

Template for
District Irrigation Plan

Foreword: (by District Collector):

Index:

Executive summary

I. Introduction:

- i. Background,**
- ii. Vision,**
- iii. Objective,**
- iv. Strategy /approach,**
- v. Rationale/ Justification Statement: In reference to the status and need of irrigation**

Chapter-I: General Information of the District:

1.1 District Profile: Any specific information of the district for its identification, latitude and longitude, historical or other importance, etc. if any, Administrative setup

Table No: 1.1 of Annexure I

Source: Gazetteer, Census Report, any other source of government

1.2 Demography: Male, female, children, SC/ST, General, Total

Table No: 1.2 of Annexure I

Source: Census of India

1.3 Biomass and Livestock: Green cover, Availability of fuel wood, Biomass yield, Fodder Yield, Small and Large Livestock, Milk production.

Table No: 1.3 of Annexure I

Source: Livestock Census of India

1.4 Agro-Ecology, Climate, Hydrology and Topography: Agroecological zone, type of terrain, normal annual rainfall, average monthly rainfall, no. of rainy days,

maximum rainfall intensity, season wise average weekly temperature, potential Evapo-transpiration (PET), elevation.

Table No.: 1.4 of Annexure I

Source: IMD, regional ICAR centre(s), SAUs, KVKs etc

1.5 Soil Profile : Major soil classes and land slope classification

Table No.: 1.5 of Annexure I

Source: SLUSI, NBSS, Indian Institute of Soil Science, Department of Land Resources

1.6 Soil Erosion and Runoff Status: Erosion, peak rate of runoff, frequency of peak, total runoff volume, flood and drought

Table: 1.6 of Annexure I

Source No.: ICAR regional centre and sediment monitoring station

NB: This information is optional and may be provided if available for the district

1.7 Land Use Pattern: Total geographical area, area under agriculture, forest, wasteland and other uses

Table No: 1.7 of Annexure I

Source: DAP, PPR, Land Use Plan

Chap-II: District Water Profile:

2.1 Area Wise, Crop Wise irrigation Status: crop type, area under Kharif, Rabi and summer , horticulture and plantation crops and irrigation for each type of crop

Table No: 2.1 of Annexure I

Source: Department of agriculture, agriculture statistic of state, agristat.

2.2 Production and Productivity of Major Crops: season wise crop sown, production productivity and cost of cultivated of crops under rainfed and irrigated conditions

Table No: 2.2 of Annexure I

Source: DAP, agriculture statistics

2.3 Irrigation based classification: gross irrigated area , net irrigated area, area under protective irrigation, unirrigated or totally rainfed area

Table No: 2.3 of Annexure I

Source: Agriculture statistics, irrigation statistics of CWC, Indian statistics, open government data platform

Chap III: Water Availability:

3.1: Status of Water Availability: Crop season wise sources of irrigation

Table No: 3.1 of Annexure I

Source: CWC, CGWB, District Irrigation and Agriculture office records

3.2: Status of Ground Water Availability: Status of block, draft, recharge and gaps

Table No: 3.2 of Annexure I

Source: CGWB

3.3: Status of Command Area: Village wise information of canal command, information on other services command, total developed and under developed command.

Table No: 3.3 of Annexure I

Source: CADA, CGWB

3.4: Existing Type of Irrigation: Surface, ground water, lift, treated effluent from STP, other sources including traditional water harvesting structure.

Table No: 3.4 of Annexure I

Source: NWDA, CGG

Chap IV: Water Requirement/Demand:

4.1: Domestic Water Demand: population in 2015, projected population by 2020 and Gross Water demand

Table No: 4.1 of Annexure I

Source: CWC, Department of Water Resources in District and Status Report

4.2: Crop Water Demand: Crop wise water demand, existing water potential and water potential to be created

Table No: 4.2 of Annexure I

4.3: Livestock Water Demand: Present water demand, water demand by 2020, water potential to be created

Table No: 4.3 of Annexure I

4.4: Industrial Water Demand: Present water demand, water demand by 2020, water potential to be created

Table No: 4.4 of Annexure I

4.5: Water Demand for Power Generation: Present water demand, water demand by 2020, water potential to be created

Table No: 4.5 of Annexure I

4.6: Total Water Demand of the District for Various sectors: Total Water Demand at Present, Water demand by 2020 for all components.

Table No: 4.6 of Annexure I

4.7: Water Budget: Water availability, water demand and gaps

Table No: 4.7 of Annexure I

Chapter V: Strategic Action Plan for Irrigation in District under PMKSY

Table No. V: Block/ Sub District Wise, component wise activities, estimated cost and period of implementation.

