of ground water development of the district is only 7 % and categorized as 'Safe'

# Demand for water and the gap:

The present water demand of the district has been assessed at 1001.61 MCM annually, withPatherkandibeing the block with maximum water requirement (175.49 MCM). Dullavcherra and R. K. Nagar block stand at 2nd and 3rd position with 170.44 MCM and 162.96 MCM water required in the respective Block.During 2021, total water requirement of the district has been assessed at 1006.78 MCM out of which maximum will be for Patherkandi block (176.13 MCM). It will be followed by Dullavcherra and R. K. Nagar block (163.39).



# **PMKSY Financial Proposal:**

Total plan of Karimganj district for five years works out to be Rs. 99417.9 lakh. Maximum share of Rs. 57966.8 lakh (58%) is for irrigation department followed by Agriculture department with Rs. 37269.81 lakh (38%). Share of Soil Conservation, DRDA and Horticulture departments are Rs. 3947.09 (4%), 39.2 and 195 lakh respectively.

## **Expected Outcome**:

Various departments of the district have proposed to bring additional acreage of land under irrigated cultivation system. During 2021, total water requirement of the district has been assessed at 1006.78 MCM. Keeping in view the above, a plan to Rs. 95998.7 lakh has been proposed under Strategic Action Plan of Karimganj district.



#### Background

Government of India launched Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) to address the constraints in providing assured irrigation as well as increasing efficiency and productivity of current water use to bring more prosperity to the rural areas. Priorities of Government of India were reflected in the Hon'ble President's address to the joint Session of the Parliament of 16<sup>th</sup> Lok Sabha where he 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 Pani'. 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 popularised to ensure 'Per drop-More crop''.

Out of 2811 thousand hectare of net area sown in the state of Assam during the year 2011-12 only 161 thousand ha (or 5.72%) is presently covered under irrigation. Substantial dependency on Rainfed makes cultivation in unirrigated areas a high risk, less productive. Assured or protective irrigation may encourage farmers to invest more on farm mechanisation, new technology and high volume inputs leading to productivity enhancement and increased farm income.

#### Vision

The overreaching vision of the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) will be to ensure access to some means of protective irrigation to all agricultural farms in the state, to produce "per drop more crop", thus bringing much desired rural prosperity.

# Objective

The objectives of the PMKSY are to:

- a) Achieve convergence of investments in irrigation at the field level
- b) Enhance the physical access of water on the farm and expand cultivable area under assured irrigation (Har Khet Ko Pani),
- c) Integration of water source, distribution and its efficient use, to make best use of water through appropriate technologies and practices.



- d) Improve on-farm water use efficiency to reduce wastage and increase availability both in duration and extent,
- e) Enhance the adoption of precision-irrigation and other water saving technologies (More crop per drop).
- f) Enhance recharge of aquifers and introduce sustainable water conservation practices
- g) Ensure the integrated development of Rainfed areas using the watershed approach towards soil and water conservation, regeneration of ground water, arresting runoff, providing livelihood options and other NRM activities.
- h) Promote extension activities relating to water harvesting, water management and crop alignment for farmers and grass root level field functionaries.
- i) Explore the feasibility of reusing treated municipal waste water for peri-urban agriculture, and
- j) Attract greater private investments in irrigation.

# Strategy and focus area

To achieve above objectives, PMKSY will strategize by focussing on end to end solution in irrigation supply chain viz water sources, distribution network, efficient farm level applications, extension services on new technologies and information etc. Broadly PMKSY will focus on

- a) Developing augmenting distribution network where irrigation sources (both assured and protective) are available or created.
- b) Creation of new water sources, repair, restoration and renovation of defunct water sources, construction of water harvesting structure, secondary and micro storage, groundwater development, enhancing the capacity of traditional water bodies at village level like Dongs, bandhas etc.
- c) Promotion of scientific moisture conservation and run off control measure to improve grand water recharge so as to create opportunity for farmer to access recharged water through shallow tube well/ dug well.
- d) Promoting efficient water conveyance and field application devices within the farm viz underground piping system, Drip and sprinklers, pivots, rain guns and other application devices etc.
- e) Encouraging community irrigation through registered user groups such as farmers /producers organisation/NGO/PPS ; and



f) Farmers oriented activities like capacity building, training and exposure visits, demonstrations, farm schools, skill development is efficient water use and cropmanagement practices 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.

However, combination of intervention is required depending on location specific conditions and requirements which are identified through Block Irrigation Plan (BIP) and District Irrigation Plan (DIP). More focus on irrigation development plans are given where there is deficient in terms of irrigation coverage.

#### Programme components

PMKSY will have following programme components:

#### A. ACCELERATES IRRIGATION BENEFIT PROGRAMME (AIBP)

To focus on faster completion of ongoing major and medium irrigation projects.

#### **B.** PMKSY (HAR KHET KO PANI)

- a) Repair, restoration and renovation of water bodies, strengthening carrying capacity of traditional water sources, construction of rain water harvesting structures (Jal Sanchay).
- b) Command area development, strengthening and creation of distribution network from source to the farm.
- c) Creation of new water sources through minor irrigation (both surface and grand water).
- d) Diversion of water from source of different locations where it is plenty to nearby water scarce areas, lift irrigation from water bodies/rivers at lower elevation to supplement requirements beyond IWMP and MGNREGS irrespective of irrigation command.
- e) Grand water development in the areas where it is abundant, so that sink is created to restore run off/flood water during peak rainy season.
- f) Improvement in water management and distribution system for water bodies to take advantage of available water source which is not tapped to its fullest capacity.
- g) Grand water development in the areas where it is abundant, so that sink is created to restore run off/flood water during peak rainy season.
- h) Creating and rejuvenating traditional water storage systems like Dougs/ponds/bandhas etc. at feasible location.



# C. PMKSY (PER DROP MORE CROP)

a) Programme management, preparation of District irrigation plan / Block irrigation Plan, approval of annual action, monitor etc.

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

c) Promoting efficient Walt's conveyance and precision water application device like drips, sprinklers, pivots, rain guns in the farm.

d) Topping up of input cost particularly under civil construction beyond permissible limit (40%) under MGNREGS for activities like lining inlet, outlets, silt trays, distribution etc.

e) Water lifting devices like diesel / electric / solar pump sets including water carriage pipes, underground piping system.

f) Construction of micro irrigation structure to supplement some creation activities including tube wells and dug wells (in areas where ground water is available) and not under semi critical which are not supported under AIBP, PMKSY, PMKSY (har Khat ko Pani), PMKSY (Water Shed) and MGNREGS as per block / district irrigation plan.

g) Secondary storage structure at tail end of canal system to store waters when available in abundance (rainy season) or from perennial sources like streams for use during dry periods through effective on farm water management.

h) The extension workers will be empowered to disseminate relevant technologies under PMKSY only after requisite training is provided to them especially in the area of promotion of scientific moisture conservation and agronomic measures, improved innovative distribution system like pipe etc.

i) Capacity building, training of awareness campaign including low cost publication, use of Pico projectors of low cost filters for encouraging potential use water source through technological, agronomic and management practices including commonly irrigation.

j) Information communication technology (ICT) intervention through NEGP-A to made use in the field of water use efficiency, precision irrigation technologies, on farm water management crop rotation etc. and also in the intensive monitoring of the system.

# D. PMKSY (WATER SHED DEVELOPMENT)

a) Converging with MGNREGA for creation of water sources to full potential in identifies backward rain fed blocks including renovation of traditional water bodies.



b) Effective management of runoff water and improved soil and moisture conservation activities such as ridge area treatment, drainage live treatment, rain water harvesting, in situ moisture conservation and other allied activities on water shed basis.

# Rationale/Justification

In reference to the status and need of irrigation, the water resource management including irrigation related priorities was identified for Sirmour district by the peoples' representatives of district with support from administration and technical experts. For instance the reports of Strategic Research and Extension Plan (SREP) prepared under ATMA program, Comprehensive District Agriculture Plan (C-DAP) prepared as part of Rashtriya Krishi Vikas Yojana (RKVY), Potential Linked Credit Plans (PLP) of NABARD and the Integrated District Development Plan etc. identified number of irrigation related issues for Sirmour district including (i) promoting water use efficiency through sprinkler and drip irrigation; (iii) promoting protected polyhouse cultivation to minimize risk factors and enhance quality and productivity; (iv) Improvement of on-farm water delivery and efficiency of existing irrigation systems; (v) promotion of soil conservation of arable & non-arable land through engineering measures; (vi) creation of new water harvesting structures, check dams, ponds, tanks, etc (vii) increase the forest cover in the district and (viii) land improvement measures.

# Procedures for formulation of the district irrigation plan (DIP)

The District Irrigation Plan (DIP) is intended to facilitate advance planning and to provide a development perspective for the district. The aim is to identify the types of works that should be undertaken in the district and potential linkage between these works and the agricultural productivity ultimately leads sustained development. The DIP will serve as a framework of long term planning but it will be flexi able enough to respond to the new emerging needs of the area, the experience of implementation and new works approved by the implementation Committee headed by the Deputy Commissioner.

The DIPs will identify the gaps in irrigation infrastructure after taking into consideration the District Agricultural Plan(DAP) prepared for RKVY vis-a-vis irrigation infrastructure currently available and resources that would be added during XI plan from other ongoing schemes( both state and central govt) like MGNREGS, RKVY, RIDF (Rural Infrastructure Development End), Members of Parliament Local Area Development (MPLAD) scheme, Members of Legislative Assembly Local Area Development (MLALAD) scheme, Local body funds etc. The gaps identified under strategies Research and Extension Plan(SREP) will be taken into consideration while preparing DIP.



The DIP will present holistic irrigation development perspectives plan of the district outlining medium to long development plans integrating three component water sources, distribution networks and water use applications incorporating all uses of water like drinking and domestic use, irrigation of industry, preparation of DIP will involve the participation of allparticipating departments much as agriculture, irrigation, oil conservation and Agricultural Engineering DIP will form the compendium of all existing and proposal water resource networks system in the district.

# Generally a dip will have the following features

(a) Block based: With the block as the unit for planning, the work would be primarily done at block level. Block wise irrigation plan is to he prepared depending on the available and potential water resource and water requirement for agriculture sector. The activities based on socio-economic and location specific requirement. The DIP are to be approved by the Governing body of the ZilaParishad and subsequently incorporated in the state Irrigation Plan (SIP).

The DIP Will incorporate information on all sources of available water, distribution network defunctionwater bodies, new potential water sources such as surface and sub-surface system, crops and cropping system preventing in the area, rainfall, crops water surface/sub –surface sources, Distribution of water including repair, renovation and restoration of water bodies, medium at major irrigation works, command area development etc. are to be taken up within the frame work of the Block master plan. The construction of water harvesting tank may be encourage.

(b)Indicate outcome based strategies

(c)Holistic cover socio-economic status of the population.

(d) Indicate method for measurement of out come

(e)Mapping resources.

# Nodal department

Since the financial outcome of PMKSY is to ensure access to effective and efficient delivery and application of water at HarKhetkoPanithereby enhancing agricultural production and productivity, Agricultural Department is notified as the Nodal Department for implementation of PMKSY. However, the implementing departments for the four components like AIBP, PMKSY(Has KhetKoPani), PMKSY(per drop more crop) and PMKSY (water shed Development) will be decide by the respective programed Ministry.

The District Nodal Department will within the service as notified by the State Government for all supervision and co-ordination of the programme. It may also strength the existing state



level agencies available for similar activities for entrust the responsibility of co-coordinating the works of PMKSY. The existing SAMETI is entrusting to address the mandate of PMKSY.

The Nodal Department is Agricultural department in the district is responsible for collection of projects of each cluster received from different implementing departments and prepare one DPR and place before the Inter Departmental working group for scrutiny and place State Level sanctioning Committees (SLSC) for sanction.

The Nodal Department will also be responsible for monitoring, co-coordinating physical, financial progress with implementing departments agencies and furnishing consolidate utilization certificate (UC) and Physical/financial progress reports.

In addition Nodal Department will also be responsible for the following:

(1) Co-coordinating in preparing DIP.

(2) Co-coordinating is preparation and appraisal of projects, implementing, monitoring and evaluation with various Departments and implementing agencies.

(3) Management of fund .received from state government and disbursement to the implementing agencies.

(4) Furnishing physical and financial progress reports.

(5) Effectively utilizing and regularly updating web enabled IT based (PMKSY-MTS)

# **District level implementation committee (DLIC)**

The DLIC will form the ties of PMKSY. The DLIC will be chaired by the Deputy Commissioner and will comprise of District Development Commissioner, CEO, Zila Parishad, PD, DRDA, District Agricultural Officer, Assistant Director of Agriculture, Executive Engineer (Agri.), Executive Engineers(Irrigation), DistrictSoil Conservation Officer, Lead Bank Managers of the district, EE (Water Resources).

The Project Director, ATMA will be the Members Secretary of DLIC. In addition DLIC may have two progressive farmer and a leading NGO working in the district. The farmers will be nominated for one year from District Farmers Advisory Committee under ATMA

The DLIC will oversee the implementation and inter-departmental coordination at district level and will have following sales.

(i) To act as the field level co-coordinators between the various implementation agencies/line department in the district. And to ensure that the agreed DIP is fully /successfully prepared/implemented.



(ii) To prepare annual Irrigation plan (AIP) arising out of DIPS and forward to SLIC for approval.

(iii) To monitors the progresses of various components of the AIPS, to remove implementation of make periodic reports.

(iv)Toundertake public awareness of publicity through PRI members, media to build support for the implementation of DIPS.

While preparing DIP, the traditional water management system must be studied at included. Emphasis be given for utilizing MGNREGA fund for desalting of canals, defunct water bodies like old pounds, khul etc.to improve storage capacity and creating scopes for water availability for irrigation purpose.

At the time of preparing DLP, it should be noted that where more than one department has to converge to implement a single scheme, each department may take up separate Component for implementation .Where Irrigation potential has been created but it is lying unutilized for want of field channels, works rules creating such supporting infrastructure shall he take up rules MGNREGA on priority lands.

# Methodology

Mainly three concepts formulate the base for drawing up perspective plan viz expectation availability and gap/missing. Expectation takes cap of village level aspiration the agricultural activities aiming towards improving /enhancing the livelihood support system of the people. The concept of `gap /missing is derivative one stand as expectation minus availability and this concept is a main tool fordrawing comprehensive DIP.

Initially an awareness was conducted by the Nodal Department of Jorhat on Dec. /15. It was attended by official of Irrigation /Soil Conservation/Agri. Engineering.

A team leaded by the Agricultural Development Officers, AssistantEngineer (Agri) was formed with the members of Irrigation, Agriculture, Soil conservation Agri. Engineers for Data collection at Goan Panchyat level was taken up by the committee using PRA strategy and during which villager's expectation and status of existing infrastructure, assets of future needs were recorded.

The choices of villagers were validated by Goan Panchyat level Committee to ensured

1) Selection of right type of scheme,(ii) Essential details of schemes selected and

2) Schemes selected are as per the activities in PMKSY.



The assessment of irrigation perspective has been chosen at village level, and plans for block and district level are the outcome of the collection of village level data.

Tools of data collection

To achieved the goal, survey tools have been designed keeping in view the feature specifies in DIP for drawing up the perspective plan of these are-

1. Village / Panchayat schedule for background information and existing land use pattern.

2. Village aspiration /expectation for perspective plan for BIP/DIP as well as farm under convergence activity.

# Time frame and span of the perspective plan

The perspective plan has been drown up for a period of 5 years i.e. 2016-17 to 2020-2



# Chapter 1 : General Information of the District

# 1.1 District Profile

Karimganj District is located in the South-western part of Southern Assam lies between 24°15′N-25°54′N latitude and 92°23′E-92°30′E longitude. The district with 1809 sq.km spread along Indo-Bangladesh border touching Tripura, Mizoram State on its south, and Hailakandi District on the east and Bangladesh on the North and West. The district Head Quarter, Karimganj itself is situated on the bank of river Kushiro which is a dividing line between India and Bangladesh. In summer days the town bears the characteristic of "PORT – TOWN".



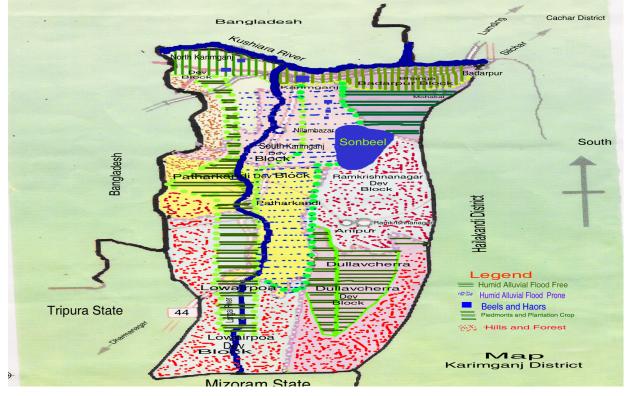


Table 1.1 District Profile			
Name of the District	<b>District</b> Code	Latitude	Longitude
Karimganj		24°15′N-25°54′N	92°23 E-92°30 E

The major rivers of Surma Valley that drains Tripura, Mizoram, Monipur, part of Nagaland & Meghalaya flows through the district. As a result Karimganj is the only district constitutes almost 30% water covered district for more than 6 months every year. Therefore, the district is not merely flood prone but rather "WATER BASE" District.



Enumeration of the Indian Parliamentary Constituency starts with No.1. Karimganj. Similarly, the Assam Legislative Constituency starts with No.1- Ratabari LAC.

All the major rivers of Surma Valley that drain Tripura, Mizoram, Monipur Part of Nagaland & Meghalaya flow through the district. As a result the District is the only district constitutes almost 30% water covered district for more than 6 months every year. Therefore, the district is not merely flood prone but rather "WATER BASE" District. Water body management should be one Focus priority. The district also shares two contrast: - The wettest zone of the globe(Cherpunjee Mosynram belt) and the most scanty rainfall zone of N.E. i.e. Mizoram, Tripura State. The Sun line called Tropic of Cancer passes through the edge of the district in the south whereas other part of the district experiences 125 Rainy days in a year.

As SRIRAMPUR of Brahmaputra Valley is the "GATE-WAY" to the North East, Karimganj is the "GATE-WAY" from the region. Sylhet Trunk Road is operative in the form of NH-115 which touches Sylhet City and Dhaka directly. River Kushiara is natural river canal that could serve the whole region as the "SWEZ CANAL of the North East" for trade route to the mainland of India and international ports as 'INLAND SEA ROUTE'.

Therefore the District occupies strategic position in local, regional, national and international arena having scope and vitality to develop the same.

#### **Brief History**

The early history of present district of Karimganj, Assam, is hazy and obscure. With available source materials and evidences, it is difficult to construct a chronologically comprehensive account of early history of the region. Only a broad outline, with major gaps, can be attempted.

From the Nidhanpur copper inscriptions issued by King Bhaskarbarman, it is learnt that the region has been within the Kamrupa Kingdom for about a hundred years since A.D. sixth century. The Aryanisation of the region under the leadership of the pioneer immigrant Brahmins with plough-based agriculture as economic basis had its beginning during this period. From the Kalapur copper plates issued by Samata Marundanatha, it is learnt that in the 7th Century A.D., this region, along with foothills of North Cachar Hills had passed on to the Samatata Kingdom of the Eastern Bengal. Of ourse, there is no direct evidence to prove it. In the 10th Century A.D., King Srichandra of the renowned Chandra Dynasty of Eastern Bengal incorporated the entire region within his Vanga Kingdom. During this period, the Chandrapura Matha or monastery, situated at Panchakhanda (8 miles From Karimganj town, now in Bangladesh), became a very reputed centre of learning. According to the renowned



historian D.C. Sarkar, the Chandrapura Matha was the greatest centre of Hindu-learning in the entire Eastern India of the early period. From two Bhatera inscriptions of Govindakeshava Deva and Ishana Deva, it is learnt that there was an independent Srihatta Rajya in the 12th Century within which the entire Karimganj District along with a major portion of the Cachar plains were incorporated.

At the time of partition of the country, in 1947, the district of Sylhet was transferred to East Pakistan barring three-and-half thana areas (Ratabari, Patherkandi, Badarpur and half of Karimganj thana) of the Karimganj sub-division. This truncated Karimganj sub-division was incorporated in the Cachar District of Assam as a full-fledged sub-division. This sub-division was upgraded to a district on the 1st of July, 1983, vide Govt. Notification no. GAG15/83/1 dated June 14, 1983.

# Administrative Set-up of Karimganj

Karimganj is one of the 27 districts of Assam. It comprises only one sub- division which is also named as Karimganj. Below this level, there are 5 Revenue Circles (Tehsils), namely -Karimganj, Badarpur, Nilambazar, Patherkandi and Ramkrishna Nagar. Furthermore, from developmental angle, the district is divided into 7 Community Development Blocks - North Karimganj, South Karimganj, Badarpur, Patherkandi, Ramkrishna Nagar, Dullavcherra and Lowairpoa. Below the block level set-up, there are 96 Gram Panchayats each comprising about ten villages on the average and governed by local-self bodies. From the angle of Police administration, the district area is divided among 5 Police stations - Karimganj, Badarpur, Patherkandi, Ramkrishna Nagar and Ratabari.

The district consists of three civil sub-division viz, Karimganj, Ramkrishnanagar and Patherkandi with geographical area of 50112 ha, 64835 ha & 65953 ha respectively. Karimganj sub-division has 3 blocks comprising of 45 Gaon Panchayats and 416 revenue villages, while Ramkrishnanagar has 2 blocks, 26 Gaon Panchayats and 290 revenue villages and Patherkandi has 2 blocks, 25 Gaon Panchayats and 234 revenue villages. District has two agricultural sub-divisions via, Karimganj and Ramkrishnagar. Sub-division & block wise area, number of gaon panchayats and revenue villages and development block wise name of gaon panchayats is shown in below table.

Civil Sub-division	Name of the block	Geographical area (ha)	No of Gaon Panchayats	No of revenue villages
KARIMGANJ	1.Badarpur	13506	12	83
	2.N. Karimganj	14565	12	127
	3.S. Karimganj	22041	21	206
	Sub. total	50112	45	416



R. K. Nagar	1.R.K. Nagar	32675	12	129
	2.Dullavchara	32160	14	161
	Sub. total	64835	26	290
Patherkandi	1. Patherkandi	35031	13	122
	2.Lowaipoa	30922	12	112
	Sub. total	65953	25	234
	Grant total	180900	96	940

The head of District Administration is Deputy Commissioner. He also acts as the Collector in case of Revenue matters, as District Magistrate in case of maintenance of Law and Order and General Administration, as District Election Officer in case of conduct of Election and so on. The Deputy Commissioner is aided by a number of Officers like Additional Deputy Commissioner, Sub-divisional Officers, Extra Assistant Commissioners and others.

Revenue Administration has historically been the primary responsibility of District Administration. This involves collection and fixing of land revenue, registration, mutation and overall management in regard to land - private and public. Besides the Revenue Branch of the Deputy Commissioners Office, which is looked after by Additional Deputy Commissioner (Revenue), there are 5 outlying Revenue Circles (Tehsils) in the district, supervised by Circle Officers. Unlike in most other districts in Assam, Mouzadari System is not applicable in Karimganj. Circle Officers, being Tehsildars are responsible for collecting land revenue (Khazna) from land owners (pattadars). All the Circle Officers, and also the Settlement Officer (since Settlement Operation in in progress in the district) are required to submit 'doul' (demand of revenue) to DC, and after his approval, Tehsildars are to collect revenue as per the demand.

**Settlement Operation:**The settlement of a local area or an estate is a special operation carried out under the provision of section 17-42 of the Regulation for formal revision of the land revenue demand for that area or class of estate. These operation are generally perioding in nature and take place after every a few decades.

Under Section 55 of the Settlement Rules, the assessment of the land shall consist of the following processes:

- . Preliminary record writing and field classification.
- . Record attestation.
- . Submission of attested reports.
- . Revenue attestation.
- . Offer of settlement.



As per Assam Land Revenue Regulation, a Settlement Officer (of the rank of an ADC) is appointed under section 133 for any local area or class of estate. He/she shall exercise the power of the D.C. as conferred by these rules for settlement of any local area or class of estate except those expressly reserved by the Deputy Commissioner. When no settlement is under operation, D.C. acts as the Settlement Officer.

Settlement Operation in Karimganj District: From the point of view of Revenue Administration, Land area of Karimganj District fall under two separate categories - (a) Permanently Settled Estate (comprising 664 revenue villages and 2 non-cadastral villages) and (b) Temporarily Settled Estate (comprising 476 revenue villages). As regards Permanent Estate, Settlement Operation is now under process and is likely to be completed within a year or two. As for Temporary Estate also, Govt. of Assam has issued notification for Settlement Operation to start from 1st August, 2000. The entire Settlement Operation is being done under the guidance of a Settlement Officer for details on Settlement Operation.

#### 1.2 District Demography

As per 2011 census,thePopulation of the district is 1228686, out of that 1118986 (91.07%) live in rural area and 109700 (8.93%) in urban areas. The density is 679.21 per/Km & sex ratio is 961 females per 1000 males in rural area and 982 females per 1000 males in urban area of the district. The schedule caste, schedule tribe and general population are12.85%, 0.16%, & 86.99 % respectively of the total population. The average literacy rate in Block area is 76.75%. Male literacy is 82.95% and female literacy is70.11% in Block area. Male literacy is higher than female literacy both in rural and urban areas. Total population of work force is 348020 and out of that 64.39% population is of agricultural workers and rest of non-agricultural labourers who are engaged in business; shop keeping, carpentering, driving & mechanic etc. Migration of agricultural workers from rural to urban areas for better livelihood is hampering the agriculture operations and other related works. The demographic information (block wise) presented in the Table 1.2.

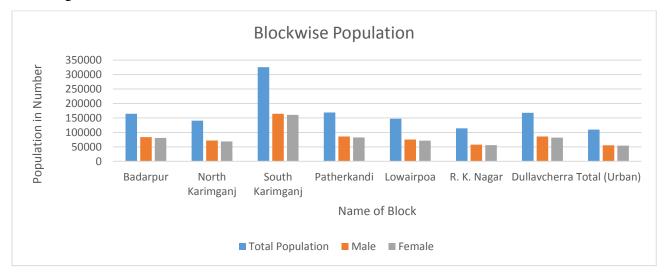
		0 0	<b>M</b> 1		117	1 '				
Name of	Population	Literacy	Male	Female	W	orkers in no.		C	Caste in no	
Block										
					Agri	Non-Agri	Total	SC	ST	General
Badarpur	142523	82.96	72711	69812	24478	8160	32638	11867	26	130630
Badrpur TC	13298	96.88	6738	6560	-	5125	5125	1930	0	11368
Badrpur	8882	96.88	4477	4405	-	3375	3375	1710	38	7134
Railway										
North	140869	80.88	71916	68953	49940	11098	61038	10180	160	130529
Karimganj										
Karimganj	56854	94.15	28473	28381	215	22346	22561	8413	190	48251
Municipality										

Table 1.2 Demography of Karimganj



NABCUNS										
South Karimganj	268434	77.94	136248	132186	37069	10742	47811	35644	120	232670
Patherkandi	168726	77.40	85972	82754	24895	7002	31897	8350	81	160295
Lowairpoa	147236	69.15	75570	71666	26554	8195	34749	23758	409	123069
R. K. Nagar	113992	76.80	57713	56279	31391	7848	39239	35541	233	78218
Dullavcherra	167872	72.12	86046	81826	29536	8990	38526	20497	783	146592
Total (R)	1118986	76.75	570510	548476	215	30846	31061	144169	1660	973157
Total (U)	109700	95.97	55354	54346	223863	62035	316959	13721	280	95699
Total	1228686		625864	602822	224078	92881	348020	157890	1940	1068856
			8%	12%					North Kai South Kai	0,
			8% 13%	12%				= :	South Kai	rimganj
			8%					-	Patherka	ndi
			11%	24%					Lowairpo	а
			13%						R. K. Naga	ar
									Dullavche	erra
									Total (Url	oan)
		1								
rigure 1.2 Bl	lock wise Pop	ulation								

South Karimganj is the most populated block of the district whereas R.K. Nagar has lowest population. Same trend exists in population density of the block and which shown in given below figure.



# *Figure 1.3 Total male and female Population blocks* 1.3 Biomass and Livestock

Animal Husbandry and Dairying have played a vital role in the development of Assam's rural economy. According to 19<sup>th</sup>Livestock Census 2012, the district has a total livestock population of 10.49 lakh.



Name of District	Cattle Population	Poultry Population	Total Livestock Population
Karimganj	449144	600779	1049923

Between 2007 and 2012, the population of cattle has shown a positive growth. There have been increment of population of cows by 2.65%, goat by 42.81% and sheep by 46%. The population of buffalo has decreased during the same period by -12.93%, poultry by -6.35%.

# 1.4 Agro-Ecology, Climate, Hydrology and Topography

Ecology, Climate, Hydrology and Topography etc. are the basic factors determining the delineation of agro-climatic zones. The state has delineated into six Agro-Climatic Zone on the basis of Physiographic, climate, Soil, crops and cropping pattern. The District comes under the Barak Valley agro-climatic zone. Based on rainfall, physiographic, soils, flood, crops, cropping pattern etc. The district has been delineated in to 5 different agro-ecological situations with a view to generate location specific technologies to cater the needs of farmers. The highest area is in humid Piedmont and plantation Situation (32.02%) AES-IV followed by Hill & Forest situation (28.41%) AES-V, Alluvial Flood Free Situation (23.57%) AES-I, Beels and Hoar situation (9.00%) AES-III and Alluvial Flood Prune Situation (7.00%) AES-II. Blocks covered under each agro-ecological situation are presented in the Table 4.4 and Block wise different farming situations in the Table 1.4

Area of	Area of	Name of AES	Area	a of AES	Name of Blocks fall in	Area of	block	Representative Village
Zone (Ha)	district in zone in %		На	%	the AES	На	%	of AES
516140	32.53	Alluvial Flood	42633	23.56716	Badarpur	6632	49	Chaitannyanagar-
		Free Situation			North Karimganj	5826	40	Kandigram
		(AES-I)			South Karimganj	6612	30	
					Lowairpoa	13915	45	
					Dullavcherra	9648	30	
		Alluvial Flood	12654	6.995025	North Karimganj	2113	15.64	Narugoan
		Prune			South Karimganj	5508	24.99	
		Situation (AES-			Patherkandi	2558	7.3	
		11)			R. K. Nagar	2280	7	
					Dullavcherra	195	0.61	
		Beels and	16296	9.008292	Badarpur	2746	20.33	Taltola
		Haors			North Karimganj	2210	15.17	
		Situation			South Karimganj	5419	24.59	
		(AES-III)			Patherkandi	1180	3.37	
					R. K. Nagar	4741	14.51	
		Piedmonts	57929	32.02266	Badarpur	2778	20.57	Bhairabnagar Block-I
		and plantation			North Karimganj	4416	30.32	
		Situation			South Karimganj	4502	20.43	
		(AES-IV)			Patherkandi	16043	45.8	
					Dullavcherra	10009	31.12	
					Lowairpoa	7112	23	
					R. K. Nagar	13069	40	
		Hills and	51388	28.40685	Badarpur	1350	10	Karikhai Part-I
		Forest			Patherkandi	15250	43.53	
		Situation (AES-			Lowairpoa	9895	32	

Table 1.4 Agro-ecological Status



V)	R. K. Nagar	12585	38.52
	Dullavcherra	12308	38.27

#### Physiography

The district comprises plain areas surrounded by small hill and hillocks, Saras range of hills in the east- Dohalia range in the center and Patheria range in west are the dismemberments of the great Borail range in North and North Eastern parts of the district are generally plain areas whereas South and South western parts are covered with forests. The major rivers of then districts are Kushiara, Longhai and Singla. The river Kushiara forms the Northern boundary of the district and separated it from Bangladesh. The Kushiara and Longhai are the perennial source of water as other rivers dried up during winter season. River Singla originating from jumpai Hills of Tripura- Mizoram flows to Sonbeel, a natural reservoir. Sonbeel is one of the main sources of fish in the district. A major percentage of fisherman community lives around Sonbeel.