Appendix A : District Map with *available layer of attributes:

- i. Land Use of the District
- ii. Soil Type of the District
- iii. Cultivable Command Area (Kharif, Rabi, Zayad)
- iv. Cropping Pattern (Kharif, Rabi, Zayad)
- v. Surface and subsurface water
- vi. Sub basin & Watershed
- vii. Irrigation- canals and other sources, Irrigated area
- viii. Industries & Sewage treatment Plant
- ix. Urban and peri urban agriculture zone

Source: NRSA, SRSA, WRIS, Bhuvan Application of ISRO

*NB: Layers of attributes available may be provided for the district.

Annexure I: Tables for collating information on DIP

Annexure I Tables for collating information on DIP

Chapter I: General Information of the District:

1.1 District Profile		Source: Gazetteer, Census Report, any other source of Government		
S No	Name of the District	District code	Latitude	Longitude
1				
2				

1.2 Demography														Source: Census of India
Name of the State:														
Name of District :														
Name of the Block:														
Name of the Gram Panchayat	Name of the Villages Covered	Code of Villages covered	Population				SC		ST		General		Total	
			M	F	CH*	Total	No. of household	No. of Members	No. of household	No. of Members	No. of household	No. of Members	No. of household	No. of Members

* 1-14 years Age Bracket

1.3 Biomass and Livestock										Source: Livestock Census of India
Name of the State										
Name of the District										
Name of the Block										
Small Animals					Large Animals				Any other Milch or Meat Animal (Nos.)	Draft Animal (Buffalo/yak/bulls/any other (Nos.))
Poultry (No.)	Ducks (No.)	Pigs (Nos.)	Goats (Nos.)	Sheeps (Nos.)	Indigenous Cow (Nos.)	Hybrid Cow (Nos.)	In descriptive Buffalo (Nos.)	Hybrid Buffalo (Nos.)		

Annexure I Tables for collating information on DIP

1.4 Agro Ecology, Climate, Hydrology and Topography	Source: IMD, regional ICAR centre(s), SAUs, KVKs etc.
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Name of the State:

Name of the District:

Name of the Block*:

S. No.	Agro Ecological Zone Type	Type of Terrain	Block Area (ha)	Normal Annual Rainfall (mm)	Average Monthly Rainfall (mm)	No of Rainy Days (No)	Maximum Rainfall Intensity(mm)			Average Weekly Temperature (°C)						Potential Evapo-Transpiration (PET)				Elevation						
							Up to 15 Min	Beyond 15 but up to 30 Min	Beyond 30 but up to 60 Min	Period						Period			Cumulative Total	Min.	Max.	Mean				
										Summer (April-May)			Winter (Oct.-Mar.)			Rainy (June-Sept.)							Summer	Winter	Rainy Season	
										Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean								
1																										
2																										

NB: Block wise/sub district wise data may be used if available,

1.5 Soil Profile	Source: SLUSI, NBSS, Indian Institute of Soil Science, Department of Land Resources
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Name of the State:

Name of District:

Name of the Block:

Soil Type		Land Slope			
Major Soil Classes	Area (ha)	0-3% (ha)	3-8% (ha)	8-25% (ha)	>25% (ha)

Annexure I Tables for collating information on DIP

1.6 Soil Erosion and Runoff Status*					Source: ICAR Regional Centre and sediment monitoring Stations						
Name of the State:											
Name of District:											
Name of the Block:											
Name of the Micro Watershed	Name of the Sediment Monitoring Station	Longitude	Latitude	Soil Erosion (Tone/ha)	Runoff						Drought Frequency
					Peak Rate (cum/hr)	Frequency of Peak (No in Months)	Total Runoff Volume of Rainy Season (ha-m)	Time of return of Maximum flood			
5 Years	10 Years	In Years									

NB: optional; may be provided if data is available for the district

1.7 Land Use Pattern								Source: DAP, PPR, Land Use Plan		
Name of the State:										
Name of District :										
Name of the Block:										
										Area in ha
S. No.	Name of the Gram Panchayat	Name of the Villages Covered	Total Geographical Area	Area under Agriculture				Area under Forest	Area under Wasteland	Area under other uses
				Gross Cropped Area (1)	Net Sown Area (2)	Area sown more than once (1-2)	Cropping Intensity (%)			

Annexure I Tables for collating information on DIP

Chapter II: District Water Profile:

2.1 Area-wise, Crop-wise Irrigation Status													Source: Department of Agriculture, Agriculture Statistic of State, Agristat			
Name of the State:																
Name of the District :																
Name of the Block:																
Crop Type	Kharif (Area in ha)			Rabi (Area in ha)			Summer Crop (Area in ha)			Total (Area in ha)			Horticulture & Plantation Crops (Area in ha)			
	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	Irrigated	Rainfed	Total	
A) Cereals																
B) Coarse Cereals																
C) Pulses																
D) Oil Seeds																
E) Fibre																
F) Any other crops...																
..																