#### Information on climate

The climate of the district is very humid and damp due to high rainfall, high temperature and land look. The average rainfall of the district is 3910 mm. The maximum rainfall recorded in 1998 is 4587 mm and lowest recorded in 1979 is 1552 mm. The maximum temperature recorded is to  $39 \ ^{0}$ C whereas minimum being 10.4  $^{0}$ C.

# **Relative Humidity**

Relative humidity varies from 87.9% to 96.7% in morning time and 48.1% to 76.0% in the evening time. It goes down to 37% in February/March in some years. The average relative humidity in rainy season almost remained below 80% but in summer it goes upto 60%.

## Rainfall

The distribution of rainfall in different months with maximum & minimum temperature and relative humidity is presented in Table below. The average monthly rainfall is higher during April to August and minimum or no rainfall records during November to February. The average annual rainfall varies from 2800mm to 3200mm which highly congenial for cultivation of paddy. But the rainfall pattern during summer and autumn paddy cultivation period is highly erratic and scanty as a result in these two season paddy cultivation mainly irrigation dependant.



Table 1.5 Rainfall Pattern of District

	5 5		Rainfall	(mm) & days (in	n no.)	
Months	201.	3	20	)14		2015
	Rainfall	Days	Rainfall Days Rainfall		Rainfall	Days
January	0.0	00	0.0	00	7.6	3
February	8.3	1	33.0	4	16.4	3
March	17.4	2	82.4	5	3.9	3
April	241.9	15	134.2	11	4.90	21
May	811.6	27	556.70	22	628.9	22
June	380	19	656.9	27	593.2	25
July	448.9	28	344.8	29	365.6	19
August	500.6	26	497.2	27	1027	28
September	168.8	18	432.5	22	490.9	15
October	265.7	14	51.8	5	131.1	6
November	00	00	0.0	0	6.2	2
December	00	00	0.0	0	15.4	2
Total	2852.3	150	2789.5	147	3291.1	149

#### 1.5 Soil Profile

Data was not provided by the concern department.

#### 1.6 Soil Erosion and Runoff Status

Data was not provided by the concern department.

#### 1.7 Land Use Pattern

The total geographical area of the district is 180900 hectares & out of that 51.52 % is cultivable area. At presently, 74.62 % cultivable area is under cultivation. Three crops are grown in 19.61% area, two crops in 38.34% and single crop in 33.08% area that can be brought under double crops through persuasion. Out of total cultivable area, 7.29 % is still cultivable wastes, which can be reclaimed & brought under cultivation. 3.82% of total area is under non-agricultural use, 1.12 % is barren land, 2.38% area is under misc. plantation, 21.63% area is under forest and 0.26% is under pasture. This is too meagre area keeping in view existing population of livestock and there by productivity of livestock is too low. This situation suggests that only limited number of good quality animals be kept and fed under the stall –feeding system besides proper management of existing pasture land. Block wise land use pattern of the district is presented in Table 1.6.

Name of	Geogra	Cultiva	Cultivated	Cultiva	Current	Forest		Pasture	Non	Misc.	waste	Other
Block	phical Area	ble Area	Area	ble waste	fallow	Reserve	Open	1	Agri Use	plantati on	land	uses
Badarpur	13506	8402.00	6774.0	525.0	103.0	20.0	-	20.0	533.0	1176.0	-	2727
North Karimganj	14565	9104.0	7564.0	438.0	102.0	12.0	-	12.0	620.0	1212.0	264.0	2810
South Karimganj	22041	12079.0	9422.0	1580.0	153.0	75.0	2435. 0	40.0	2133.0	1020.0	422.0	2104
Patherkandi	35031	16868.0	10778.0	1660.0	130.0	505.0	102.0	120.0	520.0	300.0	50.0	14776
Lowairpoa	30922	14992.0	11550.0	1800.0	142.0	26.0	13.0	25.0	775.0	156.0	20.0	12973
R. K. Nagar	32675	15836.0	11550.0	375.0	111.0	1510.0	430.0	40.0	550.0	322.0	93.0	13408
Dullavcherra	32160	15925.0	11911.0	416.0	298.0	3332.6	680.0	218.0	1786.0	130.0	1235.0	12973
Total	180900	93206	69549	6794	1039	5480.6	3660	475	6917	4316	2084	

 Table 1.6Land use pattern (area in ha) of the district

% of	51.52	38.45	3.76	0.57	19.61	2.02	0.26	3.82	2.38	1.12	
Geographical											
Area											

The total operation land holding in the district is 76649 & total cultivable area is 93206 ha. The average size of holding is 1.01 ha. The resource rich farmers on the basis of size of land holdings (viz. very large, large & medium) are 10.95% and they are holding 34.39% cultivable area. The resource poor farmers are 89.05% and are occupying 65.61% area. It indicates that low cost farm technology have the better chances of adoption instead to expensive technologies. Block wise detail on operational land holding is given in Table 1.7.

Table 1.7Detail of operational land holdings of the district

Name of Block		Operational holdings (in number and area in ha)											
	Very large		La	arge	Med	lium	Sn	nall	Mar	ginal	Lan	dless	Area
	Nos.	Area	Nos.	Area	Nos.	Area	Nos.	Area	Nos.	Area	Nos.	Area	Total
		(>4.0)		(3-4)		(2-3)		(1-2)		(0.5-1)		(<0.4)	
Badarpur	26	140	78	291	246	659	2142	3688	3128	2048	2882	576	7402
North Karimganj	34	145	97	335	380	889	2718	4077	492	2389	3086	269	8104
South Karimganj	56	280	161	560	825	2062	2544	3816	2905	2170	1061	534	9422
Patherkandi	185	839	520	1959	480	1248	2350	4180	4736	3502	4200	840	12568
Lowairpoa	362	1472	725	2223	1631	3479	3624	3865	3805	2029	7973	1424	14492
R. K. Nagar	280	1260	590	2188	884	2431	1415	2335	4490	3592	696	230	12036
Dullavcherra	117	526	471	1413	825	1962	4508	5940	4709	2085	3498	699	12625
Total	1060	4662	2642	8969	5271	12730	19301	27901	24265	17815	23396	4572	76649



# Chapter 2 : District Water Profile

# 2.1 Area Wise, Crop Wise Irrigation Status

The total geographical area of the district is 180900 hectares & out of that 51.52 % is cultivable area. The district receives total rainfall in between 2800-3200 mm per year and more than 70% received during 7 months via, April to October. Summer (Boro rice) paddy and vegetable crops are mainly grown in Beels and Haor situation and low lying area. In winter season crops suffer from water stress and require irrigation. Even higher rainfall areas needed irrigations at critical stages. There is a significantly gap between the potential irrigated area & actual irrigated areas. Block wise rain fed & irrigated area and source of

Сгор Туре	Kha	rif (Area in	ha)	Rab	Rabi (Area in ha)			Crop (Are	ea in ha)	То	tal (Area in	ha)
	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total
A) Cereals	1107	58365	59472	170	6725	6895	0	1550	1550	1277	66640	67917
B) Coarse Cereals	0	0	0	0	0	0	0	34.42	34.42	0	34.42	34.42
C) Pulses	0	77	77	0	1093.5	1093.5	0	0	0	0	1170.5	1170.5
D) Oil Seeds	0	16.4	16.4	0	531.9	531.9	0	0	0	0	548.3	548.3
E) Fibre	0	48.5	48.5	0	0	0	0	0	0	0	48.5	48.5
F) Any other crops	0	210	210	0	0	0	0	0	0	0	210	210
Grand Total	1107	58716.9	59823.9	170	8350.4	8520.4	0	1584.42	1584.42	1277	68651.72	69928.72

irrigation are presented in the Table 2.1.

#### Table 2.1Crop wise status of irrigated and Rainfed

The total cultivable area of the district is 93206 hectares and out of it 2.53% is actually irrigated remaining 96.40 % is rain-fed.

Name of Block	Rainfed Area (Ha)	Irrig	ated Area (Ha	a)
Name of Diock		Major	Medium	Minor
Badarpur	8132	Nil	Nil	270
North Karimganj	8754	Nil	Nil	350
South Karimganj	11189	Nil	Nil	890
Patherkandi	16318	Nil	Nil	550
Lowairpoa	14642	Nil	Nil	350
R. K. Nagar	15386	Nil	Nil	450
Dullavcherra	15425	Nil	Nil	500
Total	89846			3360

Table 2.2 Status of Area in Block wise



Table 2.3 Area of Horticulture and Plantation

Horticulture & Plantation Crops	; (Area in ha)	
Irrigated	Rainfed	Total
30	16015	16045

# 2.2 Area, production & productivity of Major Crops

#### **Agricultural crops**

The paddy is a staple food crop of the district and it's grown three times in a year. Winter paddy is occupying an area of 69525 hectares followed by summer paddy 6895 ha and autumn paddy 1550 ha. The area under autumn paddy is showing a decreasing trend due to water scarcity and lack of assured irrigation facilities. The trend in area of different agricultural crops for last 5 years is depicted in Table-2.3, production in Table 2.4, productivity in Table 2.5

Table 2.4Trend of growth in the area of agricultural crops (in Ha)

Commodity	2011	2012	2013	2014	2015
Autumn paddy	1810	1785	1705	1640	1550
Winter paddy	69425	69475	69480	69485	69525
Summer paddy	6649	6488	6979	7225	6895
Maize	35	30	28	31	34.5
Sugar Cane	210	212	214	214	215
Jute	40	43	46	51	55
Cotton	24	25	25	26	27
Potato	2050	2105	2115	2485	2595
Colocassia	1805	1806	1806	1804	1806
Sesamum	21	22	20	23	26
Toria/Rape & Mustard	160	171	188	205	294
Linseed	36	39	37	38	39
Green gram	10	12	11	13	11
Black gram	70	65	62	64	66
Lentil	10	8	12	25	60
Arhar/Tur	65	68	72	79	87.5
Gram	2	3	5	3	9
Rajmah	640	650	640	630	635
Country Bean	960	930	945	970	950
Pea	52	68	61	65	75

Table 2.5Trend in productivity of agricultural crops (q/ha)

Commodity	2011	2012	2013	2014	2015
Autumn paddy	31.21	31.28	31.38	31.48	31.52
Winter paddy	28.44	28.58	28.74	28.82	28.84



Summer paddy	33.30	33.48	33.70	33.75	33.80
Maize	28	29.5	30	30.21	30.33
Sugar Cane	442	448	450	451	453
Jute	13.5	14	15	15.5	15.6
Cotton	2.7	2.8	3	3.10	3.11
Potato	158	159	160	162	163
Colocassia	102	103	105	110	111
Sesamum	3.8	3.9	4	4.8	4.9
Toria/Rape & Mustard	7.4	7.4	7.5	7.6	7.8
Linseed	4.85	4.95	5	5.28	5.44
Green gram	5.75	5.85	6	6.57	6.89
Black gram	7.95	8	8	8.26	8.79
Lentil	5.8	5.9	6	6.26	6.67
Arhar/Tur	7.76	7.88	8	8.62	8.84
Gram	4.49	4.69	5	5.34	5.41
Rajma	11.59	11.85	12	12.47	12.51
Country Bean	84.5	84.78	85	85.37	85.39
Pea	7.86	7.88	8	8.21	8.46

#### Table 2.6Trend in production of agricultural crops (in 'Qtls)

Commodity	2011	2012	2013	2014	2015
Autumn paddy	56490.1	55834.8	53502.9	51627.2	48856
Winter paddy	1974447	1985596	1996855	2002558	2005101
Summer paddy	221411.7	217218.2	235192.3	243843.8	233051
Maize	980	885	840	936.51	1046.385
Sugar Cane	92820	94976	96300	96514	97395
Jute	540	602	690	790.5	858
Cotton	64.8	70	75	80.6	83.97
Potato	323900	334695	338400	402570	422985
Colocassia	184110	186018	189630	198440	200466
Sesamum	79.8	85.8	80	110.4	127.4
Toria/Rape & Mustard	1184	1265.4	1410	1558	2293.2
Linseed	174.6	193.05	185	200.64	212.16
Green gram	57.5	70.2	66	85.41	75.79
Black gram	556.5	520	496	528.64	580.14
Lentil	58	47.2	72	156.5	400.2
Arhar/Tur	504.4	535.84	576	680.98	773.5
Gram	8.98	14.07	25	16.02	48.69
Rajma	7417.6	7702.5	7680	7856.1	7943.85
Country Bean	81120	78845.4	80325	82808.9	81120.5
Реа	408.72	535.84	488	533.65	634.5

# 2.2.1 Information on area, production & productivity of horticultural crops

The existence of different types of soils in the district makes possible the diversity in horticultural crops. The monsoon gives abundant rainfall, thus, making possible sound growth of subtropical fruits and plantation crops. High land areas and homestead areas in upland are utilized mostly for cultivation of fruits and vegetables. Fruit plants mostly are



scattered in individual homesteads. Bananas, Coconut, Areca nut, Jackfruit, Mango, and Papaya etc are main fruit crops. Brinjal, Tomato, Potato, Pea, Cabbage, Cauliflower, knoll kohl, Carrot, Radish, Ladies finger, Ridge gourd, pointed gourd and other leafy vegetables etc. are main vegetables which are grown by the farmers.

The trend in area presented in Table 2.6; production in Table 2.7, productivity in Table 2.8.All three viz. area, production and productivity of all horticultural and vegetable crops have increased significantly which indicates that farmers are well acquainted with importance of these crops hence there is a need to mobilize them to work under group mode particularly marketing so that operational & recurring expenditure could be minimized & net profit could be maximized by selling them at appropriate markets instead of local markets.

Sl No.	Commodity	2011	2012	2013	2014	2015
	Fruit crops					
1	Banana	1280	1285	1294	1298	1300
2	Pineapple	250	258	263	270	275
3	Orange	233	241	247	250	255
4	Papaya	59	65	68	70	72
5	Assam lemon	588	596	630	640	645
6	Guava	130	135	135	137	138
7	Lichi	131	132	132	135	136
8	Jack Fruit	825	825	825	826	826
9	Mango	220	223	223	224	224
10	Other fruits crop	120	122	124	126	127
	Nut Crop					
1	Areca nut	2220	2221	2222	2226	2228
2	Coconut	707	707	707	708	708
3	Cashewnut	250	250	250	250	250
	Tuber crop					
1	Potato	1750	1760	1768	1770	1775
2	Sweet Potato	132	135	138	139	140
	Spices crop					
1	Chilly	310	315	315	320	325
2	Turmeric	275	276	276	280	281
3	Onion	24	25	25	25	26
4	Ginger	210	212	214	216	220
5	Coriander	40	41	41 (Seed)	42	42
6	Garlic	4	4	4.5	5	5
7	Black pepper	270	275	279	279	280
8	Other Spices	72	73	75	75	76
	Vegetable crops					
1	Kharif Vegetable	2130	2132	2135	2138	2140
2	Rabi vegetable	5440	5441	5443	5445	5446

 Table 2.7Trend in area of horticultural crops (in ha)
 Image: state of the st

Table 2.8Trend in production of horticultural crops (in tonnes)

	SI No.	Commodity	2011	2012	2013	2014	2015
Fruit crops		Fruit crops					



1	Banana	38750	38790	38820	38890	38990
2	Pineapple	3670	3700	3770	3850	3900
3	Orange	2350	2400	2470	2510	2550
4	Papaya	990	999	1005	1090	1150
5	Assam lemon	3050	3090	3150	3190	3200
6	Guava	1250	1300	1350	1390	1400
7	Litchi	610	640	660	690	695
8	Jack Fruit	27850	27950	28050	28100	28150
9	Mango	585	599	602	625	640
10	Other fruits crop	910	935	940	950	990
	Nut Crop					
1	Areca nut	4300	4330	4333	4390	3400
2	Coconut	1715	1745	1767.5	1785	1795
3	Cashewnut					
	Tuber crop					
1	Potato	6001	6010	6014	6100	6150
2	Sweet Potato	540	560	579	580	590
	Spices crop					
1	Chilly	160	165	174	185	195
2	Turmeric	150	155	157	160	165
3	Onion	70	75	77	80	85
4	Ginger	1510	1540	1590	1640	1650
5	Coriander	75	80	82	85	90
6	Garlic	6	7.5	8.29	9	9.25
7	Black pepper	220	240	257.8	275	280
8	Other Spices	72	73	74	75	76
	Vegetable crops					
1	Kharif Vegetable	40350	40485	40518	40590	40695
2	Rabi vegetable	101395	102925	103221	103459	103696

*Table 2.9Trend in productivity of horticultural crops (q/ha & in coconut nuts in lakh)* 

Sl No.	Commodity	2011	2012	2013	2014	2015
	Fruit crops					
1	Banana	295.67	299	300	305	310
2	Pineapple	140.25	142	143.35	144.15	144.55
3	Orange	95	98	100	104	108
4	Papaya	144.45	145.95	147.83	148.14	148.56
5	Assam lemon	46	48	50	51	53
6	Guava	94	98	100	103	105
7	Lichi	45	49	50	52	52.25
8	Jack Fruit	338	339	340	341	342
9	Mango	26	27	27	28	28.25
10	Other fruits crop	74.25	75.25	75.86	76.06	76.15
	Nut Crop					
1	Areca nut	19.25	19.45	19.5	19.75	19.86
2	Coconut	24.75	24.85	25	25.15	25.22
3	Cashewnut					
	Tuber crop					
1	Potato	33.55	33.85	34.02	34.25	34.45
2	Sweet Potato	41.77	41.86	42	42.58	42.82
	Spices crop					
1	Chilly	5.23	5.43	5.53	5.63	5.72



2	Turmeric	5.38	5.48	5.68	5.72	5.76
3	Onion	30.40	30.65	30.80	30.92	30.98
4	Ginger	74.09	74.19	74.29	74.33	74.41
5	Coriander	19.25	19.56	20	20.12	20.40
6	Garlic	18.12	18.25	18.42	18.52	18.76
7	Black pepper	9.04	9.14	9.24	9.36	9.48
8	Other Spices	9.71	9.75	9.88	9.96	9.98
	Vegetable crops					
1	Kharif Vegetable	188.48	189.38	189.78	189.88	190.18
2	Rabi vegetable	189.18	189.39	189.64	189.74	189.83

# 2.3 Irrigation Based Classification

	Irrigated	(Area in ha.)	Rainfed (Area in ha.)				
Name of District	Gross Irrigated Area	Net Irrigated Area	Partially Irrigated/Protective Irrigation	Un-Irrigated or Totally Rainfed			
Name of District							



## Chapter 3 : Water Availability in Karimganj

#### 3.1 Status of water availability

Surface irrigation in the district is found to be common during all seasons. The total water available in summer is more than Rabi and Kharif. Most of the area is irrigated through lift command and further through deep tube well system. The district is endowed with natural resources and ground and surface water are also available for agriculture

Table 3.1Status of water availability

					MCM per Ha
Sl.No.	Sources	Kharif	Rabi	Summer	Total
1	Surface Irrigation				
(i)	Canal(Major & Medium Irrigation)				
(ii)	Minor Irrigation tanks				
(iii)	Lift Irrigation/Diversion	4.9507	1.04266		5.99336
(iv)	Various Water Bodies including Rain Water Harvesting				
(v)	Treated Effluent Received from STP				
(vi)	Untreated Effluent				
(vii)	Perennial sources of water				
2	Ground Water				
(i)	Open Well				
(ii)	Deep Tube Well	0.0308	0.00134		0.03214
(iii)	Medium Tube Well				
(iv)	Shallow Tube Wells				
	Grand Total				6.0255
Source	CGWB				

Source: CGWB

#### 3.2 Status of Ground Water Availability

#### Hydrogeology

Water Bearing Formations: There are three hydrogeological units/water bearing formations exists in the district. They are Alluvium, Dupitila and Tipam formation and are shown in. The details of the water bearing formations are as follows:

1. Alluvial formation: It occurs along the banks of main rivers and its thickness varies from 10 to 15 m. ground water occurs under unconfined condition. Ground water Development in the area has not been very significant because of high content of clay and sandy clay. Ground water is developed through dug wells and hand pumps.



2. Dupitila formation: Dupitila formation is nearly horizontal in deposition. The formation mainly consists of clay and silt with some intercalations of gritty and ferruginous sandstones. It is exposed in the southern and western part of the district along valley flanks. In general, it has low permeability and low storage capacity due to high clay content. It has been developed through dug wells, shallow tube wells and deep tube wells.

3. Tipam formation: Sandstone of Tipam formation constitutes the principal aquiofer in the district. The permeability of this sandstone is much higher than that of Dupitila sandstone or Surma sandstone. The recharge area of the sandstone is in the anticlinal hills. This formation consists of sub- rounded, fine to medium grained, and friable sandstone with intercalated clay. The exposures of Tipam formation is found mainly along the foot-hill areas. Ground water occurs under semi-confined to confined conditions. This sandstone is developed mainly by deep tube wells.

#### **Occurrence of groundwater**

Ground water occurs under unconfined condition in alluvial formation. In Dupitila and Tipam formations ground water occurs under unconfined, semi confined to confined conditions. In major part of the area, ground water occurs under unconfined condition in shallow aquifers and under semi confined to confined conditions in deeper aquifers.

**Nature and depth of Aquifer system:** Aquifer system of the district is divided into two types, viz, shallow aquifer within 50 m bgl and deep aquifer between 50-300 m bgl.

**Karimganj valley:**Six major aquifers are present within the depth of about 260 m. the cumulative thickness of aquifer zones to a depth of 200 m. The disposition of aquifers is almost horizontal between Hashimganj and Loharpara and then they dip towards north. The aquifers are persistant throughout the valley with minor facies variations. The sediments in the top zones 25-50 m are predominantly clayey. The surfacial top clay has thickening trend from south to north. The granular zones which comprise fine to medium grained sands have an effective grain size of 0.1 to 0.16 mmin the depth range up to 100 m while for deeper aquifer zones from 100 to 200 m it varies from 0.06 to 0.1 mm, indicating finer nature of the sediments at depth. By and large, the sediments are predominantly clayey beyond a depth of 200 m down to the explored depth of 300 m.

**Anipur valley:** Six aquifers are present within a depth of 220 m. these aquifer zones are uniformly extensive in nature with minor lithofacies variations. However, towards north beyond Ratakandi the top clayey formations become thick and increases to about 70 m with thin sand lenses. The aquifer material comprising fine to medium grained sand have effective grain size of 0.14 to 0.17 mm within a depth range of about 100 m while the same in the



depth range of 100- 220 m the effective size of aquifer material ranges from 0.09 to 0.12 mm indicating that with depth the aquifer materials tend to become finer.

**Depth to water recharge:** The Central Ground Water is monitoring water levels four times a year i.e., during January, March, August and November. During pre-monsoon period of 2011 (March), depth to water level in preatic aquifer varies from 0.35-2.80 m bgl and is shown in Fig.3. During post monsoon 2011 (November), depth to water level in phreatic aquifer varies from 0.19-3.88 m bgl and is shown in fig.4.

**Seasonal fluctuation:**The seasonal fluctuation of water level varies between 0.48 to 2.96 m during the year 2011.

**Long term Trend of Water level:** The CGWB is monitoring water levels data over the years through monitoring of network stations. There are 10 number of network stations in the district. The data generated was utilized for long term trend of water levels.

During pre-monsoon season, the trend of water level for between 2001-2011 shows rise of water level in seven stations and ranges from 0.001 to 0.379 m/yr, and fall in three station at the rate of 0.002 to 0.133 m/yr. during post monsoon season, the trend of water level between 2001-2011 shows a rise in five stations with 0.019 to 0.326 m/yr and fall in five stations with 0.003-0.068 m/yr.

Aquifer parameters of confined/deeper aquifers: Under Ground Water exploratory programme, the Board has constructed eight exploratory wells five observation wells, two Piezometers and three slim holes, with depth ranges from 12-178 m. the discharge of these wells varies from 3.4 to 30.2 lps in deep tube wells, where as it is 0.9 to 2.7 lps in shallow tube wells. The transmissivity values range from 102.5 to 347.6 m2/day in deep tube wells, while it is 26.06 to 120.48 m2/day in shallow tube wells. The Storativity value in the deep tube well is  $1.5 \times 10$ -4 and in shallow tube wells it ranges from  $2.67 \times 10$ -4 to  $8.4 \times 10$ -4.

#### Ground water resources

Groundwater resources for the year 2009 were estimated by the GEC'97 methodology. During resource estimation, the district is taken as unit of computation. The main source of ground water recharge in the district is precipitation (rain). Other sources of ground water recharge in the area are return flow from irrigation and seepage from ponds/tanks.

Table 3.2Status of Ground Water AvailabilityName of DistrictStatus of District as per Central<br/>Ground Water Board Notification

Ground Water (MCM)



	Critical	Semi- Critical	Safe	Draft	Recharge	Gap
Karimganj			Safe	28.36	472.87	444.51
~ ~ ~ ~ ~ ~						

Source: CGWB REPORT

Ground water in the area is mostly used for domestic and irrigation purposes. Ground water draft for industrial purpose is 26.36mcm. Net ground water available in the district is 425.58 mcm and ground water draft for all uses is 28.36mcm mcm. The stage of ground water development of the district is only 7 % and categorized as 'Safe'.

#### Ground water quality

**Suitability of ground water for drinking and domestic Use:**Ground water quality in the district is potable and range of all chemical constituents are within the permissible limit aet by BID (1991), except iron. The ph values of the ground water range from 6.96-8.38. The EC values ranges from 121 to 841. The fluoride content ranges from 0.10 to 1.70 ppm.

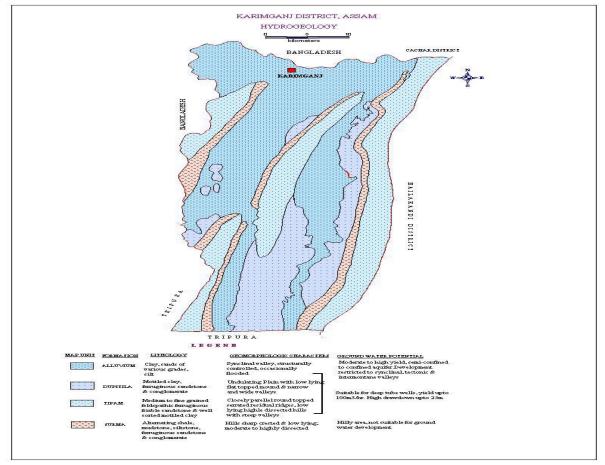
**Suitability of ground water for irrigation Use:**In general, ground water in the area is suitable for irrigation purpose.

**Status of ground water development:**Ground water is developed in the district mainly by deep tube wells for drinking, domestic and irrigation purposes. Other groundwater abstraction structures are shallow tube wells (hand pumps) and dug wells were constructed within a depth range of 5-35 m bgl.

**Drinking water scenario:** In urban areas water supply is mainly from surface water sources through piped water supply schemes. In rural areas, piped water supply schemes are mainly dependent on 109 surface water schemes, in addition to 36 deep tube wells. In addition to piped water supply schemes there are 3676 Tara pumps, 674 Singur hand pumps and 1707 ring wells in the district to meet the domestic water demand in rural areas. Water from deep tube wells is treated in water treatment plants before supply.

**Irrigation scenario:** Irrigation is mostly done by utilizing surface water in the district. During the year 2007-08, the surface water irrigates 98% of the total irrigation. Ground water irrigates only 2% of the total Irrigation which shows that the ground water utilization is negligible for irrigation in the district. Ground water developed for irrigation purpose is through deep and shallow tube wells fitted with pump sets. As on 31.03.2008, there are 19 lift irrigation schemes, 1 flow irrigation scheme, 17 CTW and 385 STW in the district, most of the minor irrigation sources are not in use.





#### 3.3 Status of Command Area

A total of 55473 hectare is covered under canal command. Maximum area is covered in DullavcherraBlock (6321 ha) followed by Lowairpoa (5469 ha).

Name of the Village	Inform	nation of Can	al Command	Inform	nation on the Comma	other Services nd	Total Area in Ha		
	Total Area	Developed Area	Undeveloped Area	Total Area	Developed Area	Undeveloped Area	Developed Command	Undeveloped Command	
North Karimganj	2400	1600	4370				1600	4370	
South Karimganj	1161	774	1885				774	1885	
Badarpur	2031	1354	2469				1354	2469	
Patharkandi	4265	2843	11070				2843	11070	
Lowairpoa	5469	3646	4318				3646	4318	
Dullavcherra	6321	4214	8192				4214	8192	
R.K.Nagar	4583 3055		8683				3055	8683	
Total	26230	17486	40987	0	0	0	17486	40987	



In total, 45 different source of irrigation are under command area. 35 under surface irrigation and remaining 10 underground water.

#### Table 3.3Existing Type of Irrigation

Sou			rface Irrig			(	Grou	ind W	ater	(2)			Tr		r extrac vices / L		Total	
Source of Irrigation		Canal Based			Tanks / Ponds / Reservoirs		Tube wells		Open wells		Bore well	Other Sources Incl TraditionalWHS	Tr <u>eated effluent disc</u> l	Electricity	Diesel Pump (5)	Others (6)	Irrigation sources (1+2+3)	Water extracting units
	Govt. Canal	Community/ Pvt. Canal	Community Ponds Including Small	Individual /Pvt. Ponds	Govt. Reservoir/Dams	Govt.	Pvt.	Community/ Govt	Pvt.	Govt.	Pvt.	Including WHS (3)	discharged from STP	, pump (4)				ıg units (4+5+6)
Total					35	10								6			45	6



The earlier Chapters deal with the general profile, water profile and water availability of Karimganj district. The present chapter deals with the current (2016) and projected (2021) demand of water for various sectors. The demand for water has been assessed on the basis of data obtained from different departments.