2.2 Production and Productivity of major Crops																Source: DAP, Agriculture Statistic		
Name of the State:																		
Name of the District:																		
Name of the Block:																		
Season	Crop Sown					Rainfed				Irrigated				Total				
	Cereals	Coarse Cereals	Pulses	Oil Seeds	Fibre Crops	Any other crops	Area (ha)	Production (qtn/yr)	Productivity or Yield (Kgs/ha)	Cost of Cultivation (Rs./ha)	Production (qtn/yr)	Productivity (Kgs/ha)	Cost of Cultivation (Rs./ha)	Production (qtn/yr)	Productivity (Kgs/ha)	Cost of Cultivation (Rs./ha)		
A. Kharif																		
B. Rabi																		

Annexure I Tables for collating information on DIP

Summer															
Horticultural & Plantation															
Total															

2.3 Irrigation based Classification		Source: Agriculture Statistic, Irrigation Statistic of CWC, Indian Statistic, Open Government Data platform	
Name of the State:			
Name of the District :			
Name of the Block:			
Irrigated (Area in ha)		Rainfed (Area in ha)	
		Partially Irrigated/Protective Irrigation	Un-Irrigated or Totally Rainfed
Gross Irrigated Area	Net Irrigated Area		

Annexure I Tables for collating information on DIP

Chapter – III: Water Availability:

3.1 Status of Water Availability		Source: CWC, CGWB, District Irrigation and Agriculture office records			
		BCM per Ha			
S.No.	Sources	Kharif	Rabi	Summer	Total
1	Surface Irrigation				
(i)	Canal(Major & Medium Irrigation)				
(ii)	Minor Irrigation tanks				
(iii)	Lift Irrigation/Diversion				
(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				
(iii)	Medium Tube Well				
(iv)	Shallow Tube Wells				

3.2 Status of Ground Water Availability			Source: CGWB		
Name of the State:					
Name of the District:					
Name of the Block:					
Status of Block as per Central Ground Water Board Notification			Ground Water (BCM)		
Critical	Semi-Critical	Safe	Draft	Recharge	Gap

Annexure I Tables for collating information on DIP

3.3 Status of Command Area										Source: CADA, CGWB
Name of the State:										
Name of the District:										
Name of the Block:										
Area in Ha										
S.No.	Name of the Village	Information of Canal Command			Information on the other Services Command			Total Area		
		Total Area	Developed Area	Undeveloped Area	Total Area	Developed Area	Undeveloped Area	Developed Command	Undeveloped Command	
1	2	3	4	5	6	7	8	4+7	5+8	
Total										

3.4 Existing type of Irrigation															Source: NWDA, CGG				
Name of the State:																			
Name of the District :																			
Name of the Block:																			
Source of Irrigation	Surface Irrigation (1)					Ground Water (2)					Other Sources Including Traditional WHS (3)	Treated effluent discharged from STP	Water extraction devices / Lift			Total			
	Canal Based		Tanks / Ponds / Reservoirs			Tube wells		Open wells		Bore well			Electricity pump (4)	Diesel pump (5)	Others (6)	Irrigation sources (1+2+3)	Water extracting units (4+5+6)		
	Govt. Canal	Community/Pvt. Canal	Community Ponds Including Small	Individual / Pvt. Ponds	Govt. Reservoir /Dams	Govt.	Pvt.	Community/Govt.	Pvt.	Govt.								Pvt.	
No																			

Annexure I Tables for collating information on DIP

												3.....						
Command Area (ha)																		

Chapter IV: Water Requirement/Demand:

4.1 Domestic Water Demand				Source: CWC, Department of Water Resources in District and Status Report			
Blocks	Population in 2015	Projected population in 2020	Gross Water Demand(BCM)				

4.2 Crop Water Requirement							
Block	Crops	Area sown (ha)	Irrigated area (ha)	Crop water demand (mm)	Water potential required (BCM)	Existing Water potential (BCM)	Water potential to be created (BCM)

4.3 Livestock Water Demand					
Block	Total number of live stock	Present water demand (BCM)	Water demand in 2020 (BCM)	Existing Water potential (BCM)	Water potential to be created (BCM)

Annexure I Tables for collating information on DIP

4.4 Industrial Water Demand					
Block	Name of the industry	Water demand (BCM)	Water demand in 2020 (BCM)	Existing Water potential (BCM)	Water potential to be created (BCM)