#### 4.1 Domestic Water Demand

Data of Census 2011 and 2001 has been considered to arrive at the growth rate of population of the district. As per Census 2011, the district has shown an annual growth rate of 2.19%. Table 4.1 below indicates the Taluka-wise population of the district. Current population (in 2016) has been calculated by assuming a growth rate of 10.95% (2.19%  $\times$  5 Years) over a period of five years (from 2011-2016). Projected population has been calculated in similar way by assuming a growth rate of 10.95% (2.19%  $\times$  5 Years) over the period of four years (from 2016-2021).

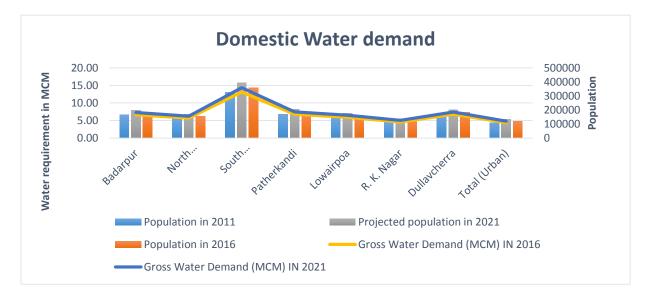


Figure 4.1 Domestic Water Demand

It has been assumed that per capita daily water requirement of people residing in urban areas of the district is 140 Litres and for population in rural areas, the daily per capita daily water requirement is 100 Litres. Using the same norms domestic water supply demand has been worked out and given in table 20 below.



Block	Population in 2011	Population in 2016	Projected population in 2021	Gross Water Demand (MCM) IN 2016	Gross Water Demand (MCM) IN 2021
Badarpur	164703	181996.82	199290.63	6.64	7.27
North Karimganj	140869	155660.25	170451.49	5.68	6.22
South Karimganj	325288	359443.24	393598.48	13.12	14.37
Patherkandi	168726	186442.23	204158.46	6.81	7.45
Lowairpoa	147236	162695.78	178155.56	5.94	6.50
R. K. Nagar	113992	125961.16	137930.32	4.60	5.03
Dullavcherra	167872	185498.56	203125.12	6.77	7.41
Total (Urban)	109700	121218.5	132737	4.42	4.84
Grand Total	1228686	1357698	1486710.06	53.98	59.11

It can be inferred from the table that considering the growth rate of population of the district, the quantity of water required in 2021 for domestic consumption shall be approximately 59.11 MCM which is 5.13 MCM more than the present water requirement.

#### 4.2 Crop Water Requirement

Taking into account, the water requirement of various crops, average water requirement per hectare of land has been worked out to for each crops separately. The irrigation efficiency of water has also been considered while working out the water requirement. It has been observed that most of the field is irrigated under flood irrigation system where the efficiency of water is around 50%. Accordingly, to calculate the actual water requirement of land, twice of the crop water requirement have been taken.

Block	Area Sown (Ha)	Irrigated Sown (Ha)	Crop Water demand (MCM)	Water Potential requirement (MCM)	Existing Water Potential (BCM)	Water Potential to be created (MCM)
Badarpur	8402	270	84.02	84.02	2.7	81.32
North Karimganj	9104	350	91.04	91.04	3.5	87.54
South Karimganj	12079	890	120.79	120.79	8.9	111.89
Patherkandi	16868	550	168.68	168.68	5.5	163.18
Lowairpoa	14992	350	149.92	149.92	3.5	146.42
R. K. Nagar	15836	450	158.36	158.36	4.5	153.86
Dullavcherra	15925	500	159.25	159.25	5	154.25
Grand Total	93206	3360	932.06	932.06	33.6	898.46

 Table 4.2Crop Water Requirement in Million Cubic Meter



It can be concluded from the table that in 7 block, a total water potential of 898.46 MCM is to be met additionally in the district to fulfill the requirement of crops.

#### 4.3 Livestock

The requirement of water for livestock of the district has been derived from last two livestock census (2007& 2012). The table below represents the district water requirement for livestock.

<i>Table 4.3Talı</i> Name of district	uka wise livesto Total number of livestock in 2012	ock water demo Total number of livestock in 2016	and (in MCM) Total number of livestock in 2021	Present Water Demand (MCM)	Existing Water potential (MCM)	Water Demand in 2021 (MCM)	Water potential to be created (MCM)			
Karimganj	1049923	1066722	1068855	15.57	15.57	15.61	0.04			
* It is assumed that present water requirement of animal is met from existing water usage and hence existing potential is almost equal to existing demand.										

It can be concluded from the table that, a total water potential of 0.04 MCM is to be met additionally in the district to fulfill the requirement of livestock.

#### 4.4 Industrial Water Requirement

At present, Industry is not in Jorhat district, so there is no water demand.

#### 4.5 Water Demand for Power Generation

In Jorhat, Power plant is not there for manufacturing the power which is using water, so there is no water demand.

4.6 Total Water Demand of the district for various sectors

This sections presents the total water demand of the district and has been calculated by

summing up all major sectors consuming water. The current water demand has been indicated

in Table 4-6 and the projected water demand has been depicted in Table 4-7.

	Demand from Components in MCM												
Block	Domestic	Сгор	Livestock	Industrial	Power Generation	Total, MCM							
Badarpur	6.64	84.02		NA	NA	90.66							
North Karimganj	5.68	91.04		NA	NA	96.72							
South Karimganj	13.12	120.79		NA	NA	133.91							
Patherkandi	6.81	168.68	15.57	NA	NA	175.49							
Lowairpoa	5.94	149.92		NA	NA	155.86							
R. K. Nagar	4.60	158.36		NA	NA	162.96							
Dullavcherra	11.19	159.25		NA	NA	170.44							
Grand Total	53.98	932.06	15.57			1001.61							

 Table 4.4Present Water Demand of the district for various sectors
 Image: Comparison of the district for various sectors



The present water demand of the district has been assessed at 1001.61 MCM annually, withPatherkandibeing the block with maximum water requirement (175.49 MCM). Dullavcherra and R. K. Nagar block stand at 2nd and 3rd position with 170.44 MCM and 162.96 MCM water required in the respective Block.

	, i	Dema	nd from Co	mponents in	MCM	
Block	Domestic	Сгор	Livestock	Industrial	Power Generation	Total, MCM
Badarpur	7.27	84.02	15.61	NA	NA	91.29
North Karimganj	6.22	91.04		NA	NA	97.26
South Karimganj	14.37	120.79		NA	NA	135.16
Patherkandi	7.45	168.68		NA	NA	176.13
Lowairpoa	6.50	149.92		NA	NA	156.42
R. K. Nagar	5.03	158.36		NA	NA	163.39
Dullavcherra	12.26	159.25		NA	NA	171.51
Grand Total	59.11	932.06	15.61			1006.78

Table 4.5Total Water Demand of the district for various sectors (Projected for 2021)

During 2021, total water requirement of the district has been assessed at 1006.78 MCM out of which maximum will be for Patherkandi block (176.13 MCM). It will be followed by Dullavcherraand R. K. Nagarblock (171.51) and Mandavi block (163.39).

#### 4.7 Water Budget



# Chapter 5 : Strategic Action plan for Irrigation in District under PMKSY

#### 5.1 Department wise Plan

Total plan of Karimganj district for five years works out to be Rs. 99417.9 lakh (Table 5-1). Maximum share of Rs. 57966.8lakh (58%) is for irrigation department followed by Agriculture department with Rs. 37269.81 lakh(38%). Share of Soil Conservation, DRDA and Horticulture departments are Rs. 3947.09 (4%), 39.2 and 195 lakh respectively. Fig.1-1indicates department-wise year -wise share in PMKSY for five years from 2016-17 to 2020-2021.

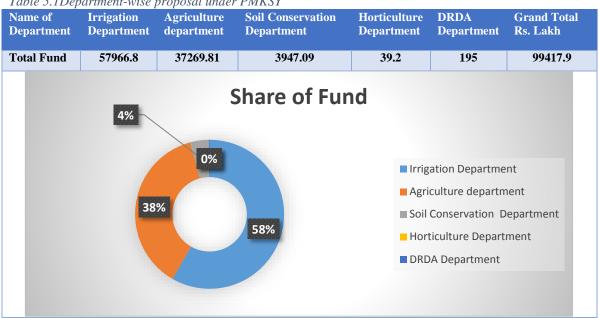


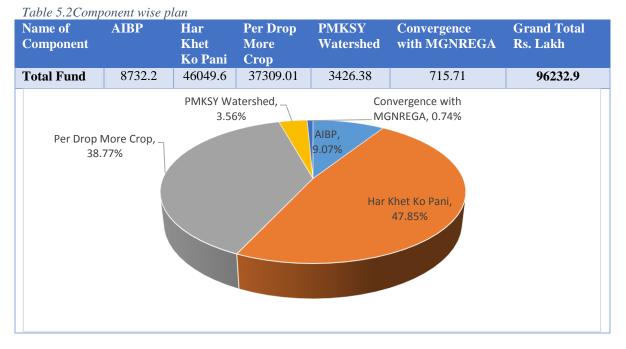
Table 5.1Department-wise proposal under PMKSY

#### 5.2 Component Wise Plan

As discussed above about various components of PMKSY, the plan is prepared accordingly. Table 5.2 shows component wise plan for 5 years starting from 2016-17 to 2020-21. AIBP component has a total proposal of Rs. 8732.2 lakh which is 9.10% of the total PMKSY proposal of the district. This component will be mainly executed by Irrigation department. Per Drop More Crop components is Rs. 37269.81 lakh, which is to be executed mainly by Agriculture department. This component constitutes 38.82% of the PMKSY Plan. Har Khet ko Pani component is of Rs. 46049.6 lakh (47.97%) will be executed by Irrigation department. Watershed component has a total proposal of Rs. 3426.38 lakh which is 3.57% of district's PMKSY proposal. This component will be implemented by GSWMA. Convergence with MGNREGS is proposed for a total amount of Rs.520.71 lakh i.e. 0.54% of districts proposal. This both component will be implemented by DRDA and Soil Conservation Department. All the stakeholders need to have coordination among themselves to have the



maximum irrigation efficiency and to avoid duplicity. Fig. 5.2 represents the graphical representation of various components of PMKSY, year wise plan and share



#### 5.3 Expected Output and Outcome

The total cultivable area of the district is 93206 hectares and out of it 2.53% is actually irrigated remaining 96.40 % is rain-fed. Net ground water available in the district is 425.58 mcm and ground water draft for all uses is 28.36mcm mcm. The stage of ground water development of the district is only 7 % and categorized as 'Safe'.

Various departments of the district have proposed to bring additional acreage of land under irrigated cultivation system. . During 2021, total water requirement of the district has been assessed at 1006.78 MCM. Keeping in view the above, a plan to Rs. 95998.7 lakh has been proposed under Strategic Action Plan of Karimganj district.

#### 5.4 Suggestions

For successful implementation of PMKSY plan it is suggested that:

- All the stakeholders should convene meeting of Panchayat samities and then finalise the village plan and prepare DPR.
- There should not be duplicity of project. ٠
- The Department should supplement each other so that the maximum irrigation • efficiency is achieved.



- All the irrigation projects should have a component of water conveyance so that the each drop of water is judiciously utilized.
- Where ever feasible solar pump sets should be installed.
- All the structures planned should be geo tagged and marked on map, so that social monitoring of the projects can be conducted. This will also avoid the duplicity.
- Priority should be given to projects minimize the gap in potential created and potential utilized.
- Execution of the scheme should be expeditiously completed.
- There should be smooth flow fund to timely complete the project.



Annexure I: Strategic Action Plan of AIBP by Irrigation Department

Sr. No	Name of the Blocks/Sub Districts	Concer ned Ministr y/ Depart ment	Compone nt	Activity	Total Number/ Capacity (cum)	Comma nd Area/ irrigatio n Potentia l (Ha)	Period of Implementat ion/ 7 yrs.)	Estimated cost (in Rs.)	TS amoun t Accor ded (Rs)	Expendi ture already incurred (Rs)	Balanc e Amou nt of TS Accord ed (Rs)	Addition al amount required for completi on of work	Remarks
1		MoWR		Major Irrigation									
2		MoWR		Medium Irrigation									
		MoWR				Su	irface Minor I	rrigation (C	)n going)				
1	Lowairpoa	MoWR		Piplacherra FIS under AIBP for the year 2008-09		120	2 Yrs.	140.11	250.00	249.89	0.11	140.00	Estimate d cost =
2	Lowairpoa	MoWR	AIBP	Tuilengtache rra FIS under AIBP for the year 2009-10		240	2 Yrs.	250.32	498.00	386.682	111.32	139.00	Balance amount of TS accorded
3	Lowairpoa	MoWR		Pipla Punji cherra FIS under AIBP for the year 2013-14		600	2 Yrs	989.00	989.00	0	989.00	0	+ Addition al amount required for
4	Lowairpoa	MoWR		Manikcherra FIS under AIBP for the year 2009- 10.		280	2 Yrs	299.19	495.00	437.81	57.19	242.00	completi on of work



	CONS										
5	Lowairpoa	MoWR	IchaCherra FIS under AIBP for the year 2009-10	260	2 Yrs	159.81	498.00	406.19	91.81	68.00	
6	Lowairpoa	MoWR	Sagolmoache rra FIS under AIBP for the year 2008- 09.	250	2 Yrs	200.44	495.00	493.56	1.44	199.00	
7	Lowairpoa	MoWR	Lowairpoach erra FIS under AIBP for the year 2009-10.	280	2 Yrs	165.58	495.00	429.416	65.58	100.00	
8	Lowairpoa	MoWR	Sarjulcherra FIS under AIBP for the year 2009- 10.	130	2 Yrs	110.05	300.00	283.951	16.05	94.00	
9	Lowairpoa	MoWR	Putnicherra FIS under AIBP for the year 2008- 09.	160	2 Yrs	80.03	300.00	299.97	0.03	80.00	
10	Lowairpoa	MoWR	Kurtacherra FIS under AIBP for the year 2009- 10.	160	2 Yrs	99.82	300.00	272.184	27.82	72.00	
	Lowairpoa	MoWR	Sulla Futti Cherra F.I.S. (A.I.B.P.)	200	2 Yrs	340.25	345.00	4.75	340.25	0.00	
11	Durllavcherra	MoWR	Barbari FIS under AIBP for the year	140	2 Yrs	100.70	196.96	181.26	15.70	85.00	



	CONO				1				1	
			2008-09							
			Fanai cherra FIS under							
12	Durllavcherra	MoWR	AIBP for the	350	2 Yrs	140.07	476.00	428.928	47.07	93.00
			year 2009-10							
			Gambhira							
			cherra FIS							
13	Durllavcherra	MoWR	under AIBP	400	2 Yrs	75.08	496.00	428.919	67.08	8.00
			for the year							
			2009-10							
			Magura cherra FIS							
14	Durllavcherra	MoWR	under AIBP	380	2 Yrs	250.05	495.00	275.954	219.05	31.00
			for the year	200	~			_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-19100	01100
			2009-10							
			Singla							
1.5			Cherra FIS	200	2.14	120.10	105.00	100.00	05 10	25.00
15	Durllavcherra	MoWR	under AIBP for the year	380	2 Yrs	120.10	495.00	409.90	85.10	35.00
			2009-10							
			Uttarkalachu							
17	Ramkrisna	MoWR	b FIS under	170	2 Yrs	100.05	235.00	234.953	0.05	100.00
17	Nagar	WIO W K	AIBP for the	170	2 118	100.05	233.00	234.935	0.05	100.00
			year 2008-09							
	D 1 '		Balicherra FIS under							
18	Ramkrisna Nagar	MoWR	AIBP for the	100	2 Yrs	125.17	240.00	239.83	0.17	125.00
	Tugui		year 2008-09							
			Suruchi nala			1				
19	Ramkrisna	MoWR	FIS under	90	2 Yrs	129.61	300.00	288.39	11.61	118.00
19	Nagar	MOWR	AIBP for the	90	2 Yrs	129.01	300.00	288.39	11.01	118.00
			year 2009-10							