4.5 Water Demand for Power Generation					
Block	Power requirement, MW	Water demand (BCM)	Water demand in 2020 (BCM)	Existing Water potential (BCM)	Water potential to be created (BCM)

4.6 Total Water Demand of the district for Various sectors							
S. No.	Block	Components					Total, BCM
1		Domestic	Crop	Livestock	Industrial	Power generation	
2							
3							
4							
5							

Annexure I Tables for collating information on DIP

6							
7							

4.7 Water Budget							
Name of Blocks	Existing water availability (BCM)		Total (BCM)	Water Demand (BCM)		Water Gap (BCM)	
	Surface water	Ground water		Present	Projected (2020)	Present	Projected (2020)

Chapter V: Strategic Action Plan for Irrigation in District under PMKSY:

5 Strategic Action plan for Irrigation in District under PMKSY								
S.No	Name of the Blocks/Sub Districts	Concerned Ministry/ Department	Component	Activity	Total Number/Capacity(cum)	Command Area/Irrigation Potential(Ha)	Period of Implementation(5/ 7 yrs)	Estimated cost(in Rs.)
1		MoWR	AIBP	Major Irrigation				
2		MoWR		Medium Irrigation				

Annexure I Tables for collating information on DIP

3	MoWR		Surface Minor Irrigation				
4	MoWR	Har khet ko pani	Lift Irrigation				
5	MoWR		Ground Water Development				
6	MoWR		RRR of Water Bodies				
7	MoWR		Construction of Field Channels				
7.1	MoWR		Lined Field Channels				
7.2	MoWR		Unlined Channels				
8	MoWR		Micro-Irrigation				
9	MOA &FW-DAC&FW		Per drop more crop (Micro Irrigation)	DPAP Drip			
10	MOA &FW-DAC&FW	DPAP Sprinkler					
11	MOA &FW-DAC&FW	Non -DPAP Drip					
12	MOA &FW-DAC&FW	Non -DPAP Sprinkler					
13	MOA &FW-DAC&FW	Per drop more crop (Supplementary water management activities)	Topping up of MGNREGA				
14	MOA &FW-DAC&FW		Drought Proofing through check Dams/Water Harvesting Structures				

Annexure I Tables for collating information on DIP

15	MOA &FW-DAC&FW		Secondary Storage Structures				
16	MOA &FW-DAC&FW		On Farm Development (distribution pipe / raised bed and furrow system etc.)				
17	DoLR-MoRD	PMKSY Watershed	Newly created WHS				
17.1	DoLR-MoRD		Farm Ponds				
17.2	DoLR-MoRD		Check Dams				
17.3	DoLR-MoRD		Nallah Bunds				
17.4	DoLR-MoRD		Percolation Tanks				
17.5	DoLR-MoRD		Other Ground Water Recharge Structure				
17.6	DoLR-MoRD		Fishery ponds/cattle pond				
18	DoLR-MoRD		Renovated WHS				
18.1	DoLR-MoRD		Farm Ponds				
18.2	DoLR-MoRD		Check Dams				
18.3	DoLR-MoRD		Nallah Bunds				
18.4	DoLR-MoRD		Percolation Tanks				

Annexure I Tables for collating information on DIP

18.5		DoLR-MoRD		Other Ground Water Recharge Structure				
18.6		DoLR-MoRD		Fishery ponds/cattle pond				
19		DoRD-MoRD	Convergence with MGNREGA	Newly Created				
19.1		DoRD-MoRD		Water Conservation:				
19.2		DoRD-MoRD		Water Harvesting:				
19.3		DoRD-MoRD		Creation of Irrigation canals and Drains:				
19.4		DoRD-MoRD		Providing Infrastructure for Irrigation:				
19.5		DoRD-MoRD		Land Development :				
20		DoRD-MoRD		Renovation				
20.1		DoRD-MoRD		Renovation of water bodies including desilting:				
20.2		DoRD-MoRD		Renovation & Maintenance of Irrigation Canals & Drains:				
21		State Planned Scheme of Irrigation						
21.1		State Irrigation Department	Name of the scheme	Major Irrigation				

Annexure I Tables for collating information on DIP

21.2		State Irrigation Department	Name of the scheme	Medium Irrigation				
21.3		State Irrigation Department	Name of the scheme	Surface Minor Irrigation				
22		Irrigation Scheme of State Agriculture Department	Name of the scheme					
23		Irrigation Scheme of other Line Departments of State Govt.	Name of the Scheme					
24		Externally aided projects	Name of the Scheme					
25		other loan projects like NABARD	Name of the Scheme					