	LONS										
20	Ramkrisna Nagar	MoWR	FIS from Jita Stream at Sorarpar under AIBP for the year 2008-09	140	2 Yrs	100.09	195.00	194.909	0.09	100.00	
21	Ramkrisna Nagar	MoWR	Singlacherra FIS in Shonbeel area under AIBP for the year 2009-10	1900	2 Yrs	2789.26	2850.0 0	60.744	2789.2 6	0.00	
22	Ramkrisna Nagar	MoWR	Dolugang FIS under AIBP for the year 2008-09	200	2 Yrs	150.01	245.00	244.99	0.01	150.00	
23	Patherkandi	MoWR	Defolcherra FIS under AIBP for the year 2008-09	150	2 Yrs	50.20	235.00	234.80	0.20	50.00	
24	Patherkandi	MoWR	Dholcherra FIS under AIBP for the year 2008-09	150	2 Yrs	70.27	175.76	175.49	0.27	70.00	
25	Patherkandi	MoWR	Dubricherra FIS under AIBP for the year 2008-09	100	2 Yrs	60.43	199.69	193.26	6.43	54.00	
26	Patherkandi	MoWR	Sonatolacher ra FIS under AIBP for the year 2008-09	150	2 Yrs	69.93	199.99	191.06	8.93	61.00	
27	Patherkandi	MoWR	Unkappacher ra FIS under AIBP for the	100	2 Yrs	128.93	245.00	244.935	8.93	120.00	



	CUNS										
			year 2008-09 (pt-I)								
28	Patherkandi	MoWR	Unkappacher ra FIS under AIBP for the year 2008-09 (pt-II)	90	2 Yrs	0.00					
29	Patherkandi	MoWR	Burunga cherra FIS under AIBP for the year 2009-10	200	2 Yrs	199.51	476.00	406.49	69.51	130.00	
30	Patherkandi	MoWR	Lakhipur FIS under AIBP for the year 2008-09.	120	2 Yrs	80.03	300.00	299.97	0.03	80.00	
31	North Karimganj	MoWR	Gandhaicherr a FIS under AIBP for the year 2008-09	500	2 Yrs	175.07	495.00	444.934	50.07	125.00	
32	North Karimganj	MoWR	Bagacherra FIS under AIBP for the year 2008-09	220	2 Yrs	161.51	287.00	155.488	131.51	30.00	
33	North Karimganj	MoWR	Jukecherra FIS under AIBP for the year 2013-14	220	2 Yrs	309.20	309.20	0.00	309.20	0.00	
34	Badarpur	MoWR	F.I.S. from barunchera at Kalmakandi area under	400	2 Yrs	196.37	488.07	291.704	196.37	0.00	



		A.I.B.P. 2009-10					
 Grand Total				8416.22			



### Annexure II: Strategic Action Plan of Har Khet Ko Pani by Irrigation Department

Sr. No	Name of the Blocks/Sub Districts	Concerned Ministry/ Department	Component	Activity	Total Number/Capacity (cum)	Command Area/ irrigation Potential (Ha)	Period of Implementation/ 7 yrs.)	Estimated cost (in Rs.)	TS amount Accorded (Rs)	Expenditure already incurred (Rs)	Balance Amount of TS Accorded (Rs)
			Har khet ko pani	Surface Minor Irrigation (New Proposed)							
1	Badarpur	MoWR		Khashiya Cherra F.I.S.		150	3 Yrs	350.00			
2	Badarpur	MoWR		Irrigation scheme at Gatudharam Ushanbaz from Baruncherr Stream.		100	3 Yrs	200.00			
3	Badarpur	MoWR		Damcherra F.I.S.		150	3 Yrs	300.00			
4	Durllavcher ra	MoWR		Baskantilla Cherra FIS		120	3 Yrs	300.00			
5	Durllavcher ra	MoWR		Kamumua Cherra FIS		220	3 Yrs	550.00			
6	Durllavcher ra	MoWR		Teracherra FIS		220	3 Yrs	550.00			
7	Durllavcher ra	MoWR		Kanta nala FIS		50	3 Yrs	125.00			
8	Durllavcher ra	MoWR		Mondir tilla FIS		50	3 Yrs	125.00			
9	Durllavcher ra	MoWR		Balicherra FIS		150	3 Yrs	375.00			
10	Durllavcher ra	MoWR		Purbo magura FIS		130	3 Yrs	325.00			
11	Durllavcher ra	MoWR		Bidyanagar Nala FIS		100	3 Yrs	250.00			
12	Durllavcher ra	MoWR		Kata Nala FIS		90	3 Yrs	225.00			
13	Durllavcher ra	MoWR		Sunafi sora FIS		70	3 Yrs	175.00			



	CUNS							
14	Durllavcher ra	MoWR	Mona nala FIS	75	3 Yrs	187.50		
15	Durllavcher ra	MoWR	Lalgonai Nala FIS	80	3 Yrs	200.00		
16	Durllavcher ra	MoWR	Dakhin Cheragi Nala FIS	70	3 Yrs	175.00		
17	Durllavcher ra	MoWR	Borua Tila Nala FIS	60	3 Yrs	150.00		
18	Durllavcher ra	MoWR	Khakura Punji sora FIS	55	3 Yrs	137.50		
19	Patherkandi	MoWR	Kewty cherr FIS	90	3 Yrs	225.00		
20	Lowairpoa	MoWR	Hatikhira Flow Irrigation Scheme.	48	3 Yrs	120.00		
21	Lowairpoa	MoWR	SINGICHERRA Flow Irrigation Scheme.	204	3 Yrs	510.00		
22	Lowairpoa	MoWR	Tuisencherra Flow cum Lift Irrigation Scheme.	220	3 Yrs	550.00		
23	Lowairpoa	MoWR	Lpcherra Flow Irrigation Scheme.	210	3 Yrs	525.00		
24			Lift Irrigation					
25	North Karimganj	MoWR	LIS from left bank of River Longai at Hizlomura (1 pt.)	90	2 Yrs	225.00		
26	Durllavcher ra	MoWR	Impt & Extn. Of R.K.Nagar ELIS (Pt-7 nos)	400	2 Yrs	1000.00		
27	Ramkrisna Nagar	MoWR	Echakhauri LIS from Echakhauri cherra	30	2 Yrs	75.00		
28	Ramkrisna Nagar	MoWR	Kalinagar LIS from L/B of Kalinagar cherra (pt-I)	30	2 Yrs	75.00		
29	Ramkrisna Nagar	MoWR	Kalinagar LIS from L/B of Kalinagar cherra (pt-II)	30	2 Yrs	75.00		



	CONS							
30	Ramkrisna Nagar	MoWR	Sonapati cherra LIS (pt-I)	30	2 Yrs	75.00		
31	Ramkrisna Nagar	MoWR	Sonapati cherra LIS (pt-II)	25	2 Yrs	62.50		
32	Ramkrisna Nagar	MoWR	Sonapati cherra LIS (pt-III)	30	2 Yrs	75.00		
33	Ramkrisna Nagar	MoWR	Borualla LIS from L/B of river Singla (pt-I & II)	100	2 Yrs	250.00		
34	Patherkandi	MoWR	Palpara LIS from Longai River	90	2 Yrs	225.00		
35	Patherkandi	MoWR	Mantrigram LIS from River Longai (pt-I & II)	160	2 Yrs	400.00		
36	Patherkandi	MoWR	Janjanibill LIS from River Longai (Satghori pt)	90	2 Yrs	225.00		
37	Patherkandi	MoWR	Janjanibill LIS from River Longai (Muradpur pt)	60	2 Yrs	150.00		
38	Patherkandi	MoWR	Janjanibill LIS from River Longai (Muraura pt)	60	2 Yrs	150.00		
39	Patherkandi	MoWR	North Kabaribond ELIS	90	2 Yrs	225.00		
40	Patherkandi	MoWR	Karampur ELIS	60	2 Yrs	150.00		
41	Patherkandi	MoWR	Chandpur ELIS	60	2 Yrs	150.00		
42	Patherkandi	MoWR	Borsangan E.L.I.S	60	2 Yrs	150.00		
43	Patherkandi	MoWR	LIS from River Longai at Katabari.	90	2 Yrs	225.00		
44	South Karimganj	MoWR	Digolbag LIS from river Longai.	120	2 Yrs	300.00		
45	South Karimganj	MoWR	Katagram LIS from river Longai.	100	2 Yrs	250.00		
46	Lowairpoa	MoWR	LIS from River Longai at	70	2 Yrs	175.00		



	00110							
			Manikbond					
47	Lowairpoa	MoWR	LIS from River Longai at Korikhai	72	2 Yrs	180.00		
48	Lowairpoa	MoWR	LIS from river Longai at Balipipla.	55	2 Yrs	137.50		
49	Lowairpoa	MoWR	LIS from River Longai at Pecharghat.	80	2 Yrs	200.00		
		MoWR	DTW Scheme					
50	Badarpur	MoWR	DTWS at Kachakhawri (5 Point)	130	2 Yrs	325.00		
51	North Karimganj	MoWR	DTWS at East Sadarashi (4 Pt.)	96	2 Yrs	240.00		
52	North Karimganj	MoWR	DTWS at Baurbak (1 Pt.)	24	2 Yrs	60.00		
53	North Karimganj	MoWR	DTWS at Lafasail (1 pt.)	24	2 Yrs	60.00		
54	North Karimganj	MoWR	DTWS at Pechakuna (1 pt.)	24	2 Yrs	60.00		
55	North Karimganj	MoWR	DTWS at Promodnagar (1 pt.)	24	2 Yrs	60.00		
56	North Karimganj	MoWR	DTWS at Mantali (1 Pt.)	24	2 Yrs	60.00		
57	North Karimganj	MoWR	DTWS at Kholarputa (1 Pt.)	24	2 Yrs	60.00		
58	North Karimganj	MoWR	DTWS at Binakandi (1 Pt.)	24	2 Yrs	60.00		
59	North Karimganj	MoWR	DTWS at Jagannathi (1 Pt.)	24	2 Yrs	60.00		
60	North Karimganj	MoWR	DTWS at Kandigram (1 Pt.)	24	2 Yrs	60.00		
61	North Karimganj	MoWR	DTWS at Gugrakuna (1 Pt.)	24	2 Yrs	60.00		
62	North Karimganj	MoWR	DTWS at Vitorgool- Bagarsangan (1	24	2 Yrs	60.00		



	CONS							
			Pt.)					
63	North Karimganj	MoWR	DTWS at Zarapata (1 Pt.)	24	2 Yrs	60.00		
64	North Karimganj	MoWR	DTWS at Bahubal (2 Pt.)	48	2 Yrs	120.00		
65	North Karimganj	MoWR	DTWS at Ulukandi (1 Pt.)	24	2 Yrs	60.00		
66	North Karimganj	MoWR	DTWS at Hamindpur (1 Pt.)	24	2 Yrs	60.00		
67	North Karimganj	MoWR	DTWS at Balingapar (1 Pt.)	24	2 Yrs	60.00		
68	North Karimganj	MoWR	DTWS at North Manikuna (1 pt)	24	2 Yrs	60.00		
69	Durllavcher ra	MoWR	DTWS at Awalala (pt -1&2)	40	2 Yrs	100.00		
70	Durllavcher ra	MoWR	DTWS at Baskantilla (pt- 1&2)	40	2 Yrs	100.00		
71	Durllavcher ra	MoWR	DTWS at Patiala (pt-1&2)	40	2 Yrs	100.00		
72	Durllavcher ra	MoWR	DTWs at Ramnagar (pt-1 & 2)	50	2 Yrs	125.00		
73	Durllavcher ra	MoWR	Bidyanagar DTWS (pt-I)	20	2 Yrs	50.00		
74	Durllavcher ra	MoWR	Bidyanagar DTWS (pt-II)	20	2 Yrs	50.00		
75	Durllavcher ra	MoWR	Bidyanagar DTWS (pt-III)	20	2 Yrs	50.00		
76	Durllavcher ra	MoWR	Anipur DTWS (pt-I)	20	2 Yrs	50.00		
77	Durllavcher ra	MoWR	Vetarbond DTWS (pt-I & II)	40	2 Yrs	100.00		
78	Durllavcher ra	MoWR	DTWS at Pechawala(Pt-1)	24	2 Yrs	60.00		
79	Ramkrisna Nagar	MoWR	Netajinagar DTWS (pt-I & II)	40	2 Yrs	100.00		
80	Ramkrisna Nagar	MoWR	East Harinagar DTWS (pt-I & II)	50	2 Yrs	125.00		
81	Patherkandi	MoWR	Nalugaon DTWS	25	2 Yrs	62.50		



	CUNS							
82	Patherkandi	MoWR	Bagadhar DTWS Pt-I	24	2 Yrs	60.00		
83	Patherkandi	MoWR	Rajbari DTWS Pt- I	24	2 Yrs	60.00		
84	Patherkandi	MoWR	Alapur DTWS Pt- I	24	2 Yrs	60.00		
85	Patherkandi	MoWR	South Hathkhala DTWS Pt-I	24	2 Yrs	60.00		
86	Patherkandi	MoWR	Kandigram DTWS Pt-I	24	2 Yrs	60.00		
87	Patherkandi	MoWR	Eraligool DTWS Pt-I	24	2 Yrs	60.00		
88	Patherkandi	MoWR	Mambari DTWS pt-I	24	2 Yrs	60.00		
89	Patherkandi	MoWR	Duhalia DTWS pt-I	24	2 Yrs	60.00		
90	Patherkandi	MoWR	Narayanpur DTWS pt-1	24	2 Yrs	60.00		
91	South Karimganj	MoWR	Putragool DTWS	30	2 Yrs	75.00		
92	South Karimganj	MoWR	Jatrapur DTWS	25	2 Yrs	62.50		
93	South Karimganj	MoWR	Puborbond DTWS (Pt-1 &2)	48	2 Yrs	120.00		
94	South Karimganj	MoWR	Padamarpar DTWS (pt-1 & 2)	48	2 Yrs	120.00		
95	South Karimganj	MoWR	Churadighirpar DTWS (Pt-1 &2)	48	2 Yrs	120.00		
96	South Karimganj	MoWR	Dhanarpar Bilorghat DTWS	25	2 Yrs	62.50		
		MoWR	Ground water development					
		MoWR	RRR of Water Bodies					
1	North Karimganj	MoWR	Explo cum Productive DTWS at Fakirabazar	18	1 Yr	25.00		
2	North Karimganj	MoWR	DTWS at Sutarkandi- Sonadori	24	1 Yr	25.00		
3	North Karimganj	MoWR	DTWS at Panighat (2 Pt)	48	1 Yr	80.00		



	CONS							
			(On going)					
4	North Karimganj	MoWR	DTWS at Latu- Dasgram (On going)	24	1 Yr	45.00		
5	Ramkrisna Nagar	MoWR	ELIS from R/B of river Singla at Gourarkhal & Dolu	90	1 Yr	60.00		
6	Patherkandi	MoWR	CAD to Nurulcherra FIS	400	1 Yr	500.00		
7	Patherkandi	MoWR	Const. of irrigation facility and sorounding Burunga GP. At Korcharghat pump center under BADP 2009-10	30	1 Yr	40.00		
8	Patherkandi	MoWR	Const. of irrigation facility at and sorounding Burunga GP. At Parugaon pump center under BADP 2010-11	30	1 Yr	58.00		
9	Patherkandi	MoWR	Patharkandi ELIS at TINOKHAL POINT	25	1 Yr	45.00		
10	Patherkandi	MoWR	Patharkandi ELIS at Kachubari POINT-1	25	1 Yr	40.00		
11	Patherkandi	MoWR	Imprn. & Extn. Of patharkandi Extn. ELIS at Nalibari point	40	1 Yr	30.00		
12	Patherkandi	MoWR	Imprn. & Extn. Of patharkandi Extn. ELIS at Jamirala point	30	1 Yr	55.00		
13	Patherkandi	MoWR	Patharkandi ELIS at Kachubari POINT-2	28	1 Yr	50.00		



14	Patherkandi	MoWR	Patharkandi ELIS at Burunga POINT-	24	1 Yr	46.00		
15	South Karimganj	MoWR	Explo cum productive DTWS at Nairgram	24	1 Yr	50.00		
16	South Karimganj	MoWR	DTWS at Mobarakpur	22	1 Yr	50.00		
17	South Karimganj	MoWR	LIS from R/B of river Longai Ph- IV	164	1 Yr	250.00		
18	South Karimganj	MoWR	Improvement & Extention o Kaliganj Jadutilla ELIS (Kudrakandi Point)	120	1 Yr	240.00		
19	South Karimganj	MoWR	DTWS at Akborpur	24	1 Yr	48.00		
20	South Karimganj	MoWR	DTWS at Kanakpur	24	1 Yr	50.00		
21	South Karimganj	MoWR	DTWS at Farampasha (2 pts)	48	1 Yr	96.00		
22	South Karimganj	MoWR	DTWS at Singaria	24	1 Yr	50.00		
23	Lowairpoa	MoWR	Sibergul DTW Scheme	30	1 Yr	55.00		
						17640.50		

**Continue from Previous Page** 



					TS amount Accorded (Rs)	Expenditure already incurred (Rs)	Balance Amount of TS Accorded (Rs)	Additional amount required for completion of work	Remarks
State IrrigationDepartment		Dams/Water Harvesting Structures							
State IrrigationDepartment	SCSP	Paltila nala FIS in singlacherra area under SCSP for the year 2013-14	90 H	80.10	97.00	73.90	23.10	57	Estimated cost = Balance amount of TS
State IrrigationDepartment	SCSP	Chahbagan cherra FIS under SCSP for the year 2013-14	70 H	70.62	67.37	44.75	22.62	48	accorded + Additional amount required for completion of work

# Annexure III: Strategic Action Plan of Per Drop More Crop by Agriculture Department

S1.	Component	Activity	Total unit	Rate	Amount	1st year	2nd year	3rd year	4th year	5th year	Command
-----	-----------	----------	------------	------	--------	----------	----------	----------	----------	----------	---------



	JONO														_	
No.	of Irrigation		(Nos.)	in Lakh	in Lakh	Phy	Fin	Phv	Fin	Phv	Fin	Phy	Fin	Phv	Fin	Area (Ha.)
	IIIgation			Lakii		T Hy	1.111	T II Y	1.111	THY	1 111	THY	1.111	THY	1.111	(11a.)
		Drought														
		proofing through														
13		check	947	-	18940.00	170	3400.00	219	4380.00	221	######	245	#####	92	1840.00	5682
			i) New -													
			1182		11820.00	212	2120.00	292	2920.00	282	######	240	#####	156	1560.00	
14		Dam/Water	ii)													4116
		harvesting	Renovation													
	Per drop	structure	-190		950.00	38	190.00	25	125.00	48	240.00	37	185.00	42	210.00	
	more crop	Secondary														
	-	Storage														
15		Structure	171	_	1242.80	1263	252.60	1590	318.00	1503	300.60	1195	239.00	664	132.80	6215
15			1/1	_	1242.00	1205	252.00	1570	510.00	1505	500.00	1175	237.00	004	152.00	0215
		On Farm														
		Dev.(distribution														
		pipe/raised bed														
16		and furrow	100		4217.27	2612	014.00	21 (2) 7	1107.00	21277		2276	706.60	1145	400 75	10005 00
16		system etc.)	426	-	4317.37	2613	914.00	3163.7	1107.28	3137.7	######	2276	796.60	1145	400.75	12335.33
	Total		2916		37269.81	#####	6876.60	######	8850.28	######	######	#####	#####	######	4143.55	28348.33

#### Annexure IV: Block wise annual action plan for irrigation (watershed) for the year 2016-17 by Soil Conservation Department

**Block: - Badarpur Dev. Block** Watershed Project: Kachua IWMP, 2011-12

17. Newly Created WHS and Other Soil Moisture Conservation Activities

	No. of	Village	Name of Activity	No. /	Area for irrigation	Period of	Estimated Cost
--	--------	---------	------------------	-------	---------------------	-----------	----------------



village			Capacity	potential (In Ha.)	implementation	(Rs. in Lakhs)
30 Nos.	Sri Gouri, Umorpur, Jhum- V & VI, Umorpur-II, Chapra, Hasanpur, Mahakol-I, Nizmalua, Naharpur, Kandigram, Lamajuar, Masli, Nairgram, Lamajuar-I, Jatkapon, Masli- II, Nirjapur, Lamajuar – III & IV, Deukuri, Daukuri, Ghuramara I & II, Chinpathan, Jatkapon, Barbari, Jhum	Farm Pond	30	156.00 Ha.		28.80
01 No.	Jhum –V	RCC Drop Spillway	01	37.00 Ha.		6.61
10 Nos.	Lamajuar-I, Nairgram, Konkolesh-II, Lamajuar-III, Barbari, Brahmansason, Kolakuri, Basail and Umorpur – I & II	Earthen Bundh	10	138.00 Ha.	2016-17	25.00
03 Nos.	Alakulipur, Jhum – II & Jhum – VII	Graded Bundh	03	16.00 Ha.	2010 17	3.00
20 Nos.	Jhum-IV, Jhum-VI, Alekorgool, Bundasheel, Jhum Basti, Arengabad, Katagram, Nandapur, Basail, Morjadkandi, Adorkuna, Dattapur, Borgool, Hasanpur, Mazargool, Basail, Korikotsh, Nayagram, Gangpar, Sonalipur	Fishery Pond	20	190.00 Ha.		34.00
05 No.	Lamajuar Pt-I, Chaitanya Nagar, Kandigram, Niz-Malua, North Srigouri	Boulder Revetment	05	39.00 Ha.		8.00
05 Nos.	Jhum-II, Jhum-VII, Jhum-V, Kandigram and Masli-II	Brick Channel	05	5.00 Ha.		10.00

No. of village	Village	Name of Activity	No. / Capacity	Area for irrigation potential (in Ha.)	Period of implementation	Estimated Cost (Rs. in Lakhs)
14 Nos.	Jhum-III & VI, Barbari, Nairgram, Banairgool, Konkolesh, Rongpur, Kandigram, Lamajuar – I, II & III, Mohakol and Morjadkandi	Drainage Channel	14	220.00 HA.	mprenenation	40.00
10 Nos.	Mirjapur-I, Chaityananagar, Malua, Masli – I & II, Mirjapur, Kumarpara, Bargool, Kandigram and Umorpur-I	Road Side Plantation	10	10.50 Ha.		3.00
					Sub Total	158.41



# VILLAGE WISE ANNUAL ACTION PLAN FOR IRRIGATION UNDER THE COMPONENT PMKSY (WATERSHED) IN KARIMGANJ DISTRICT FOR THE YEAR 2016-17

#### Block: - Badarpur Dev. Block

Watershed Project: Kachua IWMP, 2011-12

#### 18. Renovated WHS and other Soil Moisture Conservation Activities

No. of village	Village	Name of Activity	No. / Capacity	Area for irrigation potential (In Ha.)	Period of implementation	Estimated Cost (Rs. in Lakhs)
13 Nos.	Umorpur-II, Kumapara, Mohakol-I & II, Rajpasha, Masli, Bangla Bazar, Morjatkandi, Ruposhibari, Naharpur, Jogonnathpur, Sonalipur and Srigouri	Farm Pond	13	121.00 Ha.	2016-17	22.00
06 Nos.	Basail, Chapra, Chinipathon, Umorpur-I, Kandigram, Masli-II	Fishery Pond	06	67.00 Ha.		12.00
					Sub Total	34.00



Annual Action Plan (Year-wise Breakup) for Irrigation under the Component PMKSY (Watershed) from 2016-17 to 2020-21

Block : - Dullavcherra

Watershed Projects : - Upper Singla IWMP

	iter sneu 110jec		2016-17	88		2017-18	3		2018-19	)		2019-20	)		2020-21			Total	
		Р	hy.	Fin.	Pl	ıy.	Fin.	Ph		Fin.	Pł		Fin.	Р	hy.	Fin.	F	Phy.	Fin.
Sl. No.	Activities	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)
17	Newly Created V	VHS and	d Other So	oil Moistu	re Cons	ervation	Activities												
17.1	Farm Pond	28	133	24	22	208	37.4	12	113	20.4	16	151	27.2	14	132	23.8	290	264	132.8
17.2	Check Dams	5	160	22.43	2	200	28	2	200	28	3	300	42	2	200	28	14	1060	148.43
17.3	Nallah Dams																		
17.4	Percolation Tanks	15	67.5	12.15	10	45	8.1	18	81	14.58	8	60	6.48	12	54.5	9.72	63	284	51.03
17.5	Other Ground Water Recharge Structure																		
17.6	Fishery Ponds / Cattle Pond	5	5	12.5	6	6	15	6	6	15	6	6	15	6	6	15	29	29	72.5
17.7	Creation of Irrigation Canals and Drains																		
17.8	Land Development & other Soil Moisture Conservation Activities	27	533.16	63.98	16	257	46.31	9	154	27.78	9	154	27.78	8	121	21.63	69	129.16	187.48
17.9	Creation of Vegetative Cover	15	15	17.4	20	20	23.2	18	18	20.88	18	18	20.88	9	9	10.44	80	80	92.8
	Sub Total	95	913.66	152.46	76	736	158.01	65	572	126.64	60	689	139.34	51	522.50	108.59	545	1846.16	685.04



Annual Action Plan (Year-wise Breakup) for Irrigation under the Component PMKSY (Watershed) for Karimganj District from 2016-17 to 2020-21

#### Block

: - Lowairpoa

Watershed Projects : - Longai IWMP & Longai –II IWMP

			2016-1	17		2017-1	8		2018-1	.9		2019-2	20		2020-2	21		Total	
		Р	'hy.	Fin.	Р	hy.	Fin.	Р	hy.	Fin.	Р	'hy.	Fin.	P	'hy.	Fin.	Р	hy.	Fin.
Sl. No.	Activities	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)
17	Newly Create	d WHS	S and Ot	her Soil N	Ioistur	e Conse	rvation Ac	ctivitie	<b>S</b>										
17.1	Farm Pond	35	35	28.40	10	10	17.0	10	10	17.0	10	10	17.0	10	10	17.0	75	75	96.4
17.2	Check Dams	6	254	35.58	5	268	37.50	5	268	37.50	5	268	37.50	5	268	37.80	26	1326	185.58
17.3	Nallah Dams																		
17.4	Percolation Tanks	6	6	3.36	7	7	5.67	7	7	5.67	7	7	5.67	7	7	5.67	34	34	26.04
17.5	Other Ground Water Recharge Structure	10	40	7.24	10	40	7.24	10	40	7.24	10	40	7.24	10	40	7.24	50	200	36.20
17.6	Fishery Ponds / Cattle Pond																		
17.7	Creation of Irrigation Canals and Drains	3	18	3.40	12	72	13.60	12	72	13.60	12	72	13.60	12	72	13.60	51	306	57.80
17.8	Land Development & other Soil	40	479	86.30	23	181	32.50	23	181	32.50	23	181	32.50	23	181	32.50	132	1203	216.30



	000110																		
	Moisture																		
	Conservation																		
	Activities																		1
	Creation of																		
17.9	Vegetative	29	29	17.32	11	11	12.76	11	11	12.76	11	11	12.76	11	11	12.76	73	73	68.36
	Cover																		1
	Sub Total	129	861	181.60	78	589	126.27	78	589	126.27	78	589	126.27	78	589	126.57	441	3217	686.68
	Sub Iotai	14)	001	101.00	70	507	140.47	70	507	120.27	70	507	120.27	70	507	120.57	771	5417	000.00



## Annual Action Plan (Year-wise Breakup) for Irrigation under the Component PMKSY (Watershed) for Karimganj District from 2016-17 to 2020-21

Block Watershed Projects

: - North Karimganj : - Lower Longai , West Kushiara IWMP

	tersned i rojects		2016-17	7		2017-18			2018-19			2019-20	)		2020-21			Total	
		Ph	<u></u>	Fin.	Ph	5	Fin.	P	hy.	Fin.	Pl	ıy.	Fin.	Pł	ıy.	Fin.	Pl	ny.	Fin.
Sl. No.	Activities	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)
17	Newly Created W	VHS and	l Other S	oil Moistu	re Conse	rvation A	Activities												
17.1	Farm Pond	42	224	40.32	24	230	40.80	24	230	40.80	37	346	62.90	37	346	62.90	164	1376	247.72
17.2	Check Dams	3	11	19.83	6	250	45.0	6	250	45.0	10	417	75.0	10	416	75.0	35	1444	259.83
17.3	Nallah Dams																		
17.4	Percolation Tanks																		
17.5	Other Ground Water Recharge Structure																		
17.6	Fishery Ponds / Cattle Pond																		
17.7	Creation of Irrigation Canals and Drains	8	35	6.324	8	45	8.0	8	45	8.0	12	67	12.0	11	60	11.0	47	252	45.324
17.8	Land Development & other Soil Moisture Conservation Activities	42	512	92.17	27	533	63.98	16	257	46.31	18	308	55.56	8	121	21.63	111	1731	279.65
17.9	Creation of Vegetative Cover	13	15	17.31	8	8	9.28	8	9.28	9.28	12	12	13.92	12	12	13.92	53	55	63.71
	Sub Total	108	797	175.954	73	1066	167.06	62	791.28	149.39	89	1150	219.38	78	955	184.45	410	4858	896.234



Annual Action Plan (Year-wise Breakup) for Irrigation under the Component PMKSY (Watershed) for Karimganj District from 2016-17 to 2020-21

Block

: - Patharkandi Dev. Block

Watershed Projects

: - Longai-III IWMP

			2016-1	7		2017-1	8		2018-1	9		2019-2	0		2020-2	1		Total	
		Pł	ıy.	Fin.	Pł		Fin.	Pl	ıy.	Fin.	Pł		Fin.	Pł		Fin.	Pł		Fin.
Sl. No.	Activities	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)
17	Newly Created	WHS a	and Oth	er Soil M	oisture	Conserv	vation Ac	tivities											
17.1	Farm Pond	26	26	44.20	33	33	56.10	26	26	44.20	26	26	44.20	23	23	39.10	134	134	227.80
17.2	Check Dams	4	166	30.00	3	125	22.50	3	125	22.50	4	166	30.00	4	166	30.00	18	748	135.00
17.3	Nallah Dams																		
17.4	Percolation Tanks	8	8	6.48	7	7	5.67	8	8	6.48	6	6	4.86	6	6	4.86	35	35	28.35
17.5	Other Ground Water Recharge Structure																		
17.6	Fishery Ponds / Cattle Pond	9	9	22.50	9	9	22.50	8	8	20.00	8	8	20.00	9	9	22.50	43	43	107.50
17.7	Creation of Irrigation Canals and Drains																		
17.8	Land Development & other Soil Moisture Conservation Activities	14	249	44.94	18	310	57.78	14	249	44.94	14	249	44.94	12	214	38.52	72	1271	231.12
17.9	Creation of Vegetative Cover	9	9	10.44	10	10	11.60	10	10	11.60	9	9	10.44	7	7	8.12	45	45	52.20



Annual Action Plan (Year-wise Breakup) for Irrigation under the Component PMKSY (Watershed) for Karimganj District from 2016-17 to 2020-21 Block :- R. K. NAGAR



Watershed Projects : - Singla IWMP

vv a	itershed Projects	• •	Singla					-						-					
			2016-17			2017-18			2018-19			2019-20			2020-21			Total	
		Pł	ıy.	Fin.	Pł	ıy.	Fin.	Ph	ıy.	Fin.	Pł	ıy.	Fin.	Pł	hy.	Fin.	Pł	ıy.	Fin.
Sl. No.	Activities	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)
17	Newly Created V	VHS and	Other S	oil Moistu	ire Conse	ervation	Activities												
17.1	Farm Pond	01	1	0.96	15	15	25.50	15	15	25.50	15	15	25.50	15	15	25.50	61	61	102.96
17.2	Check Dams	2	15	2.11	06	321	45.0	05	214	30.0	04	214	30.0	05	214	30.0	22	978	137.11
17.3	Nallah Dams																		
17.4	Percolation Tanks																		
17.5	Other Ground Water Recharge Structure	20	45	8.04	10	83	15.0	10	83	15.0	10	83	15.0	10	83	15.0	60	377	68.04
17.6	Fishery Ponds / Cattle Pond																		
17.7	Creation of Irrigation Canals and Drains	1	5	0.92	08	55	10.0	08	55	10.0	08	55	10.0	08	55	10.0	33	225	40.92
17.8	Land Development & other Soil Moisture Conservation Activities	18	64	11.29	40	332	60	40	332	60.0	40	332	60	40	332	60.0	178	1392	251.29
17.9	Creation of Vegetative Cover	1	1	1.45	05	05	5.8	05	05	5.8	05	05	5.8	05	05	5.8	21	21	24.65
	Sub Total	43	131	24.77	84	811	161.30	83	704	146.30	82	704	146.30	83	704	146.30	375	3054	624.97

Annual Action Plan (Year-wise Breakup) for Irrigation under the Component PMKSY (Watershed) for Karimganj District from 2016-17 to 2020-21 Block :- South Karimganj



Wa	tershed Projects	:	- Longa	i-VI, Lon	gai-V, I	Dockch	erra, Eas	st Kush	iara, Lo	ngai-IV	IWMP								
			2016-1	-		2017-18			2018-19			2019-20			2020-21			Total	
		P	hy.	Fin.	Pł		Fin.	Pł		Fin.	Pl	ny.	Fin.	Pł		Fin.	Pł		Fin.
Sl. No.	Activities	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)	No.	C. Area/ Irri. Potl. (Ha.)	(Rs. in Lakhs)
17	Newly Created V	VHS and	d Other S	Soil Moistu	re Conse	ervation A	Activities												
17.1	Farm Pond	89	475	85.44	22	208	37.4	22	208	37.4	34	321	57.8	36	339	61.2	203	1551	279.24
17.2	Check Dams	13	567	102.092	4	167	30	4	167	30	6	250	45	6	250	45	33	1401	252.092
17.3	Nallah Dams	81	1203	216.58	16	240	43.32	16	240	43.32	25	361	64.97	24	362	64.97	162	2406	433.16
17.4	Percolation Tanks																		
17.5	Other Ground Water Recharge Structure																		
17.6	Fishery Ponds / Cattle Pond																		
17.7	Creation of Irrigation Canals and Drains																		
17.8	Land Development & other Soil Moisture Conservation Activities	71	819	147.46	21	249	44.84	21	249	44.84	33	375	68.26	33	373	66.27	179	2065	371.67
17.9	Creation of Vegetative Cover	73	70	81.667	20	15	23.2	20	15	23.2	30	24	34.8	30	25	34.8	173	149	197.667
	Sub Total	327	3134	633.239	83	879	178.76	83	879	178.76	128	1331	270.83	129	1349	272.24	750	7572	1533.829



# Annexure V: Strategic Action Plan of Per Drop More Crop by Horticulture Department

	Ide	entified villa	age wise w	ater resou	rce of Ir	rigati	on under	<b>PMKSY,20</b>	15-16	
S.No.	Name of Block	Name of Village to be covered	Concerned Dept.	Component	Activity	No. of Unit	Total Number/ Capacity	Command Area/Irrigation Potential (Ha.)	Period of Implementation	Estimated Cost (in lakh)
1	North Karimganj	Baropunji	Horticulture	Per drop more crop	Water Harvesting Tank	3	3	3	7 yr	5.4
					Drip	3	3	3	7 yr	3
2	Dullavcherra	Srirampur P.O. Oliviacherra	Horticulture	Per drop more crop	Water Harvesting Tank	2	2	2	7 yr	3.6
					Drip	2	2	2	7 yr	2
3	Lowairpoa	Sobri P.O. Ichabeel	Horticulture	Per drop more crop	Water Harvesting Tank	3	3	3	7 yr	5.4
					Drip	3	3	3	7 yr	3
4	R.K.Nagar	Kalinagar Colony P.O. Dolugang	Horticulture	Per drop more crop	Water Harvesting Tank	2	2	2	7 yr	3.6
					Drip	2	2	2	7 yr	2
5	Badarpur	Malua Khola	Horticulture	Per drop more crop	Water Harvesting Tank	2	2	2	7 yr	3.6
					Drip	2	2	2	7 yr	2
6	South Karimganj	Keotkuna Pt. II	Horticulture	Per drop more crop	Water Harvesting Tank	1	1	1	7 yr	1.8
				·	Drip	1	1	1	7 yr	1
7	Patharkandi	Hatairbond P.O. Hathikhira	Horticulture	Per drop more		1	1	1	7 yr	1.8
				crop	Drip	1	1	1	7 yr	1
Total :						28	28	28		39.2



### Annexure V: Strategic Action Plan of Per Drop More Crop by DRDA Department

	MENTY SHOWING THE Y R DRDA KARIMGANJ	EARWISE PHY	SICAL AND F	INANCIAL TARGET	OF VA		IPONE	NTS OF	IRRIGAT	ION UNDER	R PMKSY 2	015-16		
S.No	Component of irrigation	Total unit	Rate in Lakhs	Amount in Lakhs	1st Ye Physi Finan	cal	2nd Y Physi Finan	ical	3rd Yea Physica	r Financial	4th Year Physical Financial		Ph	h Year ysical nancial
1	Water Conservation	7	5.00	35.00	7	35.00								
2	Water Harvesting	7		30.00	7	30.00								
3	Creation of Irrigation Canals & Drains	12	5.00	60.00	12	60.00								
4	Land Development	14	5.00	70.00	14	70.00								
		1	1	1		Р	roject	Directo	or, Distric	t Rural Dev	elopment	Agency	Kari	mganj



### Annexure VI: Additional list of Schemes intimated by Hon'ble MP - Karimganj

Sr. No	Name of the Block s/Sub Distri cts	Concerne d Ministry/ Departme nt	Compone nt	Activity	Name of GP	Location	Name of benefited village	Total Number/Capacity(cum )	Comma nd Area/ irrigatio n Potentia l (Ha)	Period of Implementation ^/ 7 yrs.)	Estimat ed cost (in Lakhs.)
			Har khet	Surface Minor I	rrigation (New Prop	oosed)					
1	South Karim ganj	MoWR	ko pani	Hakai Beel FIS	Farampasha, Nilambazar	Hakai Beel	North Farampasa, Isswarsree, MiraDigirpar, Nilambazar	1 No.	250	3 Yrs	400.00
2	South Karim ganj	MoWR		Angura Denguri DTWS (pt-1 &2)	Angura	Angura Denguri	Abdullapur, Tikarpara, Pecharpar	2 No.	50	2 Yrs	125.00
3	South Karim ganj	MoWR		Bhoribond DTWS (pt-1 &2)	Nilambazar	Bhorirbond	Bhorirbond, Halghat	2 No.	50	2 Yrs	125.00
4	South Karim ganj	MoWR		Borkapan DTWS (pt-1 &2)	Suprakandi	Borkapan	Borkapan, Dalorpar, North Bonugram	2 No.	50	2 Yrs	125.00
5	South Karim ganj	MoWR		Boroirtuk DTWS (pt-1 &2)	Singaria	Boroirtuk	Tegoria, Boroirtuk, Kalibari	2 No.	50	2 Yrs	125.00
6	South Karim ganj	MoWR		Telikhalerpar DTWS (pt-1 &2)	Pirorchak	Telikhalerpar	Telikhalerpar ,	2 No.	50	2 Yrs	125.00
7	South Karim ganj	MoWR		Kamargram DTWS	Pirorchak	Kamargram	Kamargram	2 No.	50	2 Yrs	125.00
8	South Karim ganj	MoWR		Dayabashana DTWS (pt-1 &2)	Pirorchak	Dayabashana	Dayabashana	2 No.	50	2 Yrs	125.00
9	South Karim ganj	MoWR		Madamail DTWS	Pirorchak	Madamail	Madamail	2 No.	50	2 Yrs	125.00



10	South	MoWR		Dewakuri	Jatkapanbarkatpur	Dewakuri	Dewakuri	2 No.	50	2 Yrs	125.00
	Karim ganj			Jahapur DTWS (pt-1 &2)		Jahapur	Jahapur				
11	Ramk risna Nagar	MoWR		Usharani FIS	Binodini	Binodini	Usharani, Binodini	1 No.	250	3 Yrs	500.00
12	Pather kandi	MoWR	-	Chotoia Punji FIS	Bandorkuna	Bandorkuna	Botoia, Bandorkuna	1 No.	120	3 Yrs	300.00
13	Durlla vcherr a	MoWR	-	Koila Ghat LIS	Singlcherra	Bazartilla	Bazartilla, Tiniali, Mukamtilla	1 No.	100	3 Yrs	250.00
14	Lowai rpowa	MoWR		Lunvpumsi Cherra FIS	Balipipla	Jerjeri	Kulicherra, Kadamtala, Magura	1 No.	120	3 Yrs	300.00
		MoWR		RRR of Water I	Bodies						
1	Pather kandi	MoWR		Renovation of DTWS at South Kabaribond	Kabaribond	Jarubari Defolla	Kabaribond, Jarbaridefolla l	1 No.	30	2 Yrs	60.00
2	North Karim ganj	MoWR		Revival & Reconstruction of LIS from River Kushiyara in Vitorgool Bagarshangan Area	Bagarshangan	Vitorgool	Vitargool, Bagarsangan & Gangpar	1 No.	100	2 Yrs	250.00



Annexure VII: Block wise Additional list of Schemes intimated by Hon'ble MP – Karimganj

BLC	CK-WISE / SCHEME WISE	PHYSICA	L & FINA	NCIAI	L TARGE	Г							
Nam	e of Block :South Karimganj												
Sl	Name of Scheme	Amount	1st Y	ear	2nd Y	Year	3rd Y	lear	4th Y	ear	5th Y	ear	Concerned
No.			Phy (%)	Fin (in lakh)	Phy (%)	Fin (in lakh)	Phy (%)	Fin (in lakh)	Phy (%)	Fin (in lakh)	Phy (%)	Fin (in lakh)	Department
	New Proposed												
1	Hakai Beel FIS	400.00			40%	160.00	50%	200.00	10%	40.00			Irrigation
2	Angura Denguri DTWS (pt-1 &2)	125.00			50%	62.50	50%	62.50					Irrigation
3	Bhoribond DTWS (pt-1 &2)	125.00			50%	62.50	50%	62.50					Irrigation
4	Borkapan DTWS (pt-1 &2)	125.00			50%	62.50	50%	62.50					Irrigation
5	Boroirtuk DTWS (pt-1 &2)	125.00			50%	62.50	50%	62.50					Irrigation
6	Telikhalerpar DTWS (pt-1 &2)	125.00			50%	62.50	50%	62.50					Irrigation
7	Kamargram DTWS	125.00			50%	62.50	50%	62.50					Irrigation
8	Dayabashana DTWS (pt-1 &2)	125.00			50%	62.50	50%	62.50					Irrigation
9	Madamail DTWS	125.00			50%	62.50	50%	62.50					Irrigation
10	Dewakuri Jahapur DTWS (pt-1 &2)	125.00			50%	62.50	50%	62.50					Irrigation
	Total	1525.00				722.50		762.50		40.00			



Nam	e of Block :Patharkandi												
Sl	Name of Scheme	Amount	1st Ye	ear	2nd Y	lear	3rd Y	lear	4th Y	ear	5th Ye	ear	Concerned
No.			Phy (%)	Fin (in lakh)	Phy (%)	Fin (in lakh)	Phy (%)	Fin (in lakh)	Phy (%)	Fin (in lakh)	Phy (%)	Fin (in lakh)	Department
	New Proposed												
1	Chotoia Punji FIS	300.00			40%	120.00	50%	150.00	10%	30.00			Irrigation
	Improvement of Running / Defunct												
1	Renovation of DTWS at South Kabaribond	60.00			50%	30.00	50%	30.00					Irrigation
	Total (Fin) =	360.00				150.00		180.00		30.00			

BLO	CK-WISE / SCHEME WISE PH	YSICAL &	FINANCL	AL TAF	RGET (Add	litional lis	t of Schem	es intimat	ed by Hon	'ble MP	– Karimg	anj)	
Nam	e of Block : North Karimganj												
Sl	Name of Scheme	Amount	1st Ye	ear	2nd Y	Year	3rd Y	Year	4th Y	ear	5th Y	ear	Concerned
No.			Phy (%)	Fin (in lakh)	Phy (%)	Fin (in lakh)	Phy (%)	Fin (in lakh)	Phy (%)	Fin (in lakh)	Phy (%)	Fin (in lakh)	Department
	In lieu of Previous Defunct (Abundant)												
1	Revival & Reconstruction of LIS from River Kushiyara in Vitorgool Bagarshangan Area	250.00			60%	150.00	40%	100.00					Irrigation
	Total (Fin) =	250.00				150.00		100.00					
								-	E	xecutive ]	EngineerKa	rimganj	Division (Irrigation)



BLOO	CK-WISE / SCHEME WISE PHYSIC	AL & FINA	NCIAL TAP	RGET (A	dditional	list of Sch	emes inti	mated by	Hon'ble I	MP – Ka	rimganj)		
Nam	e of Block : Ramkrishna Nagar												
SI	Name of Scheme	Amount	1st Ye	ear	2nd `	Year	۲ 3rd	Year	4th Y	ear	5th Y	ear	Concerned
No.			Phy (%)	Fin	Phy (%)	Fin (in	Phy (%)	Fin (in	Phy (%)	Fin	Phy (%)	Fin	Department
				(in		lakh)		lakh)		(in		(in	
				lakh)						lakh)		lakh)	
	<u>New Proposed</u>												
1	Usharani FIS	500.00			40%	200.00	50%	250.00	10%	50.00			Irrigation
	Total	500.00				200.00		250.00		50.00			